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Renewal



*Emergency Education in Crisis Areas
Computer Education in Waldorf Schools
Education for Character • World Language Study
Re-Imagining Mathematics • The Movable Classroom*

A JOURNAL FOR WALDORF EDUCATION

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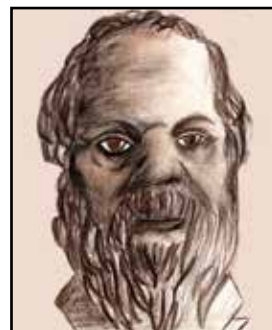
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Courtesy of the Friends of Waldorf Education



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Photo courtesy of Samara Center

*Bedtime story at
Samara*



Photo by Ricardo Beron

*Free movement after
main lesson*



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doing oil painting*



Photo by Charles Weems

*Tenth graders working
on a robot*

Waldorf Alumni Forum

Reflections on My Waldorf Education

BY OLIVIA ALLEN

Anchorage Waldorf School, Eighth-Grade Class of 2007

“If the people lived their lives as if it were a song ...” I can still hear this melancholic yet uplifting round, sung in harmony by my class, whenever I think about my Waldorf days.

It was a time in my life enriched by group singing, jewel-colored main lesson books, wood-framed chalkboards, the fairy-tale spectacle of maypole dancing, woven baskets overflowing with wool in pastel shades, the smell of freshly baked bread at countless soup potlucks, and the soft flicker of candles bathing our classroom in honey-colored light.

During our eight years together, my classmates and I slew the Dragon at Michaelmas, sang the world into being as we delved into the epic Kalevala, collected spoils of honor as powerful Romans, traveled from

Our shared quest for knowledge and wisdom included all of the above and much more. We sought to grasp the world and the ways of the world through head, heart, and hands. We were open and hungry for experience and understanding, and the curriculum supported that openness and hunger.

I feel that some permeating essence I derived from my Waldorf experience has, since then, guided me through challenge and change. After graduation from Anchorage Waldorf School, I experienced a startling shock when I entered a public high school. There I encountered an educational system that values test scores and quantifiable progress rather than creativity, imagination, and love of learning.

Later, with a deep hunger for meaningful education, I began my college experience at Seattle University. SU is an institution that prides itself on educating the whole person for a just and humane world. When it came time to select an area of study, I was baffled and conflicted about a choice that would affect the rest of my life. I wanted a field of study that would lead to an occupation that would provide financial stability and personal fulfillment and that also would benefit the world around me.

I decided to major in environmental studies. The field is interdisciplinary by nature, drawing from the sciences, history, art, and politics. I think my Waldorf schooling, which taught me to perceive and experience the world in various ways and from various perspectives, predisposed me to this kind of study. I think I apply this multi-faceted approach to everything I encounter.



The writer (kneeling at left) and her combined fourth-/fifth-grade class in costume for their production of the Ramayana. Class teacher Donna Levesque was with the class for the full eight years!

Midgard into the godly realm of Asgard before visiting the endless wasteland of Niflheim, wielded our might from the thunderous perch of Mount Olympus, wandered the lengths of the ancient world in search of Osiris, survived the feudal shadow of the Dark Ages, reveled in the astronomical discoveries of Copernicus and Galileo, beheld the rebirth of art and music from Renaissance masters, explored the vast oceans and lands of the New World, and built industrial cities with steel and mechanical invention ...



The writer (arm around her classmate) and her combined third-/fourth-grade class on a hike.

I currently live in Colorado in a small community in the Rocky Mountains. I am an environmental educator at The Catamount Center and devote myself to igniting love for the world in young people. I give place-based, outdoor lessons that focus on environmental topics and are intended to inspire elementary school students to become ecological stewards. I strive to craft lessons that develop the child as a whole and that prompt students to see themselves as part of the natural world instead of separate from it. This requires creativity and ongoing study.

As I write lesson plans for all-day outdoor school each week, I refer back to my own main lesson books, often stumbling upon inspiration in the words and drawings connected with main lesson blocks in botany, meteorology, geometry, physics, hand-work, woodwork, and geography, among others.

One afternoon, we collected various specimens from the



Photo by Alana Ede

Olivia explains to her students the differences between deciduous trees and conifers before the class heads into the forest.

and wispy strands of seeds. In time, the students realized that those wispy strands allowed the seeds to be carried by the wind to a new home. These moments of discovery and wonder bring me much joy, reminding me of my many golden moments at Waldorf school.

Here in Colorado, I continue to study the effect that human beings have on the environment. I am very interested in alternative energy sources, am extremely aware of my personal impact on the Earth, and try to live very lightly on the land.



Olivia's fifth-grade drawing from a science main lesson

forest to make natural dyes. I encouraged the students to visually observe each specimen, but also to touch and to feel and to smell it. We focused on plants with thorns



As part of an aquatic ecosystems unit, Olivia and students collect and study macro invertebrates from a lake.

I feel that my Waldorf education blessed me with a strong will, sense of intention, determination, and resiliency as well as an artistic sensitivity. These are reflected in all the actions and decisions I make in my daily life. Sometimes it is easy to take these qualities for granted, to grow impatient with the world and its problems. But at these points the gratitude I have for my education shines brightly through everything else. I am strong and steadfast, equipped with a pair of capable hands, an inquisitive mind, an open, brimming heart, and I feel confident about my place in the world. My education at

Waldorf nurtured, guided, and prepared me to discover and become an active member of the global community, and I deeply cherish the lessons of my childhood to this day.

"The sun with loving light, gives life to me each day..." It began with these true, simple words in first grade. I often reminisce about the smell of lavender wafting through the classroom, the daily circle where I joined hands with my classmates, the empowerment I felt stepping into the lives of notable historical and literary figures in class plays, and the pride of mastering new and exciting skills. Those experiences and countless others helped form me into the person I am today, and I am deeply grateful for them. ☺



Photo by Karen Kargbalk

Olivia Allen

Olivia Allen's Waldorf-inspired blog: <https://lookintotheworldblog.wordpress.com>

From the Editor

Applying Waldorf Pedagogy in Nonschool Settings

BY RONALD E. KOETZSCH, PhD

Waldorf Education promotes the balanced, healthy development of the child. It can also have a therapeutic effect for a child who has physical, emotional, social, or psychological problems. Thus, Waldorf Education can be understood as a healing education.

Each day the news is filled with heartrending stories of children who need healing and therapeutic care. All over the world there are children who are experiencing violence, war, displacement, homelessness, abuse, trafficking, and the destruction caused by natural disasters. Often these children do not have the benefit of any schooling, let alone a Waldorf schooling, nor the benefit of a loving, protected,

home environment. They have had traumatic experiences that will very likely affect their normal physical, emotional, and psychological development.

The healing gift of Waldorf Education, however, is being extended to children who are suffering from the aftereffects of traumatic experiences but who do not have access to a Waldorf school. Two of the Waldorf-based initiatives working with traumatized children in nonschool settings are the Friends of Waldorf Education and the Samara Center for Individual and Family Growth. The “Friends” work internationally. The Samara Center works locally in Harrisburg, Pennsylvania. The two articles that follow describe the inspiring work of these two initiatives that are responding to the urgent needs of our time. ☺



The editor with Amelia, his assistant

Emergency (Waldorf) Education

Helping Traumatized Children in Crisis Areas Around the World

The *Freunde der Erziehungskunst Rudolf Steiners* (known in English as the “Friends of Waldorf Education” or as just the “Friends”) is an international organization based in Germany that supports and promotes Waldorf Education worldwide. Its activities include administering an International Relief Fund, which allots donated monies to Waldorf initiatives and schools all over the world. Another project of the Friends is an emergency pedagogy program that helps children and young people who have been traumatized by war, natural disasters, or other extreme, negative experiences.

In 2006 Waldorf special education teacher Bernd Ruf worked with adolescents in a refugee camp in Beirut, Lebanon. The young people were severely traumatized by their experiences during the Lebanese war, and Ruf developed an “emergency pedagogy curriculum” to help them.

Ruf studied the phenomenon of traumatization and possible ways of eliminating or reducing the various

short-term and long-term effects. His findings are summarized in a document, “When the World Collapses—Emergency pedagogical interventions for psychologically traumatized children in crisis regions.”

Traumatic experiences during a war or natural disaster can affect children in various ways, depending upon the age and the sensitivity of the individual. Common effects include symptoms of trauma such as sleep and eating disorders, social withdrawal, strong emotional outbursts, chronic hypersensitivity, loss of ability to concentrate, fear, depression, reexperiencing of the traumatic event, and retarded development. Studies indicate that trauma can affect the normal development of the brain.



Iraq, 2015: A local teacher does painting therapy with a young girl.

Ruf's emergency pedagogy seeks to minimize the suffering of those affected and to strengthen their physical/psychological self-healing forces. The interventions create relationships that offer security, self-trust and trust in others, awaken new interest in the world, and, in age-appropriate ways, strengthen self-directed learning and support taking responsibility for oneself. The program seeks to prevent or reduce the severity of post-traumatic stress disorder (PTSD) and the short- and long-term effects associated with it.

The program uses various elements of Waldorf Education and of anthroposophically extended medicine. These activities and therapies are adapted to the age and developmental stages of the children or young people who have been traumatized. They include:

- a rhythmical daily routine with regular mealtimes, periods for sleeping, rest, and action
- painting and drawing therapy
- music therapy
- therapeutic speech formation
- therapeutic eurythmy
- modeling in clay, beeswax, and stone
- color and sound therapy
- therapeutic rhythmical massage
- baths, compresses, poultices
- social group therapy
- individual mentoring

The process of intervention begins with the identification of a crisis area. The crisis may be the result of a single, unexpected event, such as the 2013 earthquake in Sichuan province in China, or of a situation that has developed over time, such as the refugee crisis in Kyrgyzstan (2014). A team is assigned to the area. The team consists of a project leader, a medical doctor, a psychologist, therapists, Waldorf teachers, Waldorf special

education teachers, social workers, and a translator. If they are responding to an unexpected crisis, they will be on the scene within days. In November 2015, a team arrived in Paris almost immediately after the terrorist attacks. The teams typically stay several weeks working intensively with individuals and groups. Their work



Iraq, 2015: Angelika Maaser, a gynecologist and psychotherapist from Germany, plays a movement game with children.



Gaza, 2014: Reinaldo Nascimento, a Brazilian educator and part of a "Friends" emergency pedagogy team, leads a group of Palestinian boys in a rhythmical movement exercise.

is particularly effective in the second stage of the trauma experience, called the "post-traumatic stress reaction." Recovered somewhat from the initial shock, victims during this period are able to start processing the traumatic experience. The following sentence is on the program webpage: "Emergency pedagogy is not therapy, but pedagogical first aid for the soul." Some projects, however, go on much longer than several weeks.

In recent years, educational therapy teams from the Friends have been active in over twenty places around the world. These include Nepal (earthquake, 2015), Greece (refugee crisis, 2015), Kenya (displacement due to drought and civil war, 2013), Philippines (typhoon Hayan, 2015), the Gaza Strip (warfare, 2011–2014), and Haiti (earthquake, 2010). In addition, training sessions in emergency pedagogy have been held in India and Latin America to prepare persons in those areas for providing the service themselves. ○

—R. E. K.

Resources

Bernd Ruf's book, *Educating Traumatized Children: Waldorf Education in Crisis Intervention*, is available online from Lindisfarne Books. ISBN 9781584201557

For more information on Emergency Education, visit <https://www.freunde-waldorf.de/en/emergency-pedagogy.html>

Ruf's document on Emergency Education is available at: https://www.freunde-waldorf.de/fileadmin/user_upload/documents/Notfallpaedagogik/Hintergrund/Konzeption/Nothilfe_Konzeption_Englisch.pdf

The donation bank account for the Friends is: Freunde der Erziehungskunst Rudolf Steiners e.V. GLS Bank Bochum; IBAN DE06430609670800800700 BIC GENODEM1GLS

Samara Center for Individual and Family Growth

BY RONALD E. KOETZSCH, PhD

In 1992, at the suggestion of a friend, Pamela Haddad attended an open house at the Susquehanna Waldorf School in Marietta, Pennsylvania. Pam fell in love with the kindergarten classroom, with its warm, protective ambience and decor and with the way the children were able to engage in free, creative play. She enrolled her daughter in the kindergarten. Thus began an intense involvement in the school that lasted until 2002, when Pam's younger child, a son, completed the sixth grade.



*Pam Haddad,
founder of Samara*

At the time she encountered Waldorf Education, Pam had already been working for years as an investigator of child abuse in Lehigh County, Pennsylvania. She worked with adults and children involved in cases of physical and sexual abuse and with neglect, including children abused within the foster care system.

Pam soon became an active and engaged Waldorf parent. She was strongly attracted to the Waldorf culture, to the arts and crafts, including doll making, to the practice of storytelling, to the nurturing of the senses—"the sheepskins and the silks."

In time, Pam began to introduce elements of Waldorf Education into her sessions with the troubled foster families, both with the parents and with the children. She told stories, had them sing nursery rhymes, handed out silks and beeswax. To her surprise, the adults, as well as the children, responded very positively. She discovered that many of the parents were still in effect children, having not recovered from their own traumatic experiences of abuse in childhood. With the nurturing activities Pam gave them, the adults became more open, more communicative, more willing to share their own difficult experiences from the past. They also developed



*A grandmother and
grandson during a
program session at
Samara*

more empathy and were able to be better parents for the children. The children benefited in similar ways and seemed able to begin to heal from their traumatic experiences.

In 2008 Pam attended a workshop on childhood trauma given by the neuroscientist Bessel van der Kolk. Pam learned that when a person has a traumatic experience, be it a car crash or sexual abuse, it is the five senses that lock the experience into the psyche. What the person sees, hears, smells, touches, and feels at the time of the trauma experience is stored in the brain stem, the reflexive part of the brain, as signals of possible danger.

Pam theorized that positive, nurturing sensory experiences in a safe environment could be an antidote to the stored, negative sensory information. The workshop made Pam even more convinced of the importance of Waldorf-based experiences in helping children and adults with trauma.



The room used by the children's program at Samara

Now with a master's degree in social work, Pam founded her own organization, Samara: The Center for Individual and Family Growth. She wanted to work with biological families, with children and their biological parents. Pam wanted to enable families in which intergenerational abuse had occurred to stay together and to become loving, well-functioning families.

Today, Samara is an active and successful organization. The work is located in rented space in a church in the Allison Hill section of Harrisburg, Pennsylvania. Allison Hill is a racially mixed area—African-American, white, and Hispanic—characterized by extreme poverty and a high crime rate. Samara works mostly with families who have been referred by the courts because of child neglect or physical or sexual abuse. Samara is funded in part by a government contract with Dauphin County

Children and Youth and by donations from foundations and individuals.

At Samara, adults go through an eight-week course that meets twice a week in three-and-a-half-hour evening sessions. Each group optimally includes ten to twelve persons, and to achieve that number Samara sometimes has double sessions. The session begins with singing, then a shared dinner. Artistic work, such as painting and music



In the children's program, the children get individual attention from staff...

The course is a powerful experience. Some participants who have completed it once come back and repeat it voluntarily, even several times. Pam says:

They find something here that they do not find elsewhere—security, safety, and an opportunity to share emotions and experiences without being judged. They also have opportunities for artistic creativity, the nourishment of the senses, and a group of people who respect and care for them, an organic community. The groups become very close and supportive and often maintain contact after the course is over. In addition, it gives them the skills to be successful parents, who respect and feel empathy for their children. One of our



...and can share tea and conversation.

people, a former gang leader from Brooklyn and now a single father, has done the course eight times.

Jim Fitzpatrick, formerly a class teacher at the Susquehanna Waldorf School, has recently joined Samara as director of the childhood program. The children meet at the same time as the parents. The

children range in age from infancy to sixteen. Jim uses key elements of Waldorf Education in working with them—painting, drawing, music, crafts, stories, free play, and circle games. As part of his preparation for the job, Jim himself went through the Center's parenting program. He says:

This whole area of child abuse, of trauma, is new to me. I have come to understand that when these children misbehave, it is something that they really can't control—it is not willful. I have discovered that taking them out into the park, into nature, is very important. The children calm down, relax, are much more able to interact and to enjoy themselves. I realize that overcoming the effects of the traumatic experiences is gradual and will take time, but it can be done.



A park about a mile from the Samara Center gives the children an opportunity to experience nature.

One testimony to the efficacy of Samara's program is the story of a young woman named Olivia. Olivia was referred to the Center four years ago because of difficulties in her own family. After going through the Samara course, she has changed so much that she now works for Samara as a parent facilitator. You can hear her story at www.samarafamily.org.

Pam Haddad and her work at Samara is beginning to attract attention from the wider world. In June 2016, Dr. Bruce Perry, an expert in child trauma and the coauthor of *Born for Love: Why Empathy is Essential—and Endangered*, is hosting a conference in Banff, Canada. One of the central points that Perry makes is that traumatic experiences destroy the child's capacity for empathy. Pamela Haddad has been asked to present the work at Samara as an example of an innovative approach to dealing with intergenerational trauma, helping parents and children who have experienced trauma to reawaken empathy. ☉



Learning how to bake bread from scratch

Many thanks to Mary Stowe, class teacher of Pam Haddad's daughter at the Susquehanna Waldorf School, who alerted *Renewal* to Pam's inspiring work.

From the Association

BY STEPHANIE RYNAS, MA, Executive Director, Finance and Operations

One of the hallmarks of a healthy organization is a regular cycle of strategic planning and implementation. Many Waldorf schools, regardless of their size, go through a regular process of planning and realization that looks ahead from three to seven years. Similarly, the Association of Waldorf Schools of North AmericaSM (AWSNA) recently developed a new strategic plan. It was the result of twelve months of gathering and distilling input from delegates of member schools, the board of trustees, and the leadership council. The process enabled us to reflect on our



Stephanie Rynas

accomplishments, assess our goals and capacities, and articulate a clear, viable, and unified path forward to meet some of the key challenges and opportunities facing Waldorf schools today.

We identified four goals as our focus for the next three years. Achieving these goals will help us meet the evolving needs of our member schools and institutes and will strengthen Waldorf Education in North America. These goals are:

1. To strengthen and support Waldorf teacher training

Many factors contribute to student achievement, but research suggests that, among school-related factors, teachers have the greatest influence on student learning. Thus, the strength of our movement lies in the quality of the classroom experience, as created by the teacher. Waldorf schools need talented, creative, committed, and well-prepared teachers. To this end, the Association will work with the teacher training institutes to support and improve their teacher education programs. It will also promote enhanced communication and collaboration between the institutes and member schools.

2. To increase visibility and advance the principles of Waldorf Education

Waldorf Education has something to offer the wider world of education. It prepares students to live and thrive in an ever-changing world. We should be part of the continental conversation about educational transformation and make known the value of a Waldorf education. The Association will work to further Waldorf Education's brand recognition and message, will become an integral player in the

dialogue on education, and proactively respond to relevant topics in the media.

3. To inspire healthy school culture and leadership

In a healthy school there is, among all staff and teachers, a shared sense of purpose, an ethos of striving and concern, and a commitment to helping students flourish. A deep understanding of and engagement with AWSNA's Principles for Waldorf Schools and Rudolf Steiner's threefold social organism can help schools achieve this aim. The Association will collaborate with schools in this work and also share professional development resources.

4. To cultivate financial sustainability for member schools

The Association will continue to provide practical training, resources, and guidance to help schools and institutes optimize enrollment and retention efforts, business and financial practices, volunteer management, and development programs. The Association will also provide information and advice regarding opportunities for government and private grant funding.

The link to the strategic planning documents on the AWSNA website is:

<https://waldorfeducation.org/awsna> ☺

STEPHANIE RYNAS is a native of Michigan but has lived most of her adult life in California. She has a background both in business and engineering and worked in the hi-tech/semiconductor industry before obtaining a Waldorf teacher training certificate. Stephanie was formerly chair of the AWSNA Western Regional Council and was administrator at the Waldorf School of the Peninsula from 2005–2014 and faculty chair there in 2014–2015. Since 2009 she has taught woodworking at the school. Stephanie joined the AWSNA leadership team in July 2015 as executive director, finance and operations. Her primary responsibilities are leading the legal and financial activities of AWSNA, shepherding the strategic planning process, guiding the operations staff, and supporting our member schools through DANA—the Development and Administrative Network of AWSNA—and with other professional development tools.

Nature Stories and Puddle Gear

Building Resilience the New, Old-Fashioned Way

BY KELLY SMITH BARHAM

At Maine Coast Waldorf School, we follow the adage, “There is no such thing as bad weather, only inadequate gear.” We do so even with the children in our nursery, ages two-and-a-half to four.

So we recommend that all our children have marine-grade rainwear, warm sweaters and caps, elbow-length mittens, and well-insulated boots. Thus prepared for any weather, the Bluebell and Buttercup nursery classes—each with eleven or twelve students—begin every day with a walk in the forest. We may even spend the entire morning outside, playing, building fairy houses, gathering kindling wood, and warming ourselves by the fire.

We do this because the woods and fields are a perfect environment in which to develop, in a healthy way, the senses of touch, warmth, balance/vestibular, and movement/proprioception. These senses are crucial to lifelong social and intellectual success.

Nature also creates a sense of well-being, soothes sadness, and fosters a resilient character. The first days of preschool can be challenging for young children and their parents. My task as teacher is to help the little ones through this difficult transition. In the fresh morning air, full of scent, sound, and possibility, it feels as if we have only to ask for the solace we need. By following our path through the woods, singing our songs, and telling our stories, we find it.

One morning last winter, the outside temperature, seventeen below zero, determined that we would have to start our day inside the classroom with the nursery children, instead of with our usual walk in the forest. As the children came in and began peeling off their many layers of clothing, one looked dismayed and asked, “Did I come too late?” Another piped up, “We missed playing in the forest!” It wasn’t just the change of schedule that had thrown them off. It was clear that they yearned for the nourishment from nature that we count on to start our day. One of the youngest, who sometimes struggled to keep up in the great outdoors, said, “We NEED to go in the forest. It makes our bodies feel good.”

An hour or so later, when Father Sun finally warmed the air enough for us, we thankfully tromped out into the magically sparkling world of winter in the Maine woods. The visible sighs of relief hung like mist around us.

This past autumn, we had some new three-year-olds battling sadness and fear about separating from their parents for the first time. During the first weeks, we had quite a few children sobbing as we walked “merrily” along. Truth be told, one day I myself nearly cried with them.

Yet on we go. We stop on the path, as always, to tap on a bit of quartz and granite peeking through the grass, a small, visible edge of what must be a massive boulder underground. “Wake up, little gnomes!” we sing into the rock, “Time to rise and shine!” One of the children points out that the rock is glistening. “Yes, just like the tears drying on Jude’s face,” I think to myself. Curiosity about a sleeping gnome has quieted some of the sadness.



Well-protected from the cold, the author and her charges prepare for a walk in the chilly autumn forest.



*"Grandmother Rock" provides practice in climbing up and...
...sliding down.*

Our next stop is a confluence of stumps and rocks, which has become "The Sleeping Boat." Here, a few more dry their tears in order to make fishing poles with sticks and bits of string. The children use acorns for bait to catch their oak leaf fish. The plaintive cry, "I want Daddy!" is still ringing rather strongly in our ears, though, and I feel a wave of emotion welling up inside. "Help me!" I hear myself utter aloud.

I breathe deeply. Into the silence that is cricket song, chickadee, squirrel and crow, sniffing children and falling acorns, I send the plea for comfort, but more than comfort, for courage. The forest IS dark. We won't always know what lies around the bend. Who am I to say that everything is all right?

Yet our path beckons, and on we go. We breathe, we sing "Over the river and through the woods." We sniffle. And then, great glory, we arrive at "Grandmother Rock," a boulder that calls to all of the children, "Climb up here and find yourself happy." One by one they pull, clamber, stretch, and strain to get up to rest in her lap. Standing tall with huge smiles, they each call out, "King of the Mountain!" or "Queen of the Mountain!" when they make it to the top. The children find their strength, and with that comes courage, followed by self-confidence, and finally, joy. Leaning into this boulder with children sliding down one side and climbing up again on the other, I send my gratitude to all the elements in the forest who en-courage us along

the path, always patiently waiting for us to recognize their offering.

Colette calls out, "Grandmother Rock just told me she's always awake!" Yes, I agree. She is always here to help us. The crying has ended. Instead, there are open, curious faces looking up into the dappled light. "I'm not scared anymore," says Elliot. "This is a good place."

It is Michaelmas, but we aren't hearing stories about dragons and knights. Our battle is both more simple and more complicated than that. Saying goodbye is a scary enough dragon, and we must forge tools of trust and courage. This a mighty task indeed. I tell the story of Little Gnome Tender Root, who lives under a glistening rock in a green meadow and is awakened by a small band of Star Children. He is sleepy, but he knows he needs to get up and gather all the sunshine he can find to keep his heart

warm and shining like gold through the long winter. So he goes out into the Wide World. Like us, he gathers sunshine in the orchard and stores it in jars of applesauce. He gathers sunflower seeds from the garden. He tucks a crimson maple leaf into his pocket. "With all of this sunshine in his heart, Little Gnome Tender Root is brave and true. He might not be too shy to say hello to you." This is our work: to meet the unknown with courage, to find joy in overcoming fear, and to gather enough sunshine into our hearts to greet a new friend. A walk in the forest offers us the opportunity for all of this, and much more.

We place a log over a small ravine and the children have an opportunity to practice balance and uprightness. They learn how far they can lean to one side before toppling over and whether it is easier to go it alone or to hold the hand of a friend.



Even in the woods, it is good to have a place to get away from it all.

One child struggled for weeks to get up into the trunk of “Backhoe Tree.” Once he finally made it, we saw a remarkable, new capacity in him for patience and empathy. Had we just put him up into the place he longed to be, we would all have missed the deeper lessons.

The simple tools we use—butter knives, small hand drills, and pruning saws—also give opportunities for many discoveries. Which way do we turn the drill to make it come back out? Which stick is dry enough to scrape? The sense of touch, so important in developing boundaries and body awareness, is developed naturally when one is working outside with simple, natural materials.

Returning to our classroom, the children get their own boots, outerwear, neck warmers, and mittens off. This is no easy task. The order of operations is extremely important. One can easily wind up in an actual knot, with boots stuck inside of inside-out pants. We have a song for all of it, which includes, as a help in getting on mittens, “thumb in the thumb hole, fingers all together.” Here the children have an opportunity not only for building resilience in the face of a challenge, but for acquiring a pre-math skill!

After all boots are tucked neatly under cubbies, noses are wiped, and hands are clean and warm, the children are content to lie quietly on their sheepskins to gaze out at the treetops. They listen for bird songs and dream of the mud squishing up around their boots. Then they are ready for circle, where they will become the little gnomes searching for gold, or the spring bunnies hopping in the tall grass. When we paint with one color, they see a rainbow. When it is time for story, they



The children bring flashes of lively color into the brown, grey, green, sunlight-and-shadow world of the forest.



The author and some of her children—at least two of whom are Boston Red Sox fans—take time for sitting and whittling—with butter knives!

sit eagerly to hear what promises the next tale will bring. King Winter’s daughter may be finding her way up a slippery crystal mountain, or perhaps, with all of this oddly warm winter weather we are having, Peter the Gnome is having to convince the Seed Babies that it isn’t yet time to wake up. Whatever the tale, we live it deeply, and are grateful, and stronger, for it.

“Dearest Earth, and Dearest Sun, we’ll not forget what you have done.”

Blessings on your day. May you too find yourself in the forest. ☺



KELLY SMITH BARHAM has been a student of Anthroposophy and a Waldorf parent and teacher for nearly eighteen years. She first fell in love with Waldorf Education on a visit to an early childhood classroom. While she has worked

with young people in various contexts, she finds her work with preschool children in the outdoors most fulfilling. This year the children in her nursery classes range from two-and-a-half to four years old. While Kelly spends much time outdoors with her class, the children also have time indoors for coloring, painting, baking, and indoor free play. She loves her work and is very thankful for the trust and courage of the parents who put their children in her care.

The Movable Classroom

BY BECCA HILL

The transition from kindergarten to first grade is a major change for children in most schools. In Waldorf schools, the new first graders have just left a world where story, snack, and nap are the simple scaffolding of their day. They are entering a



The low benches arranged in “Square” make possible a morning walk with some balance practice as well...

new world of reading, writing, and arithmetic where they will sit in chairs and desks at least part of their day. Even the kindest teachers will encourage stillness, quiet, and focus, while discouraging squeaking, rattling, and dangerously leaning on the furniture. Starting first grade has a significant physical, emotional, and mental impact on children.

To help children make the transition from kindergarten to the more structured learning environment of the grades, Linden Waldorf School of Nashville implemented a “movable classroom” in their first and second grades for the 2015–16 school year. In a movable classroom, sturdy two-seater benches and large, buckwheat-filled cushions

replace desks and chairs. The design originated in Scandinavia about fifty years ago, and is very popular in German public and Waldorf schools as *das bewegliche Klassenzimmer*—the flexible or versatile classroom.

The benches and cushions used at Linden are handmade from quality materials—the benches from solid Baltic birch, the cushions from richly hued canvas. They can be arranged to function in various ways, including as work desks, art easels, and obstacle courses. Moving the benches and cushions is important work for small hands and growing bodies.

The children in Catie Johnson’s first-grade class at Linden are familiar with three main arrangements for the room: Ring, Rows, and Square. In Ring, cushions are on benches and children are on top—sitting cross-legged (“criss-cross applesauce”), kneeling, or with feet dangling. In Rows, the benches become desks and the cushions seats on the floor, all oriented toward the front of the room. In Square, benches are placed end-to-end with seat cushions either topping them or on the floor alongside them, the children facing inward. Each bench accommodates two students, or “bench partners,” who work together to move their furniture into its various configurations.



...while the pillows, set in a line, form a little mountain to traverse.



As a part of each day’s circle, the first graders often arrange the benches and cushions in other, more imaginative ways. Upside-down benches become balance beams and cushions become sacks full of garnet gemstones to pull through caves constructed of put-together benches. Creating these scenes is a manageable physical challenge for the children and an opportunity to work together.

The movable furniture is equally integral to Linden's second-grade classroom. For a rehearsal of their Michaelmas play, the children cluster the benches in one corner to act as a stage. When the children are to do bunny hops, wheelbarrows, skipping, and crab crawl, benches are pushed back to make room. In a limited area, the second graders demonstrate what keen awareness of space their new classroom gives them.

The movement provided here is especially important for young children who, even at age seven or eight, are still "thinking with their bodies." Modern neuroscience indicates that physical activity promotes and supports learning. Because most of our neural circuits are outbound from the cerebellum, which powers motor control in the brain, students retain input with more success when an activity—even one as simple as drawing or writing—is connected to it.

Larger-scale controlled movements do more to support memory. Activities that require balance strengthen the inner ear, a vital part of our vestibular system and one of the first systems to develop



In the "Rows" arrangement, the children are all facing front and ready for focused learning...

"Continuous reprimands can lead a child to conclude he is just plain 'dumb' or 'bad.'" The physical freedom that the movable classroom allows obviates these risks.

The movable design can also give teachers the opportunity to use movement to improve the social dynamic of their classroom. In first grade, children are beginning to develop a sense of empathy toward peers and authority figures. Acquiring this empathy is a crucial developmental milestone. This knowledge motivated Mrs. Johnson to spend ten minutes of one main lesson letting the children scale a mountain of benches and take turns helping each other. Slowly and silently, children inched across the highest bench as their partners' hands remained patiently extended in case of need. Fearful climbers froze on hands and knees until wordless encouragement came, and small hands on their shoulders helped them brave the summit. Their entire classroom was charged with a deep respect for the task, and the play at recess that day was more harmonious than ever. Such moments bolster the physical and social confidence of a newly formed class. These are the moments that make it easier to learn and teach.

Physical activity is woven into the Waldorf curriculum at every



With benches and pillows pushed back, there is plenty of room for skipping rope and other movement activities.

in the brain. So when Mrs. Johnson has her first graders enact "the stork," slowly balancing on the upturned benches that are now balance beams, she is preparing them for the academic substance of main lesson.

When the lesson ends, children are free to stretch on their benches and take on whatever physical posture they need. Katie Reilly, an expert in the Waldorf educational support curriculum, points out that this permission to wiggle is "permission [for the children] to mature at their own speed." She adds that the lack of this permission can result in challenging behavior or, worse, unconscious self-stigmatization.



...although after main lesson they have permission to wiggle and invert!



Balance training improves posture and increases body awareness.

grade, and all schools provide ample time for outdoor free play and recess. The movable classroom provides additional physical activity in the classroom. It can also be a boon for schools with limited outdoor space.

Part of the work of a Waldorf teacher, especially in the early grades, is to observe each child closely—to see how that child moves, interacts with

objects, interacts with children. The goal is to form a sufficiently complete picture of the child and, with that picture, to develop a sense of what that child needs to learn and develop in a healthy way.

The movable classroom provides many opportunities for the teacher to observe students. How does this child deal with moving a heavy object? Does the child offer help to a less capable friend? Do these two children cooperate well as bench partners?

Linden Waldorf's educational support teacher, Mary Bryan, conducted first-grade assessments for each child in the current class. Thus, she has a privileged perspective on how their new classroom design has helped them. To describe the experience of the children, their thrill at being able to move freely in the classroom, she uses neither pedagogical nor psychological jargon, but one simple word. The word is joy. ☺



BECCA HILL earned a BA in philosophy from the University of Vermont and studied the Russian language abroad for six months. Currently, she is completing a master's in education with Waldorf certification from Great Lakes Wal-

dorf Institute and Mount Mary University. At Linden Waldorf School in Nashville since Fall 2013, Becca serves as first-grade teaching assistant. In the summer, she codirects a Waldorf-inspired biodynamic farm camp situated on the Bells Bend stretch of the Cumberland River.

In Germany, about one third of the 222 Waldorf schools in the country utilize the movable classroom. And in North America, a number of Waldorf schools besides the Linden Waldorf School are using the approach in the early grades. These include the Waldorf School of Philadelphia, Shining Rivers School in Webster Groves, Missouri, and Pine Hill Waldorf School in Wilton, New Hampshire. At the Pine Hill School, which adopted the movable system in 2010, the movable classroom is used “through the third grade depending on the needs of the particular class.” The following is a paraphrase of information about the movable classroom as it appears on the Pine Hill website:

In recent decades, research into the relationship between children, learning, and the physical environment has indicated a strong relationship between movement and cognition. Evidence shows, for example, that there is a connection between postural control and the executive function of attention. Postural control is the ability to stabilize the trunk, neck, and head so that skilled tasks, such as reading and writing, can occur. Executive functions (EFs) are cognitive abilities such as attention, self-control, and problem solving that govern other learning tasks.

In our sedentary culture, children spend much time sitting in cars, in front of televisions and other media, and at school desks. They do not develop the muscle tone to easily maintain an upright position. A child in the early grades with poor postural tone will slouch in his chair, fidget, wiggle, and not really pay attention. Or he will consciously maintain his sense of balance and uprightness but, in the process, divert his executive function from paying attention and learning. This means that he is using cognitive resources to sit up straight rather than to grasp the content of the lesson.

Many movement activities help develop postural control in young children, including running, balancing, and climbing. Particularly helpful are sitting on a bench without a back support, sitting cross-legged on the floor, or in Japanese seiza position, that is, with both legs under. The movable classroom removes the chair with a supporting back and encourages more healthful ways of sitting. And, in general, it provides more opportunities for the children to move. The resulting toning of the postural muscles makes good posture automatic and unconscious and also facilitates learning.

—R. E. K.

Becoming Human

World Language Study in Waldorf Schools

BY CHARLOTTE JACKLEIN

Language is a key aspect of being human. For Rudolf Steiner, our ability to speak and to understand the speech of others is essential to our humanity.

The language or languages we speak affect us profoundly at a physical, emotional, and psychological level. The repertoire of sounds required in a given language shape the mouth, tongue, and larynx and determine the movements of which they are capable. How a language expresses past, present, and future influences how we experience time and even how we behave. A recent study indicates that people whose language does not have a future tense (Japanese, for example, in which the present tense expresses a future act) save money at much higher rates than people whose language relegates the future “to the future.” The German language, which often places the verb at the end of a sentence, requires a habit of attentiveness in both speaking and comprehending not needed in languages such as English, in which the verb is typically closer to the beginning.

Rudolf Steiner had much to say about language and the role of language study in education. He held that the specific way of perceiving and thinking implicit in a particular language influences our soul life. Different languages permeate the human being in different

ways, influencing different areas such as music, imagination, will, and intellect. Therefore it is “important to balance the effects of one language by the effects of other languages if we are aiming to create a really human, and not a specialized, national development of man.”¹

Each language gives us a new way to think, to see the world, and to express ourselves. World language study prepares people to be bridges, connectors, middlemen on a local and wider scale. Such study can overcome the narrow nationalism that is merely egoism extended into a much broader, even spiritual, context.

In developing the curriculum for the first Waldorf school, Steiner gave language study an important place. He recommended that language study begin at an early age, six or seven, before the change of teeth, and while the children are still in an imitative stage. He suggested that, from the first grade on, the children study two living languages other than their native tongue and also one classical language (ancient Greek or Latin). Each language should have at least two class periods a week.

Today the benefits of world language study are widely recognized by educators, and, as Dr. Steiner pointed out, the earlier the experience begins, the greater the benefit. World language study develops physical, emotional, and intellectual flexibility. It can promote new ways of feeling and thinking, new ways of experiencing our humanity. World language study can prevent prejudice and distrust and develop understanding and sympathy for other cultures and peoples. It makes possible direct communication with persons of other cultures and can mitigate a narrow, xenophobic nationalism. And, as A. C. Harwood points out: “Even if no opportunity comes for foreign travel, to realise how different one nation thinks from another through the very forms of its language is a liberating experience.”²

Studies of bilingual children indicate that there is “bilingual advantage,” which includes increased working memory, ability to decode meaning in new words (possibly even from completely new languages), and to efficiently process information. These benefits last far into adulthood.³



Learning a world language can help you get from your hotel to the Great Wall for a leisurely Sunday stroll and...

World language study develops capacities that are relevant in other subjects and activities. In the early grades, when participating in quality language instruction, students are likely to strengthen skills such as observation, listening, imitation, counting, moving fingers, coordination, and rhythm. In older grades, students of world languages have the opportunity to further develop their memory, critical thinking, problem solving, language structure, grammar, and understanding of their first language.

In Waldorf Education, we try to develop the whole child. We seek to promote empathy, a respect and appreciation for others, and a deep understanding of self and world. Certainly, world language study should be a key and developed part of our curriculum.

Challenges to World Language Study in Waldorf Schools

In my research, I interviewed teachers, students, and parents in Waldorf schools about world language study. I asked them about the factors that work against an effective world language program. One factor was lack of interest among students (and parents). Many schools in North America are located in unilingual areas. People don't have an immediate need to communicate in another language and don't necessarily see the importance of learning one. Other recurring themes were inadequate funding, lack of sufficient training and mentoring for language teachers, and the relative scarcity of Waldorf-specific resources and materials devoted to this subject. The lack of time in the weekly schedule was also mentioned, a result in part of pressure to dedicate main lessons to "basics" such as math and literacy. Add to these reasons the fact that languages are difficult to learn and require ongoing investment, energy, and commitment by teachers, students, and the broader school community, and it becomes apparent that world language programs face many challenges.

Language teachers in Waldorf schools are often part-time teachers. They may not have had a full Waldorf teacher training. These factors may affect their ability to develop and hold effective, developmentally appropriate language instruction that resonates within the broader curriculum. If



...help you learn the tango in Buenos Aires from a native and...



...help you pass for French at the Louvre and...

language teachers are inexperienced, insufficiently supported, undertrained, and not wholly embraced by the school, it is no surprise that language instruction ends up being a haphazard experience for the students. Because of the importance of and the challenging nature of world language instruction, schools should support world language teachers as much as possible.

World Language Instruction

Successful world language programs require a number of key elements as well as demand commitment and consistent effort from students, staff and community. The following are among the significant aspects of successful programs mentioned by survey participants:

- a well-established, detailed world language curriculum
- languages offered that are relevant to the school community and the school's location and are of interest to the students
- support for ongoing training and professional development opportunities for teachers
- connections between world language instruction with the main lesson curriculum and school events such as festivals
- passionate and interested teachers who truly love the language they are teaching, and who are able to make it come alive by celebrating the beauty of the language
- teachers willing to be humorous or even to look silly in order to engage students



...help you order a typical German meal and...



...get a new perspective on life at a bloodless bullfight in Spain and...

- inclusion of language teachers as valued and integral members of the faculty, who attend faculty meetings, are involved in school decisions, participate in curriculum development, and are fully involved in the life of the community

As in any subject, instruction in world languages is most alive when it speaks to the students in imaginative ways and can be connected to the broader life of the class and school. Rothenbucher suggests starting each language lesson with movement or a personal story that will engage the students. The lessons should be upbeat, joyful, enthusiastic, “inspiring, spirited, amusing, bright, and bold.”⁴ Beckel emphasizes the importance of context in language instruction.⁵ For example, a factual lecture about a foreign country may not be as engrossing as a firsthand account of a humorous journey to visit an old friend. Ideally, language learning is celebrated within the school’s shared framework of festivals and assemblies. Visits from parents who are native speakers and who can teach new songs or new recipes can be very valuable. Harwood states that it is particularly important in world language teaching to have opportunities for children to show each other their work through festive school events. The younger children look up in awe at the older, more fluent children, while the older grades will remember their experience of certain rhymes or fairy tales.⁶ By developing a well-established curriculum and school culture that integrates world languages into the fabric of the school, students will recognize the importance and tacit value attributed to world languages and will be more likely to match these values with their own efforts.

Successful language instruction requires a systematic and thoughtful approach that meets the needs of each stage of child development. Younger students need ample opportunities for imitation, while older students need humor, logic, relevancy, and patience. Students of all ages need committed, capable, and inspiring teachers.

Moving Forward

We as Waldorf educators have the responsibility

to prepare our students to live in today’s—and tomorrow’s—world and to make a contribution to that world. And today, above all, the world needs individuals who are capable of empathy and compassion, individuals who are capable of understanding and relating to persons of other cultures and nations, who are creative and flexible in their thinking, and who have a strong will. High-quality world language study is an important tool in realizing these goals. ☺

Notes

1. Rudolf Steiner, *A Modern Art of Education* (London: Rudolf Steiner Press, 1972), ii.

2. A.C. Harwood, *The Recovery of Man in Childhood: A study in the educational works of Rudolf Steiner* (Spring Valley, NY: Anthroposophic Press, 1958), 136.

3. M. Kaushanskaya and V. Marian, “The bilingual advantage in novel word learning,” *Psychonomic Bulletin & Review* 16, no. 4 (2009), 705–710.

4. Roland Rothenbucher, *Catching the Spirit of German in the Waldorf High School* (Fair Oaks, CA: AWSNA Publications, 2001), 28.

5. Guntram Beckel, “Fremdsprachen in der Waldorfschule—ein Erfahrungsbericht,” *Lehrerrundbrief* (Stuttgart: Bund der Freien Waldorfschulen, February 2011), 85–93.

6. A.C. Harwood, 137.



...help you find your long-lost expatriate Uncle Rob in Japan.



CHARLOTTE JACKLEIN grew up in a bilingual (English and German) household, studied French and Spanish in school, and has made “forays” into other languages such as Icelandic and Inuktitut while working in northern communities. A Waldorf graduate, Charlotte is an outdoor experiential educator, an avid kayaker and bicyclist, and a former class teacher at the Halton Waldorf School. She currently teaches high school humanities at the Whistler Waldorf School in Whistler, British Columbia.

Rudolf Steiner on the Role of Art in Education

BY ROSE EDWARDS, PhD

Every school day of a Waldorf student's life, from kindergarten through high school graduation, is filled with art. Today, children in Waldorf schools (as I did also as a Waldorf student in Germany years ago) play the recorder, move to music and speech with eurythmy, recite poetry, practice speech exercises, perform in plays, learn an orchestral musical instrument, sew, knit, crochet, and embroider, carve wood, draw, paint with watercolors, practice form drawing, model in clay, and sing in a choir.

These artistic activities are not pursued in isolation from the academic subjects as a pleasant diversion or respite from academic learning. Rather, they supplement and deepen the academic work. Every morning main lesson—history, science, literature—typically includes an artistic activity. A botany session might include drawing a plant or the metamorphosis of leaf development. Students studying Renaissance Italy might sing a madrigal by Monteverdi. In the fifth grade, when the students study ancient Greece, the class play might well be an adaptation of the *Odyssey*. And what is done in the designated art classes typically is relevant to what is being done in main lesson.

Steiner wished to found his education on a true understanding of the human being. He said, "A genuine

art of education can only be built on true knowledge of human beings."¹ And in 1924, in one of his last lectures on education, he again asserted, "One could say our education is a teaching based entirely on knowledge of the child, and this knowledge guides us in finding the appropriate methods and principles."²



Photo courtesy of Nelson Waldorf School (BC)

First graders' pentatonic recorders hung up in the colorful cases that the children have crocheted



Steiner's view of the nature and destiny of the human being—based on his scientific-spiritual research—is that the human individual is a spiritual being who has come from the heavenly realms and incarnated on Earth. Each human being comes with the intention and task to develop his or her full capacities as a human being.

A century previous, the English poet William Wordsworth, in his poem *Ode: Intimations of Immortality*, gave a similar vision of the human being:

Our birth is but a sleep and a forgetting:
The Soul that rises with us, our life's Star,
Hath had elsewhere its setting,
And cometh from afar:
Not in entire forgetfulness,
And not in utter nakedness,
But trailing clouds of glory do we come
From God, who is our home:
Heaven lies about us in our infancy!

For Steiner, the human being is comprised of body, soul, and spirit. The spirit is the eternal divine essence possessed by each human individual. The body is the physical manifestation that allows the human being to exist in the material world. The human soul, mediator between body and spirit, has the three faculties or capacities of thinking, feeling, and willing. Each capacity is related to one of the major organ systems of the body—thinking to the central nervous system (brain and spinal cord), feeling to the rhythmic system (heart and lungs), and willing to the metabolic/digestive system and limbs.

The child, according to Steiner, goes through three distinct stages of development. In each, the development of one of the three soul capacities is primary. In the first seven years of life, the child's will faculty develops. Physical and rhythmical activities and also artistic activities lay the foundation for a strong will:

The artistic element works particularly strongly on the will nature of man. In this way we can penetrate to something that is connected with man's whole being.³

It is important to realize the value of children's songs, for example, as a means of education in early childhood. They must make pretty and rhythmical impressions on the senses. . . . Dancing movements in musical rhythm . . . should not be undervalued.⁴

We want to cultivate this will power by allowing the child to do something artistic at a relatively early stage of childhood. Most people do not know the secret connection between the will and working in the proper way in childhood with drawing, painting, music, and the other arts. We do so much good when the child has this opportunity.⁵

Between the ages of seven and fourteen, the development of the feeling dominates. Academic

content must be presented by the class teacher in an imaginative and pictorial way. But here also the artistic activity of the children is crucial:

All teaching [between seven and fourteen] must have an artistic quality based on the pictorial element. The first step is to involve

the whole being of the child in the effort of painting, which is subsequently transformed into writing. Only later do we develop the faculty of reading, which is linked to the head system.⁶

[From the change of teeth on] the world of feeling is developed in the proper way through parables and pictures . . . especially through the pictures of great men and women. . . . A correspondingly deep study of the secrets and beauty of nature is also important for the proper formation of the world of feeling. Last but not least, there is the cultivation of a sense of beauty and the awakening of the artistic feeling. The musical element must

[be cultivated]. Children who are denied the blessing of having their musical sense cultivated during the years from seven to fourteen will be the poorer for the rest of their lives. . . . Nor should the other arts be neglected. The awakening of the feeling for architectural forms, for molding and sculpting, for line and design, for color harmonies—none of these should be left out of the plan of education.⁷

[The child between seven and fourteen] . . . has developed a soul that needs nourishment in the form of images or thoughts. We now have to introduce all teaching subjects imaginatively, pictorially—that is, artistically.⁸

Henry Barnes, a master Waldorf teacher, summed up the importance of the arts in education in this way:

Students who have worked throughout their education with color and form; with tone, drama, and speech; with eurythmy as an art of bodily movement; with clay, wood, fiber, metal, charcoal and ink, have not only worked creatively to activate, clarify, and strengthen their emotions, but have carried thought and feeling down into practical exercise of will. When the Waldorf curriculum is carried through successfully, the whole human being—head, heart, and hands—has truly been educated.⁹

This emphasis on the life of feeling, however, is not unrelated to the later development of the thinking capacity.

When people recognize how much is to be gained



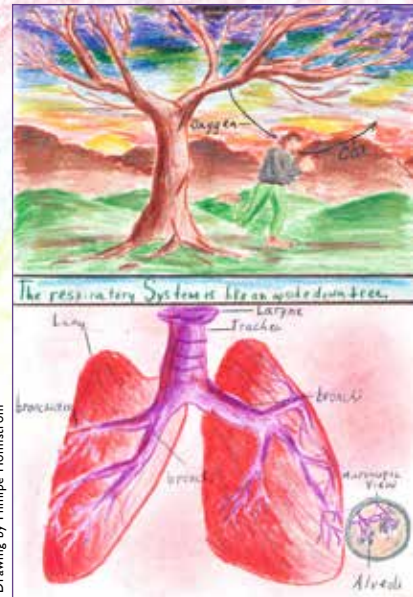
Photo by Aaron Warlock and courtesy of Philadelphia Waldorf School

From fourth grade, all the children learn to play the recorder.



Photo by Ebony Porter and courtesy of Bayou Village School, Houston

Even the youngest children have classes in eurythmy.



Drawing by Philippe Holmstrom

Page depicting the human respiratory system in a main lesson book for a seventh-grade block on health and nutrition.



Photo courtesy of the Eugene Waldorf School

Eighth graders in a production of Shakespeare's Twelfth Night.

for the intellect from this early artistic education of the child, they will be willing to allow art its proper place in the primary school education.¹⁰

In the third seven-year stage of development (ages fourteen to twenty-one), the thinking or intellectual capacity is central. Thus in high school and beyond, appropriate artistic activities, such as playing a musical instrument and doing geometric drawing and projective geometry, are essential to wholesome development. And all artistic activities, insofar as they engage the feeling and will life, can help maintain an optimal balance between the three soul capacities. Art prevents a one-sided overdevelopment of the intellectual capacity.

Thus, for Steiner, art is essential for the healthy development of all the capacities of the child: "Being artistic draws out the whole human being."¹¹ Elsewhere, he states:



Photo courtesy of Vancouver Waldorf School

A high school student making a box in woodworking class

It will be our task to find teaching methods that all the time engage the whole human being. We should not succeed in this were we not to turn our attention to developing the latent artistic sense of the human being.¹²

Steiner even refers to Waldorf Education itself as an art:

Waldorf Education is not a pedagogy

system but an Art—the Art of awakening what is actually there within the human being. Fundamentally, the Waldorf School does not want to educate, but to awaken.¹³

Hence, Steiner, using an understanding of the development of the child and of the particular needs of the child, was able to weave appropriate artistic activities into each stage of the educational/developmental process. Today, in mainstream education, art—if it is included at all in the life of the students—does not necessarily support their healthy development.

So often today, when attempts are made to educate young human beings, it is as if we were actually circumventing the child's real being—as if our modern science had lost direct contact with the child to be educated.¹⁴

I believe that Steiner's contributions to education and to the role of art in education can help rectify this situation by enabling us to remain connected with the child's essential nature. In this endeavor, art has a central role to play.

Art and Waldorf Teacher Education

Ideally, before a person begins teaching in a Waldorf school, he or she has had at least one year of full-time training or the equivalent on a part-time basis. The teacher education programs typically include study of the life and work of Rudolf Steiner and the history, pedagogy, and curriculum of Waldorf Education, as well as practical experience in a Waldorf classroom. The programs also include a great deal of artistic and craft activity, watercolor painting, sculpture and clay/beeswax modeling, theatre arts, music (including instrumental music and singing), storytelling, drawing, and calligraphy. Crafts include handwork (knitting, crocheting, sewing), bookbinding, woodworking, metalwork, weaving, stone carving, and blacksmithing. Arts studies also include the art of eurythmy (a movement art expressing speech



Drawing by Philippe Holmstrom

Cover of a main lesson book for a ninth-grade block on Native American history

and music through gesture), creative speech (involving voice training and poetic/rhythmic speech exercises), and form drawing (freehand rendering of geometrical and patterned forms).

Photo courtesy of Rudolf Steiner Centre of Toronto



This artistic work is to enable the future teacher to be able to teach these various arts to their future students and to weave the arts into all their pedagogical efforts. But it serves also to promote the development of the adult student into a well-rounded human being and hence into a better teacher. Teacher education students and their teachers have found that being actively engaged with color, music and movement, form and space, rhythm, tone, and gesture has the potential for honing skills and creating capacities in the prospective teacher. This development occurs not only in terms of artistic skills, but in the realms of creativity, imagination, and perception. In other words, the arts have been found to improve teacher competencies and facilitate the growth of the sensibilities, strengths, and talents supportive of good teaching.

In addition, upon entering the often unfamiliar and daunting domain of artistic practice, Waldorf teachers-in-training have the opportunity of taking steps in personal growth and inner transformation. Along the path of engaging in new experiences, and no longer able to rely on traditional patterns, they have to learn to overcome inner and outer resistances, ask for help, endure failure, become resourceful, accept setbacks, recognize where problems really lie, show presence of mind, and stay focused.



Clay modeling is an important part of the training of a Waldorf teacher...

To be a successful Waldorf teacher, one must embark on a lifelong path of self-development. Just as the arts are an indispensable resource for the healthy development of the child, they also support the ongoing development of the aspiring and practicing Waldorf teacher. ☉

...as is eurythmy.

Notes

1. Rudolf Steiner, *The Education of the Child* (Hudson, NY: Anthroposophic Press, 1996), 17.
2. Rudolf Steiner, *What is Waldorf Education?* (Great Barrington, MA: SteinerBooks, 2003), 103.
3. Rudolf Steiner, *Practical Advice to Teachers* (London: Rudolf Steiner Press, 1976), 12–3.
4. Steiner, *The Education of the Child*, 23.
5. Steiner, *What is...?*, 44.
6. *Ibid.*, 111–112.
7. Steiner, *The Education of...*, 34–35.
8. Steiner, *What is...?*, 110.
9. Henry Barnes, *Waldorf Education: An Introduction* (Fair Oaks, CA: AWSNA Publications, ca. 1995), 7.
10. Rudolf Steiner, *An Introduction to Waldorf Education* (London: Rudolf Steiner Press, 1985), 6.
11. *Ibid.*
12. Steiner, *Practical Advice...*, 13.
13. Rudolf Steiner, *The Younger Generation* (New York: Anthroposophic Press, 1967), 23.
14. Steiner, *What is...?*, 64.



ROSE EDWARDS (née Schwenk) was born and raised in Germany and attended Waldorf school there. After early training/certification as an occupational therapist, she studied and worked in England. In 1970 she came to the United

States to be a teacher at Esperanza, a newly founded school in inner-city Chicago. Esperanza used Waldorf Education to serve children with special needs. Rose was a class teacher, music teacher, and school program director there until 1988. Then she taught in Waldorf teacher education programs in Chicago and at Rudolf Steiner College in Fair Oaks, California. Intending to set a positive example for her students, Rose dressed with an artistic flair. She demonstrated the truth of a saying often cited by Rudolf Steiner: “The Rose who adorns herself adorns the whole garden.” At the same time, she had a certain modesty and often exclaimed, “I’m just a schoolmarm.” Rose Edwards passed away in 2010.

Computer Education in Waldorf Schools

BY CHARLES WEEMS, PhD

When and how should we teach our children about computers, so that they are prepared for the future?

Over the past decade, parents, educators, politicians, and others have been asking this question more frequently, with a growing sense of anxiety and urgency. Organizations such as the National Science Foundation and the Computer Science Teachers Association answer by proposing a program of computer education beginning in kindergarten. Their recommendations are based more on the philosophy that “earlier is better” than on research into the effectiveness and developmental appropriateness of teaching “computational thinking” starting at age five. (Please see box on the next page.)

Because Waldorf Education waits until adolescence to focus on technology, it can seem by comparison to leave children less prepared. But precisely the opposite is true. Success in a time of social upheaval and rapid change depends more on capacities for imagination, creativity, flexibility, artistry, and a love of learning than on earlier development of abstract, logical, and analytical approaches to thinking, or specific technical skills.



In mainstream education, the principle of “the earlier the better” is generally applied to computer learning.



Waldorf ninth graders learning about how images are digitized

In a world where technology fosters frequent interaction between disparate cultures, people need social and multilingual communication skills. The apparent anonymity of the internet, combined with how it enables governments and corporations to track our activities, demands a strong sense of morality and good judgment. And the passivity that can arise from meeting the world increasingly through a screen must be countered by a passion for real experiences and the courage to take action. In Waldorf kindergartens, play builds imagination, creativity, and empathy for others. Art, languages, drama, and practical work in the elementary grades develop not only those skills but also moral and aesthetic senses. High school weaves judgment and volition into college or vocational preparation. Waldorf Education is already working to prepare children to have the resilience and resourcefulness necessary to prosper in a culture that is growing more intertwined with technology.

Consider instead a question that is rarely asked: “What’s the harm in introducing computational thinking before adolescence?” Education research typically works by testing a new technique on a group of children and measuring the improvement. It is much harder to determine what might have been lost in exchange for a gain.

One obvious loss is when new material displaces existing activities. We know children are more flexible for acquiring skills in music, art, movement, and languages prior to adolescence. So diminishing those areas of activity reduces the opportunity to make the most of that period of development.

Some will argue that learning the use of technology is more important. For example, the Common Core recommends that handwriting be replaced with key-boarding after first grade. But we do not know the broader effects of reducing the time spent developing those fine motor skills. And what happens when

Computational thinking (CT) is a problem-solving process that includes, but is not limited to, the following characteristics:*

- Formulating problems in a way that enables one to use a computer and other tools to help solve them
- Logically organizing and analyzing data
- Representing data through abstractions such as models and simulations
- Automating solutions through algorithmic thinking (a series of ordered steps)
- Identifying, analyzing, and implementing possible solutions with the goal of achieving the most efficient and effective combination of steps and resources
- Generalizing and transferring this problem-solving process to a wide variety of problems

* Operational definition of computational thinking (CT) for K–12 education from the International Society for Technology in Education and the Computer Science Teachers Association, 2011: <https://csta.acm.org/Curriculum/sub/CurrFiles/CompThinkingFlyer.pdf>

we replace the individuation that a child experiences in creating a personal writing style with the uniformity of always seeing his or her words appear in a standard computer font?

Even more difficult to assess is whether training children to think rationally at an early age introduces other deficits. What subtle changes in psychology might result? In the collection of lectures entitled *A Modern Art of Education*, Rudolf Steiner offers an example:

When we train children intellectually before the age of four or five, they take something terrible into life: materialism. The more we raise children intellectually at such an early age, the more we create materialists for later life.¹

By this he means that they become less inclined to place a high value on nonmaterial aspects of life, such as ideals and the human spirit. Steiner also claims that waiting to introduce intellectual thinking until a later stage of development is actually more effective:

Although it is necessary, especially today, for people to be completely awake in later life, it is equally necessary to let children live in their gentle

dreamy experiences as long as possible . . . if you allow the organism to be strengthened without intellectualism, children will move into the necessary intellectualism in the proper way.²

He goes on to say that forcing young children to use intellectual thought too soon is like giving them an inner beating. It can engender resistance to taking it up in later studies. No student should arrive in high school with a preformed self-image that “I’m bad in math and science.” But that is often what we see resulting from well-intentioned efforts to teach those subjects to young children in an intellectual manner.

Regarding children ages nine through twelve, Steiner says,

Nothing is more harmful to children than definitions and sharply contoured ideas, because they lack the quality of growth. . . . A child must be given flexible concepts—ideas whose form constantly changes as they mature.³

The problem Steiner identifies in teaching elementary-age students in terms of facts, data,



Waldorf tenth graders building a binary addition circuit, i.e., a circuit that can add numbers that are expressed in terms of zeros and ones

and set processes is that they learn rigidity in their thinking and come to desire simple answers, rather than gaining confidence in working flexibly with living and evolving concepts.

Expressing a view similar to what the well-known pioneer in the field of child development, Jean Piaget (1896–1980), described in his “formal operational stage,” Steiner says that “before the age of twelve,

children do not understand cause and effect,” but that “through coercion” they can be forced to “take it in.” He says the effect, however, is like “swallowing a stone.”⁴ Needless to say, computational (algorithmic) thinking is largely based on cause and effect.

Evaluating whether delaying the introduction of computational thinking is more effective, or if early introduction causes harm, is nearly impossible. It would require a long-term study, on a large population of students, with a carefully designed assessment. Parents and teachers do not want to wait for the decades such a study would take. There is a sense of crisis that demands immediate action. The easy fix is to start requiring computer use in kindergarten, as recommended by the Common Core.

However, Waldorf Education has nearly a century of experience with teaching children in a manner that accounts for their development. That’s a long-term experiment we can analyze in retrospect. For example, a survey undertaken by the Research Institute for Waldorf Education⁵ found that among Waldorf high school graduates from the years 1991 to 2002, 47% chose science and engineering majors versus 32% for the general population. Clearly, a curriculum that delays rigorous, intellectual, science education until high school has not deterred graduates from pursuing such careers. Indeed, it seems to have had just the opposite effect.

My personal experience with teaching computer science in a Waldorf high school for the last fourteen years is that our students are more than able to learn binary arithmetic, digital logic, and programming. Although many of them major in college subjects other than computer science, a surprising number pick up software and web development skills along the way, and are quite fluent with technology.

Because many Waldorf schools end in eighth grade, however, it is easy to perceive Waldorf Education as being opposed to computers. Again, that is far from the truth. Steiner was very insistent that, once children enter adolescence, Waldorf curricula should focus on technology:

People are surrounded by inventions of the human mind, but have no contact at all with them. It is the beginning of an antisocial life simply to accept inventions of the human mind without at least understanding them in a general way. . . . When children are fourteen or fifteen years of age, we



Waldorf twelfth graders comparing the experience of reading the news on a computer screen versus that of reading it in a newspaper

must focus our energy on connecting them with the inventions of the human mind. This helps them understand and find their place in society.⁶

Prior to that age, students should be working on developing their other capacities so they can approach technology from a strong foundation. As Steiner says, “The main thing is to enable young adults to find their place in the world with real confidence in their own powers of discernment. Thus, they will sense their real humanity, because their education has been completely human.”⁷

If students enter adolescence with a strong sense of self, they are better prepared to study digital technology objectively. It can then be approached as a tool, like any other, with capabilities and limitations that can be understood. With discernment, it is possible to see through the hyperbole that often surrounds new technologies, to grasp the reality of their effects.

Does this mean that children should be kept in a bubble with respect to computer technology until they are teens? Of course not. Waldorf Education at all ages must work with the real world, and computers are a significant part of modern reality. High school is merely the stage in which it is most effective to focus directly on what computers are, how they work, why they behave as they do, and their effects on humanity.

In kindergarten, children are naturally imitative of the adults around them. They learn fundamental lessons about computers from observing how we interact with them. Children know that adults sometimes need to use cell phones or computers. They should see how we decide when that is appropriate, and understand what we use them for.

For example, kindergarten children might be aware that their teacher always turns off her phone before they arrive because she wants to be wholly attentive to them. But one day, she might say, “Children, I need to keep my phone on because my daughter is about to have a baby, and I don’t want to miss that call.” The children will then understand that the teacher has consciously made this choice for an important reason.

On the other hand, seeing people spending large amounts of time interacting silently with a screen while ignoring others around them tells young children that this is a socially acceptable behavior. Hearing adults express a lack of understanding of technology also makes it seem impossible to grasp. However, if teachers and parents model mastery and understanding of these devices, then children develop a sense that human beings control them, rather than being controlled by them.

In the elementary years, children look to the teacher as an authority who brings the world into the classroom. Many parents also look to the teacher for guidance with respect to computer use. For those reasons, teachers should be as knowledgeable regarding digital technology and social media as they are about other subjects.

Today’s children will face modern challenges such as cyberbullying, internet addiction, violations of privacy, online fraud, and many others. Understanding these issues can inform a teacher’s work, from consciously choosing fairy tales and fables that reflect relevant moral lessons in the early grades, to examining internet culture in connection with modern history in eighth grade. Awareness of how personal interactions and experiences of the world are shifting to virtual forms can shape a teacher’s efforts to guide social situations, create community, and develop a deep connection to the natural world.

There is much to be done in the preschool, elementary, and middle school years to help children prepare to enter a world of ubiquitous digital technology. Learning computational thinking can wait for the developmental stage in which abstraction and symbolic reasoning come naturally.

Does Waldorf Education really need to change? Absolutely. A living form of education must continually evolve. But as Steiner so often indicated, the approach begins with inner work. Teachers owe it to the children to educate themselves about this aspect of the world, take it into their meditative

lives, discuss it with colleagues and parents, and then bring it intentionally to their teaching in the context of each developmental stage.

Parents can join in this effort by deepening their understanding and reflecting on their own relationships to technology, then engaging each other and the teachers in conversations about what they hope their children will come to value most as they grow up and become computer users.

Steiner identifies the deeper goal of this education, saying, “The real aim of Waldorf schools is to raise free human beings who can direct their own lives.”⁸

The question is not when computer education should happen. It already begins shortly after birth, and will inevitably occur as children encounter the world. The question is how we will shape their education to enable them to work with technology in freedom. ☺

Notes

1. Rudolf Steiner, *A Modern Art of Education* (Great Barrington, MA: Anthroposophic Press, 2004), 103.

2. Ibid., 103.

3. Ibid., 131.

4. Ibid., 151.

5. David Mitchell and Douglas Gerwin, *Survey of Waldorf Graduates Phase II* (Wilton, NH: Research Institute for Waldorf Education, 2007)

6. Steiner, 158.

7. Ibid., 190.

8. Ibid., 191.



CHARLES (CHIP) WEEMS is an associate professor in the College of Information and Computer Sciences at the University of Massachusetts, Amherst, and a teacher of earth science and computer science at the Hartsbrook (Waldorf) High

School. He has been teaching at the college level for thirty-eight years, and at the high school since it began fourteen years ago. Chip is a member of the Association for Computing Machinery (ACM), the Institute of Electrical and Electronics Engineers (IEEE), the Anthroposophical Society, and the Pedagogical Section of the School for Spiritual Science.

Re-Imagining Mathematics

BY JAMIE YORK

Our Mathematical Crisis

It is well known that the American educational system, particularly in the teaching of mathematics and science, is in crisis. Typically, students in the United States rank between 28th and 35th in the world in these disciplines.¹ This low ranking is not a recent phenomenon, and there is no easy fix. The problem is complex and deep and exists generally in our educational system, even within our Waldorf schools. The root cause of—and the solution to—our math crisis is in our understanding of the nature and purpose of mathematics.

Some time ago at a social gathering, I introduced myself to a woman named Beth. I mention that I am a math teacher, and suddenly my new acquaintance is uneasy, as if I just revealed my identity as a psychopath. I manage to continue the conversation and discover that Beth is suffering from math trauma, even though she hasn't sat in a math classroom for thirty years. Beth says that in the early grades, she liked math and was good at it. Then, starting in middle school, math no longer made sense, and math class turned into a form of torture. Beth fell off the math train.

I have met many people over the years with similar stories. Probably most people in the United States have had a negative experience with mathematics as students. They go through their adult lives saying, "I'm not good at math." What went wrong?

I believe that the underlying cause is that . . .

Very few people truly understand what math is.

The Typical Math Classroom

Students at each stage of their education spend many hours sitting in math class. They watch and listen as the teacher introduces a concept and then demonstrates how to solve related problems. In this manner, students through the grades learn how to solve problems like these:

1. Find the sum: $\frac{1}{3} + \frac{3}{10}$
2. Divide: $2516 \div 37$
3. Find the area of a circle that has a radius of 10cm.
4. Solve: $5x - 3 = 2x + 21$

Students are taught a procedure (perhaps a formula or a step-by-step process) for every problem they encounter. Without remembering the appropriate procedure, the student has little chance of finding the correct answer. The students practice the procedure in class and then also as homework. Eventually they



The writer explains Pascal's theorem, part of the projective geometry curriculum taught in Waldorf high schools. In projective geometry, infinity is an important concept.

take a test to determine if they have mastered the material.

However, students often do not understand what they are doing. They don't grasp the math behind these procedures. Hence, for most of them . . .

Math becomes a collection of blind procedures used to solve meaningless problems.

Of course, to some degree, mathematics education must involve a certain amount of work with procedures. But there are three pitfalls with procedural math:

- *Too young.* We teach too much material to students who are too young to truly understand it.
- *Blind procedures.* Students are taught to follow step-by-step processes blindly. They are not shown the mathematical principles behind these procedures.

- *Too much.* There is an overemphasis on procedures and “math skills” to the exclusion of problem solving and other aspects of math that develop mathematical thinking.

It is not surprising then, that by the time they reach adolescence, many students, burdened by an excess of blind procedures, are overwhelmed and fall off the math train. So if math isn’t simply the memorization of procedures, then we are left with an important question . . . *What is math?*

Math is an Adventure

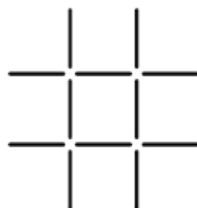
Mainstream math textbooks are typically packed with contrived problems to try to make math seem fascinating and important. Students are told, “You’ll need to use math later in life” or “Math is a language for science and other subjects that you’ll study in college.” Nevertheless, for many students, math is dull and meaningless. As teachers, we know that there is much more to math than memorizing procedures and developing skills that you will need in the distant future.

Paul Lockhart, a university mathematician turned elementary school math teacher, wrote an essay in 2002 entitled “A Mathematician’s Lament.”² In it he describes the modern mainstream math curriculum as “soul-crushing.” Lockhart argues that, just like poetry, music, painting, and literature, mathematics is an art, and should be taught as such. “Math is not a language,” he says. “It’s an adventure!”

What would it be like for our students if math were presented as an adventure? Consider the following puzzle.

Puzzle #1:

The diagram below shows 12 sticks in a particular arrangement. Move 3 sticks, so that you end up with exactly 3 squares. Every stick must be part of a square. No two sticks may be placed on top of each other or side-by-side.



Get out some toothpicks or matchsticks and try it! The puzzle is fun, engaging, and challenging.

Solving this puzzle stands in direct contrast to using a procedure to solve a problem. With such a

puzzle, a student may protest, saying, “You haven’t shown me what to do!” The student may struggle or become frustrated.

This sheds light on an important aspect of mathematics . . .

Struggle is an important part of doing math.

Here is another example of a mathematical adventure and process of discovery, one appropriate for fifth graders.

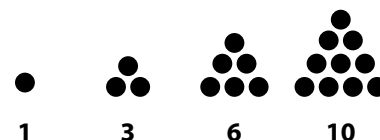
Puzzle #2:

The ancient Greeks were interested in patterns. One such sequence of numbers they investigated (shown below) is called triangular numbers. Answer the following questions:

a) What are the next ten triangular numbers?

b) What are the square numbers?

c) Is there anything special that you notice about these two kinds of numbers?



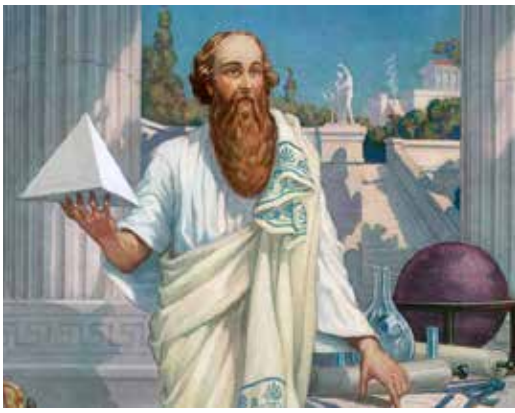
Working with triangular and square numbers and discovering the patterns that emerge is a guaranteed way to engender enthusiasm in the fifth-grade classroom. It is a wonderful moment when the students discover on their own—rather than being told by the teacher—that the spacing between the square numbers (1, 4, 9, 16, 25 . . .) is consecutive odd numbers. In other words, going from 1 up to 4, 3 is added; going from 4 to 9, 5 is added; going from 9 to 16, 7 is added, and so on. Perhaps even more exciting is the students’ realization of the mathematical law stating that any two consecutive triangular numbers always add up to a square number (e.g., $3+6=\underline{9}$ or $6+10=\underline{16}$ or $10+15=\underline{25}$). That’s a mathematical adventure!

Now let’s try a puzzle that works well for high school students or adults. Be aware that the four questions get increasingly difficult.

Puzzle #3:

A factor is a number that divides evenly into a given number. Every positive whole number has a certain number of factors. For example, the number 50 has 6 factors (1, 2, 5, 10, 25, 50). The questions are then as follows:

- Give at least one number that has exactly 8 factors.
- Give at least one number that has exactly 5 factors.
- Give at least one number that has exactly 13 factors.
- What is the smallest number that has exactly 45 factors?



Pythagoras (582–507 BC)



Plato (427–347 BC)



Rudolf Steiner (1861–1925)

Pythagoras, Plato, and Rudolf Steiner all held that the study of mathematics is essential to moral, intellectual, and spiritual development.

The students' initial reaction to such a puzzle will probably be, "I have never seen anything like this before! I have no idea what to do!" That's exactly what problem solving is! Problem solving is an important tool for developing mathematical thinking. It is a tragedy of our mathematics education today that such problem-solving experiences have almost no place in our classrooms.

Preparation for the Future

Here parents might have a legitimate concern. "Math puzzles and mathematical adventures are nice, but will they prepare my child for college and beyond?" This concern, even fear, lies behind our current math curriculum crammed with too many topics, superficial learning, and one blind procedure after another.

I believe that, broadly speaking, there are three critical ingredients that our students need in order to be prepared for their future math studies in high school or college:

1. *Enthusiasm for learning.* If our students are truly enthusiastic about learning math, this naturally leads to interest in the material, and a motivation to do excellent work.
2. *Mathematical thinking.* If we can effectively develop true mathematical thinking in our students, they will be able to think analytically and problem solve as adults in the world.
3. *Basic math skills.* Yes, skills are important! However, the list of necessary skills isn't as daunting as we are often led to believe.

Focusing on these three fundamental goals can completely transform our teaching of math. The current skills-dominated approach—with 95% of

math classroom time spent on skills work—does not achieve these three goals. It certainly does not instill enthusiasm for learning, nor does it develop mathematical thinking. And it doesn't even necessarily lead to the enduring mastery of basic skills. In order to reach these three goals, we need to find ways to carve

out classroom time to allow for problem solving and mathematical experiences.

Higher Purposes of Teaching Math

The teaching of mathematics is not only concerned with preparing students for college and careers. Rudolf Steiner spoke emphatically about a higher purpose for the teaching of mathematics.

- *Math teaches students how to think.* We want our students to be able to think for themselves, to think analytically, and we hope that their thinking is heartfelt and imbued with imagination.
- *Math promotes character development.* Math teaches students discipline, perseverance, patience, and how to deal with mistakes. Math can teach young people how to struggle productively—to work through a challenge or problem to its conclusion.
- *Math combats cynicism.* In today's world, our youth can easily come to believe that things are meaningless and without purpose. Cynicism is a pervasive societal disease today. By teaching math in the right way, we can show our students that the world is true and beautiful, and that it is worthy of awe and wonder.
- *Math helps us become fully human.* Math, like music, drama, painting, and literature, is an art and a basic part of what it means to be a human being. Through these subjects, we learn what it means to be human.
- *Math promotes moral and spiritual development.* Rudolf Steiner speaks of mathematics as training in sense-free thinking, thus an important part of a student's moral and spiritual development:

The student of mathematics must get rid of all arbitrary thinking and follow purely the demands

of thought. In thinking in this way, the laws of the spiritual world flow into him. This regulated thinking leads to the most spiritual truths.³

This more elevated approach contrasts with the teaching of mathematics in a more mechanical way, as if students were machines, performing tasks without the need for thinking. Instead, we need to realize that we are developing the human being through all of our pedagogical endeavors, including—significantly—through math. ☺

Notes

1. “Asia tops biggest global school rankings,” BBC News, May, 13 2015.

<http://www.bbc.com/news/business-32608772>
 “U.S. students improving—slowly—in math and science, but still lagging internationally,” Pew Research Center, February 2, 2015. <http://www.pewresearch.org/fact-tank/2015/02/02/u-s-students-improving-slowly-in-math-and-science-but-still-lagging-internationally/>

2. Paul Lockhart, “A Mathematician’s Lament,” 2002. https://www.maa.org/external_archive/devlin/LockhartsLament.pdf

3. Rudolf Steiner, *Spiritual Ground of Education*, lecture given at Oxford, August 21, 1922, GA 305.

Solutions to puzzles

1) See diagram at the right.

2) a) 15, 21, 28, 36, 45, 55,
66, 78, 91, 105

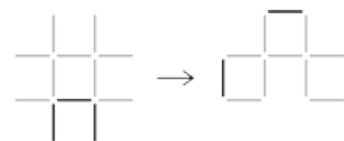
b) 1, 4, 9, 16, 25, 36, 49,
64, 81, 100, 121, 144

3) a) $30 (= 2^1 \cdot 3^1 \cdot 5^1)$, $24 (= 2^3 \cdot 3^1)$, $54 (= 2^1 \cdot 3^3)$, and $128 (= 2^7)$ are some of the possible answers.

b) $16 (= 2^4)$, $81 (= 3^4)$, and $625 (= 5^4)$ are some of the possible answers.

c) $4096 (= 2^{12})$ and $531,441 (= 3^{12})$ are two of the possible answers.

d) 3600



JAMIE YORK graduated from engineering school in 1985 with a computer science degree and then began his career as a math teacher. After a two-year stint as a Peace Corps volunteer in Nepal, a destiny meeting with a Waldorf teacher led him to Shining Mountain Waldorf School in Boulder, Colorado. In 2015, Jamie completed his series of curriculum books, *Making Math Meaningful*, for grades one through twelve. Now, Jamie is focused on his math missionary work, as he consults internationally and trains Waldorf math teachers as a faculty member of the Center for Anthroposophy in Wilton, New Hampshire.

Book Review

Germans are Funny:

A Guide to Teaching Foreign Languages

One valuable Waldorf-based resource for teaching world languages to adolescents is a book by Conrad Rehbach with the unlikely title *Germans are Funny*. (A 2011 poll of 30,000 people around the world determined Germans to be the least funny nationality!) Rehbach draws on his long experience teaching German to Waldorf high school students in America to share many helpful hints in making language lessons engaging and fun. Among the activities he has used to engage adolescents in language study are paying an imaginary visit to a German pizzeria, attaching humorous captions to random photos, reviewing the action in German in an Arnold Schwarzenegger movie, telling humorous stories about an

exploding outhouse, reciting nonsensical but rhyming poems, and doing a treasure hunt that culminates in hidden bars of German chocolate. While the examples in the book grew out of Rehbach’s German classes, the book is meant to be helpful to all teachers of world languages. The underlying message is that the world language teacher needs to be imaginative and uninhibited to get and hold the attention of teenagers. Decorum and a staid persona must be sacrificed at the altar of learning! *Germans are Funny* is available at amazon.com.

—R. E. K.



A Question of Character

Résumé Skills or Eulogy Virtues?

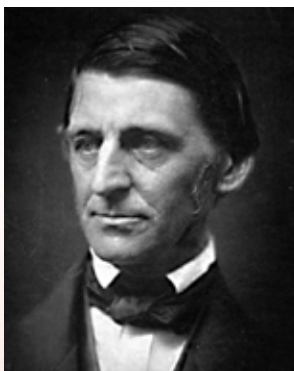
BY DAVID SLOAN

Character education is a much discussed topic these days. *The New York Times* columnist David Brooks wrote an article in April 2015 entitled “The Moral Bucket List,” in which he confesses a genuine regret in his life. The article begins:

About once a month I run across a person who radiates an inner light. These people can be in any walk of life. They seem deeply good. They listen well. They make you feel funny and valued. You often catch them looking after other people. . . . Their manner is infused with gratitude. They are not thinking about what wonderful work they are doing. . .

When I meet such a person it brightens my whole day. But I confess I often have a sadder thought: It occurs to me that I’ve achieved a decent level of career success, but I have not achieved that generosity of spirit, or that depth of character.¹

Brooks’ self-effacing candor is admirable. Later in the article, he makes an important distinction between two sets of attributes: résumé skills and eulogy virtues. The first refers to what we bring to the job market, our actual (or perhaps slightly inflated) skills and experiences that we hope will appeal to an employer. The second refers to those qualities that friends might mention at our funeral: our kindness, courage, integrity, faithfulness, generosity.



Ralph Waldo Emerson (1802–1881) was a strong proponent of education for character.

Brooks laments that while we all know eulogy virtues are far and away the more important, our current culture and educational system seem to value résumé skills over qualities of character. For decades, most mainstream schools have focused on training young people for career success rather than the cultivation of that “inner light” Brooks describes.

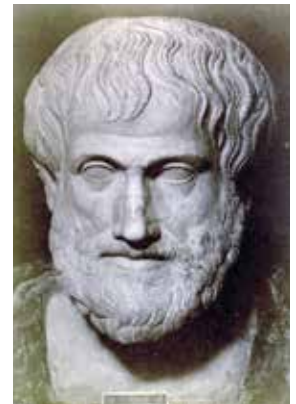
It wasn’t always that way. When Ralph Waldo Emerson

stated emphatically in his 1837 “American Scholar” address that “character is higher than intellect,”² he was declaring his position in an educational debate whose roots can be traced all the way back to the Golden Age of Greece. Aristotle articulated the dilemma as follows:

Neither is it clear whether education is more concerned with intellectual or with moral virtue. . . . No one knows on what principle we should proceed—should the useful in life, or virtue, or higher knowledge be the aim of our training?³

However, Aristotle made it clear where he stood on this matter:

Any occupation, art, or science, which makes the body or soul or mind of the free-man less fit for the practice or exercise of *virtue* [my italics], is vulgar. . . .⁴



Aristotle (384–322 BC)

Indeed, the ancient Greeks would have been mystified by the recent direction of our country’s one-sided emphasis on résumé skills, that is, on academic achievement with career success in mind, instead of on the eulogy virtues associated with character education. Mandated standardized testing—as well as the federal funding consequences linked to student performance—has led to an alarming narrowing of curricula, including the curtailing of the arts, physical education, and even recess in many schools. According to



In ancient Greece, dance and rhythmic movement was an integral part of education



one urban superintendent of schools, “We are intent on improving academic performance. You don’t do that by having kids hanging on the monkey bars.”⁵

The great educators of ancient Greece—Socrates, Plato, and Aristotle—would have pointedly disagreed. In ancient Athens, young people spent their school days engaged in gymnastic exercises, choral singing, dancing in geometrical patterns, learning to play stringed instruments, and listening to and reciting stories of gods and heroes. The Greeks understood a fundamental law that some educators have forgotten in their single-minded concern for testing results: true schooling of the whole human being requires the education of the body and the life of feeling, as well as the cultivation of the mind.

It would have been unthinkable for the Athenians to do away with physical exercise and artistic instruction. Far from being frills, such activities were crucial in the instruction of *arête*. Difficult to translate, *arête* refers to a human quality that the Greeks esteemed above all else. It might be inadequately rendered as “the paramount virtue—divinely imbued, all-round excellence.” By its very nature, the pursuit of *arête* was holistic, aiming at the full development of the whole human being in body, mind, soul, and spirit. It was character education at the highest level.

It was no accident that Plato was a champion wrestler. When youths learned wrestling techniques, they



Hitting the target with a javelin was understood to help to “hit the target” in public oratory.

were also preparing themselves for training in philosophy, i.e., “grappling with ideas.” The ancient Greeks threw the javelin not only to prepare to compete in the Olympic games, but to become better public speakers. They believed that the act of delivering a spear to its target improved their ability to deliver an oration. The intimate links

between music and mathematics, between movement and mental activity, were intuitively known by the ancient Greeks.

This Greek ideal of educating the whole human being served as a pedagogical model for centuries.

However, in the nineteenth and early twentieth century, the rise of two inexorable forces—intellectualism and industrialization—led to an unfortunate merger. Assembly-line production, the manufacture of identical products from standardized component parts, was developed as a perfect system for the industrial age. The approach worked wonders in the automotive industry. Unfortunately, it was also applied to the American system of educating children, and the long-term results have been calamitous. Today, too many of our educational institutions still bear the stamp of this assembly-line method. They value conformity over creativity, predictability over leaps of imagination, fill-in-the-blank and test-taking strategies over critical-thinking skills.



December 1, 1913: The assembly-line production of automobiles begins at the Ford Motor Company plant in Detroit.

However, in some quarters, educators are awakening to the harsh reality that this obsessive insistence on résumé skills simply has not worked. International test scores for American students have not improved in the past decade,⁶ despite the one-sided emphasis on academic proficiency over so-called “enrichment” subjects such as the arts, world languages, and physical education.



A first-grade class, Chicago, 1952

Several years ago, educators in seven California school districts formed a collaborative called CORE (California Office to Reform Education). They received a waiver from the standardized testing requirements of the No Child Left Behind Act. They also instituted a new blueprint of accountability to measure such subjective qualities as motivation, perseverance, self-control, and social intelligence in students.⁷



Photo by Amy Jenkins and courtesy of Cobb Meadow School (NH)

Waldorf early childhood educators use puppet shows to tell fairy tales and stories to the children.

On the other side of the country, the staff at the Riverdale Country School in the Bronx have developed a system to assess a student's personal growth. Alongside the traditional GPA (grade point average), they have established a CPA (*Character Point Average*), which measures a student's progress in seven key areas:

zest, grit, self-control, social intelligence, gratitude, optimism, and curiosity.⁸

It is not surprising that mainstream schools finally are attempting to quantify such intangibles, now popularly termed “nongognitive” or “social-emotional” skills. What is surprising is that they have not looked more to Waldorf Education as a longtime proponent of eulogy virtues. For decades, Waldorf teachers have modeled their schools after the holistic Greek approach to schooling, infusing the cultivation of those eulogy qualities into almost every aspect of the curriculum.

Implicit in the Waldorf ideal of schooling the “head, heart, and hands” is the idea that soul qualities are as important to cultivate as intellectual capacities. As early as the nursery-kindergarten, the children are learning the values of sharing when they play, of patience when they must wait for the bread to bake that they have helped to knead, of goodness and kindness when they experience archetypal puppet shows such as *Queen Bee*. Indeed, storytelling becomes a primary vehicle for the schooling of the soul, from the fairy tales, fables, Bible stories, and Norse myths related in the elementary school to the more adult “fairy tales” that high school students read: *Moby-Dick*, *Gilgamesh*, the *Odyssey*, *Hamlet*, *Parzival*, *Faust*, and *The Grapes of Wrath*.

Every high school teacher understands that true character education cannot contain even a trace of proselytizing or preaching. How far would we teachers get by simply exhorting adolescents to love truth, beauty, goodness? Anyone who has raised or taught teenagers knows that in this regard, heeding Emily Dickinson's admonition is a wiser course than sermonizing. “Tell all the truth, but tell it slant/Success in circuit lies. . . .”⁹

Literature thus becomes essential to character education. Critical reading and analytical writing skills are important, but the values embedded in the epics and classic stories students read can have a character-shaping influence. The self-restraint that Odysseus must develop in the face of his many trials, the authenticity that Hamlet is desperate to realize in the face of pervasive treachery, the acceptance that Gilgamesh finally embraces when he recognizes he cannot bring Enkidu back to life—these qualities can all work deeply into young people's souls.

In a ninth-grade course I teach entitled “History through Drama,” students are often struck by the distinctions between the words *personality* and *character*. *Personality* comes from the Greek word *persona*, which means “mask,” while *character* derives from a word that means “to carve” or “to engrave.” The students discern almost immediately that *character* suggests a deeper meaning than that signified by the more superficial, changeable term *personality*. Engraving takes more time and exertion than putting on or taking off a mask. Thus, character qualities must be carved into people's souls over many years.

This points to one of the greatest differences between résumé skills and eulogy virtues. Résumé skills tend to be “front-loaded,” usually compressed into a person's years of schooling. Eulogy virtues are developed over time, even over a lifetime. When Rudolf Steiner called Waldorf Education “an education for life,” surely he was taking into account these soul qualities that can take decades to ripen.



An array of masks used in ancient Greek drama, each depicting a *persona*, a *personality* or “face to the world” that one can easily put on

Waldorf teachers take up Steiner's vision of education with the utmost seriousness. Of course we understand that one primary responsibility is to prepare students to meet life's near-term challenges in college and the workplace. But we strive also to help them develop qualities of character that will enrich and give meaning to their entire lives. These qualities include an inner strength, a resourcefulness, a resilience that is essential for coping with the frustration, disappointment, and grief that life inevitably presents.

In our current cultural climate, however, a growing trend in parenting is making the development of those inner resources a difficult task. Parents have an innate, biological impulse to protect their children from danger. In most circumstances, this impulse is desirable, even essential. Yet when parents are overly protective, when they coddle and indulge their children to such an extent that young people are insulated from even minor discomforts, they may be impeding the cultivation of character.

A growing number of educators are recognizing the consequences of coddling. Parents who attempt to shield their children from hardships may be contributing to a legion of young people with two troubling characteristics:

1. an inflated self-image, i.e., an overblown sense of one's own importance, aided in no small measure by a technology that makes possible and promotes "selfies" and Facebook pages where a young person can "star" in his or her own narratives;
2. a low tolerance for disappointment and frustration. As a result, young people look for, and need, approval and validation, and will go to great lengths to avoid high-risk situations that might lead to the dreaded "f" word—*failure*.

One work of literature used in every Waldorf high school can be an antidote to this narcissism and fear of failure. The story of *Parzival* concerns a young man who dreams of becoming a knight, but who doesn't understand at first that he is being called to become a knight of the Word, not the sword. Because Parzival relies too much on other people's advice, and because he mistakenly applies that advice coming out of the past to address the unique needs of the present, he fails in the biggest test of his life. Confronted with a mystery involving the suffering of his host, who is the Lord of the Grail, Parzival cannot find it within himself to ask a simple question.

It then takes Parzival years of wandering, deprivation, and doubt before he develops the character qualities necessary to return to the Grail castle. When, out of a deeply felt and genuine sense of compassion for his host's suffering, Parzival finally does ask the question "What ails thee?" he immediately heals the king and, in a broader sense, the entire kingdom.

Perhaps above all, Parzival's journey demonstrates to young people that failure is not a disastrous endpoint, but a lesson waiting to be learned. The story is the highest example of those eulogy virtues that David Brooks cited. Parzival must develop the requisite character qualities that all of us must find within ourselves:

Gustave Doré (1832–1883)



Parzival, approaching the Grail Castle, is the archetype of the young person seeking a moral and spiritual compass in life.

self-awareness, empathy for others, and the resilience to persevere in the face of life's inevitable blows. ☉

Notes

1. David Brooks, "The Moral Bucket List," *The New York Times Sunday Review*, April 11, 2015.
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3. Aristotle, *Politics*, Book Eight, part two: classics.mit.edu.
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DAVID SLOAN has been teaching in Waldorf high schools since 1979, including Green Meadow in New York, Shining Mountain in Colorado, and currently, Maine Coast (formerly Mericoneag) Waldorf School. He is on the faculty of the Center for Anthroposophy's high school teacher training in Wilton, New Hampshire. He has given talks widely on Waldorf Education and is also the author of two pedagogical books, *Stages of Imagination: Working Dramatically with Adolescents* and *Life Lessons: Reaching Teenagers through Literature*. He has recently had a book of poetry published, *The Irresistible In-Between*, and has had poems appear in numerous national journals. At present, he is enjoying one of life's greatest delights—grandfatherhood!

Gap at Glen Brook

A Waldorf Gap Semester

BY JAKE LEWIS

In a refurbished farmhouse in the Monadnock region of New Hampshire, seven recent high school graduates wake to begin their day together. They walk to the barn for morning meditation, and then share the task of preparing breakfast. They spend part of the morning learning construction techniques from an experienced builder, then put those

skills to work building a new mobile chicken coop for the farm. The rest of the morning they work on their writing skills through in-depth feedback sessions with their peers and guest teachers. After lunch, they go through the preparation list one last time before packing their bags for an upcoming canoe expedition. This is not a typical college schedule for freshman year—in fact, it's not a college schedule at all. Instead, this is a typical day for students in a semester-long gap year program at Camp Glen Brook.

Learning to prepare one's own meals is an important part of the transition to adulthood.

At one time, not that long ago, it was assumed that the typical college-bound high school senior would graduate in June and start college that same September. Today, however, high school students are thinking critically about their education, and are looking for an education in a broader sense. They don't want to go to college simply because it's the next step and are not just asking, What do I want to do? or, What do I want to study? but more importantly,



Gap students participate in the autumnal New England ritual of making apple cider.



Who do I want to be? This has led to the growing popularity of the “gap year.” Instead of going right into college, students take a year to work, travel, or in some other way get some experience in the nonacademic world. The gap year, it is hoped, will mature the student and make the college experience more meaningful.

The American Gap Association (AGA) is an organization committed to increasing awareness of the many proven benefits of gap years. It defines a gap year as an experiential semester typically taken between high school and college in order to deepen practical, professional, and personal awareness. Taking a gap year is a growing trend in the United States, and many colleges recommend the experience to their successful applicants. Benefits of a gap year have been studied in both the United Kingdom and in Australia and include an increase in college and career attainment for students in those countries. While students take gap years for many different reasons, the desire to develop an increased sense of purpose and of engagement with the world is universally shared.

Camp Glen Brook is owned and operated by the Waldorf School of Garden City in New York. The facility has been offering outdoor educational experiences informed by Waldorf principles for seventy years. Located on a 240-acre property in southern New Hampshire, not far from Keene, home of the Monadnock Waldorf School, the camp includes extensive woodlands and fields, a working biodynamic farm,



Woodworking is a key element in the Gap curriculum...

a maple sugaring operation, a ropes course, and accommodations to house and feed large groups. Camp Glen Brook is busy all year with a summer camp, winter camp, and visits by classes of children from Waldorf—and other—schools all over the Northeast and beyond.

A few years ago, other staff and I reflected on our various summer and school programs, which serve children and young adults from early childhood to seventeen or eighteen. We realized that our responsibility and mission to prepare young people for lives of creativity, compassion, and stewardship need not stop at senior year. Reflecting on my own transition to college, I recognized that there were important questions that I had yet to adequately explore at that time: What does it mean to be a good human being? What does it mean to live a good life? What is my responsibility to the world? and even, How do I cook for myself?

And so, in September 2015 we created “Gap at Glen Brook,” a semester-long homestead-style experience for high school graduates. Seven students, four girls and three boys, enrolled in the program. Four had attended Waldorf schools. The program they went



...and last year the students built a chicken coop for the farm.

through focused on five areas: writing, outdoor education and adventure, carpentry and building, independent living and homestead skills, and personal reflection and inquiry.

Developing skill in various types of writing—personal/reflective, creative, academic, and practical—is one of the central experiences in Gap at Glen Brook. Good writing allows us to reflect on our experiences, to tell our story, to form and



The majesty of nature is a stimulus to self-reflection and self-discovery...

express clear ideas about the world. In all the types of writing they do, the students learn to clearly communicate a message and to use strong imagery to create an experience for the reader.

Another focus is on outdoor adventure and the leadership skills related to it. Through backpacking trips, canoeing expeditions, rock climbing and high-ropes experiences, and training in group dynamics and risk management, the students can better understand their relationship to the natural environment, to others, and to themselves. Wilderness experiences are a powerful catalyst for personal transformation and growth.

In the carpentry and building activities, the gap-pers are introduced to the tools of carpentry and construction and their use. They plan and carry out individual projects. This year students began by crafting their own small side tables, and finished by constructing a mobile chicken coop, learning the basics of functional building design along the way.

“Thank you for a truly amazing semester. I accomplished things I never thought I could have. Through your guidance and compassion I was able to gain a strength and confidence that I don’t think I could have acquired without your help and support.”

—Gap at Glen Brook graduate



...as is experiencing nature through artistic activity...

As part of the independent living and homestead skills focus, all learn how to cook, guided by the expertise of Glen Brook's culinary director. Being able to use produce from the camp's own farm makes the idea of self-sufficiency come alive. The students also visit local businesspeople, craftspeople, and artists to see how entrepreneurial individuals have created their own distinctive, wholesome lifestyles.

The last focus area of Gap at Glen Brook, the red thread that runs through the whole program, is what we like to call "living wisely." Gappers are encouraged to reflect upon themselves, about what they do and how they do it, how they want to "show up" in the world. This carries over into every activity.



...and as is sitting quietly together in the forest.

Gap year, as the AGA describes it, is about inviting students to confront their inherited definitions of success by exploring variations of what "success" looks and feels like. Through this exploration,

students can embrace the challenges of college or independent life with a deep understanding of what their personal values are, and have the courage and competence to live according to them.

This past autumn, seven high school graduates spent three months living in a farmhouse on a hill at Glen Brook. They practiced meditation; they cooked, cleaned, and cared for their space; they learned to build, to find their voice as writers, to adventure into wild places. When they left the hill, it had become their home—a place that they had shaped together.

The gappers are spending the second half of their year in various ways: doing a language-immersion



The Gap students crossing a bridge in New Hampshire's White Mountains

program in Germany; interning at a dance studio; starting a wholesale business; and writing a novel. Having spent the first half of their gap year at Gap at Glen Brook, each is more prepared than ever to answer the question: Who do I want to be? ☺



JAKE LEWIS has worked seasonally at Glen Brook since 2007 and as director of Gap at Glen Brook since 2014. A magna cum laude and Phi Beta Kappa graduate of Bates College, Jake worked previously at the Pasadena Waldorf High School in California. He helped prepare for the school's opening, then worked on a variety of projects, including outreach, curriculum development, and schedule planning. He also coordinated the high school's trips program, bringing classes to amazing wilderness areas in Southern California.

A School Inspired by the Principles of Public Waldorf Education—Results of a Stanford Research Team Study

BY LIZ BEAVEN, EdD

Waldorf Education, introduced into the United States in 1928, existed for decades as an independent school movement. In the early 1990s, the first public school to adopt principles and practices inspired by Waldorf Education was founded in Milwaukee, Wisconsin. Recently, many publicly funded charter schools inspired by the principles of Public Waldorf Education have come into existence. In 2014 Rudolf Steiner College, a center for Waldorf teacher education in Fair Oaks, California, funded a study carried out by an independent team of researchers from the Stanford Center for Opportunity in Education on the effects in a public school of implementing practices inspired by the principles of Public Waldorf Education. The study focused on the Alice Birney School in Sacramento. This article discusses the results of that research.

As parents or teachers, we have chosen an educational path less traveled. Our reasons for setting out on this path are numerous and varied, but many of us were initially drawn to the protected, peaceful environment that a Waldorf school provides. We share the desire to give our children the gift of a safe, nurturing, and happy childhood, to support their healthy development, to honor their unique individuality, to foster their gifts and potential, and to prepare them for a rapidly changing world and an unknowable future.



In the Rose Ceremony at the start of the school year, eighth graders present roses to the new first-grade students.

Despite these carefully considered and important goals, questions or doubts may await us along the path. Will it all turn out well for my child? Will he learn to read? Will she be equipped for college and the career of her choice? Have we restricted our options? Will our children be strong, happy, resilient, and ready for whatever life may bring? When

the questions crop up, or when doubt pays a visit, it is helpful to be able to call on objective data and evidence from research, to have clear answers about the outcomes of Waldorf Education.

A recently published report offers a fresh, helpful perspective and evidence on the positive and lasting impact of the application of the principles of Public Waldorf Education.¹ The report documents the results of research that was conducted in Sacramento, California, by a team from the Stanford Center for Opportunity Policy in Education (SCOPE). The study focused on the Alice Birney K-8 School, a district public school of choice located in the Sacramento City Unified School District. Alice Birney, founded twenty years ago, is one of the oldest schools in the country with an educational approach inspired by the principles of Public Waldorf Education, and one of the few that is not a charter school.

The Research Project

Led by researcher Dr. Diane Friedlaender and under the direction of nationally known educator Dr. Linda Darling-Hammond, the study sought to understand how and how well the educational practices at Alice Birney address students' academic, social, emotional, physical, and creative development. The study also explored how the school was first able to become established within the setting of public education and then continue to thrive over a long period of time.

During the 2013–14 and 2014–15 school years, the research team spent many hours at the school and at the two other schools in the Sacramento area that are inspired by the principles of Public Waldorf Education—George Washington Carver High School of Arts and Sciences and A.M. Winn Elementary. The team observed classes and school events, including an exhibit of eighth-grade student work. They conducted extensive interviews with teachers, staff, parents, students, founders of the schools, and with district staff. They also spoke with Rudolf Steiner College administrators and with alumni of the Alice Birney School. The researchers observed



Students and teacher work on a wall mosaic of tiles hand-painted by students.

faculty meetings and teacher education and professional development workshops. Their explorations took in the history of the school, from early meetings of a group of teachers dedicated to widening access to Waldorf Education, through relocations of the school site, struggles with the district, changes in school leadership, and legal challenges regarding the role of Anthroposophy (Waldorf's underlying philosophy) in a public school setting.

In addition, the team was given full access to district and school student records and was able to compare the results of standardized tests with those of comparable students at other Sacramento public schools. These records provided an objective basis for comparison. Student achievement in standardized tests is the outcome most widely used in assessment of contemporary education. The team studied data on student attendance and suspension rates and examined student characteristics including gender, free and reduced lunch status, race and ethnicity, language, and special education status. Looking beyond the Alice Birney experience at longer-term outcomes of the school's approach, they tracked two eighth-grade cohorts for high school enrollment and completion.

The Research Results

As a result of this extensive work, the research team concluded that, very simply put, practices inspired by the principles of Public Waldorf Education produce substantial, positive results for students in a wide range of areas.

The researchers emphasized several factors that have overarching importance in explaining the school's success:

1. *The holistic or "whole-child" approach to education* that they found to be much in evidence at Alice Birney. The researchers wrote:



One of the keys to the school's success is the involvement of parents. Here, mother, father, and son are knitting together.

[The] approach differs from many other public schools in the extent to which Birney extends its focus beyond providing students with specific knowledge and skills to prepare them for college and career, to also preparing children for meaningful lives in the broadest sense by

developing them for physically, socially, artistically, and cognitively meaningful engagement with the world.²

2. *Rudolf Steiner's comprehensive "theory of child development and goals for nurturing human development."*³

The researchers found the impact of this perspective in every aspect of the school, guiding "how children experience school including the curriculum, pedagogy, and structure of the school."⁴

3. *The positive impact of "sustained relationships" that were evident between students and teachers, among teachers, and with families.* One aspect in particular stood out—the gift of time for a teacher who works with a class over a period of years. Under these conditions, "teachers can be responsive to the students' needs, readiness for new learning, and skill development."⁵

Findings

The research findings speak of significant success. The Executive Summary affirms: "The instructional approaches at Birney lead to strong student outcomes."⁶ Birney students have low transiency and suspension rates and positive achievement outcomes on standardized state assessments. Of note, given the challenges in contemporary education, results were particularly strong for African-American, Latino, and socioeconomically disadvantaged students.

Key factors for success:

The team identified five factors that they considered to be key in explaining the success and endurance of the educational approach at Alice Birney. These are:

1. *The comprehensive theory of child development* that guides all aspects of teaching and learning. This theory "provides the teachers with guideposts that give them purpose, intention, and guidance as they develop their curricula and work with students and their families. . . . These theories shape everything from what the classroom and space look like, the tone of voice the teacher uses in teaching, as well as the nature of instruction, curriculum, and assessment strategies."⁷



The kindergarten play area at the Alice Birney School

2. *A committed, qualified, thoughtful faculty.* It is no surprise to read that the researchers identified the “significant commitment”⁸ required by the Alice Birney approach, a commitment that includes specialized training and ongoing professional development, willingness to develop long-term relationships with students and their families, collaboration with colleagues, and participation in the leadership of the school.
3. *The power of parent involvement.* From the school’s earliest days, parents have been essential. Their commitment to an approach inspired by the principles of Public Waldorf Education has encompassed demanding that the school remain faithful to its chosen approach, providing financial support, assisting in classrooms and at school events, and providing political pressure at the district level as needed.
4. *School-level policies and practices.* The school has navigated a delicate balance between compliance with district, state, and federal requirements and gaining autonomy over decisions on curriculum, faculty, teacher preparation and development, and assessment. This navigation has not always been easy; it has required that the school clearly define and stay the course on its mission and methods. This has ultimately strengthened the school.
5. *School district policies and practices.* Sacramento Unified School District made a commitment to exploring alternative schools. Over time, the district has supported the existence of Alice Birney in multiple ways. For example, it has honored school-based decision making and special, supportive human resource policies at the school.

Reflections

What does this mean for all of us as we accompany our children through school and send them forth into



All the students learn to play a stringed instrument and have an opportunity to experience...

life? Raising children in this time of change is not easy, and at times choosing an alternative path requires courage and conviction. We share a hunger for validation of our choices, and reassurance that the outcomes will be positive for our children. It is affirming to have this type of “mainstream,”

contemporary, objective research available.

If we are at all familiar with principles of Waldorf Education, there is much in this study that we recognize: the comprehensive view of the developing child and the sense of purpose that such a view gives to the curriculum, to the classroom, and to school life; a coherent understanding of the human being that informs all activity within and outside of the classroom; the essential role of dedicated, prepared, caring, committed teachers; the extraordinary commitment of parents who make so many aspects of school life possible; sustained relationships that are given time and space to develop and that result in trust and respect; school leadership that balances the well-being of the entire school with the freedom of the individual teacher and the unique needs of each child; governing boards that require appropriate accountability, ask tough questions when needed, trust the work of the school and its teachers, and provide resources that will protect the mission. It is deeply satisfying to have “mainstream” evidence confirm that these factors produce strong, positive results.

Like all good research, the SCOPE project also leaves us with a few provocative thoughts for future study. The researchers emphasized the demands of this educational approach—the commitment, the specialized training, and the ongoing personal and professional development asked of teachers. These challenges require that teachers have a clear understanding of what it means to teach from the principles of Public Waldorf Education. This necessity in turn raises questions about appropriate teacher education and resource allocation. Despite the positive outcomes for African-American, Latino, and economically disadvantaged students and the overall social equity and equal access agenda of Public Waldorf Education, the team also raised questions about demographics and the adaptation of the curriculum to the many cultures represented in today’s schools—important issues for all of us who are engaged in this growing movement.

I feel profound gratitude to those who made possible this school and the public schools that have followed. The path was far from easy and required vision, commitment, countless volunteer hours, a willingness to stay the course, and large quantities of sheer, hard work. I firmly believe that a rising tide floats all boats, and that our world is better off if more children receive the gift



...the joy of music

of a school experience inspired and enriched by the principles of Waldorf and Public Waldorf Education. The explanation of the factors for success, the validation of results, and the questions benefit all of us.

We wish for what is best for our children and we make our choices in support of that wish. This research confirms that Alice Birney provides for its students' academic, social, emotional, physical, and creative development in a rich, full, and successful way. It seems fitting to close this article with the words of an Alice Birney student:

*"Our slogan was head, heart, and hands, which really just embraces the aspect of a style of learning that has to engage all of you. It has to engage the whole person, the mind, the empathy, and the actual physical doing of things."*⁹ ☉

Notes

1. The Association of Waldorf Schools of North America (AWSNA) owns the registered Service Mark for *Waldorf*, *Steiner*, and *Rudolf Steiner* for educational use. A recent license was agreed upon for use by the Alliance for Public Waldorf Education (the Alliance) of the term *Public Waldorf Education*. In the study, the authors acknowledge AWSNA's ownership of the marks; they are not required to follow the mark guidelines as research falls outside of the scope of AWSNA's marks. AWSNA has reviewed and approved the use of the marks in this article.

2. SCOPE Research Brief, 1. 3. Ibid., 1–2.
4. Ibid., 2. 5. Ibid. 6. Ibid.
7. Ibid., 3. 8. Ibid. 9. SCOPE Study, 84.

Details about the study and the resulting report are available on the SCOPE website <https://edpolicy.stanford.edu> and at the following:



Students engaged in a phenomenological study of mud

Research Brief: <https://edpolicy.stanford.edu/publications/pubs/1386>

Full report: <https://edpolicy.stanford.edu/publications/pubs/1386>



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Book Review, continued

Another first-grade girl with tendencies on the autism spectrum remained a mystery. The faculty recommended therapeutic eurythmy as a possible remedy, with the intention of continuing close observation to determine if any progress were made.

Wiechert provides us with a challenge and a procedure to use to meet that challenge. Rudolf Steiner charged Waldorf educators to create a new approach to education. The child study is the basis of an education that arises out of the needs of the child met by the life experience, love, and wisdom of the teachers. Cultivating the child study as an essential part of the work of the teachers is fundamental to Waldorf Education, to making it the truly revolutionary education that Rudolf Steiner envisioned.

Every Waldorf educator should read this book—class teachers, specialty teachers, therapeutic support teachers, tutors, and coaches. School faculties would do well to take it up as a group study. Waldorf parents will also find it useful. The book is a valuable tool in understanding child observation and child study and their crucial role in Waldorf Education.

Dornach, Switzerland: Verlag am Goetheanum, 2014 • 224 pages • \$25.00



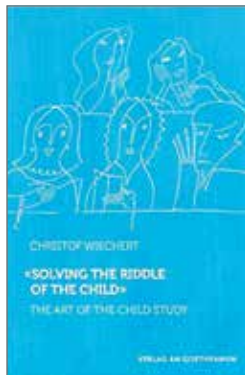
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Book Review

Solving the Riddle of the Child: The Art of the Child Study

BY CHRISTOF WIECHERT

Reviewed by Patrice Maynard, MA



When Rudolf Steiner founded the first Waldorf school in Stuttgart, Germany, in 1919, he gave to the teachers, as a primary task, the observation of the children. Out of reverence, out of love and deep interest, the teachers were to note the individual characteristics of each child in their care. This observation was to include the child's physical features and appearance, way of moving, behavior in class, manner of interacting with other children,

social ease, likes and dislikes, imaginative abilities, way of learning, and willingness to learn and to work.

From this discipline of observation, the teacher would develop heightened capacities of perception as well as a deep understanding of the true being and the needs of each child and of the whole class. For Steiner, this unique understanding qualified the Waldorf teacher to teach and to make decisions about the curriculum and how it is presented to a particular group of children. For this reason, Rudolf Steiner insisted that the administration of a school and decisions about curriculum and pedagogy be done by the teachers, who have daily direct contact with the children in the classroom. Such decisions should certainly not be made by persons outside the school who have their own arbitrary idea of "what the children should know."

Steiner also instituted in the first school the "child study," which is perhaps unique to Waldorf Education. In a child study, the observational skills of all the faculty are used to support and help a particular child. A child study begins with a request by a teacher regarding a child, usually one who is having difficulties in school. All members of the faculty—the child's class teacher, the specialty teachers, therapeutic support teachers, and the other class teachers—are asked, as possible, to carefully observe the child. The teachers then share their observations in a part of a faculty meeting set aside for child study. They thus form a picture of the whole child, the child's capacities, strengths, challenges, and needs. Together, they then

develop a plan to help that child grow and develop in a healthful and balanced way.

Parents are notified when a study of their child is to occur. Often the recommendations of the study include measures to be taken by the parents. For example, the faculty might suggest that the child be put to bed at an earlier time or be told a particular type of story at bedtime.



Christof Wiechert was for many years a Waldorf teacher in the Netherlands. From 2002 until 2012, he was head of the Pedagogical Section at the Goetheanum and, in effect, the leader of the international Waldorf movement. In *Solving the Riddle of the Child: The Art of the Child Study*, Wiechert presents the child study as the heart of Waldorf Education.

The collaborative, observation-based child study is an important tool for teachers. Children today live in a stressful and discomfiting high-speed barrage of information and stimuli. Their unwillingness or inability to learn or to behave properly may be just a symptom of their stressed condition in the everyday world. Observation of a child in various situations by a number of concerned adults may be necessary to discover the cause and remedy of a problem.

The first step in the child study process is the realization by the teacher that there is a problem with a particular child and that help is needed. As Wiechert points out, appealing to one's colleagues for assistance requires humility and courage. A child study, however, creates an opportunity for the entire faculty to learn as well as to help. Wiechert counsels against reaching conclusions too quickly, or applying what we know about another child to the child in question. Hasty judgments just avoid dealing with the unique puzzle that every child presents. He points out that the discomfort we feel with the mystery of each child is the very portal through which we must walk as teachers to find the essence of each child and to cultivate our own capacities of perception.

At the end of the book, Wiechert gives examples of actual child studies, some that had immediate results and some that did not. One first-grade girl, for example, had a complex set of social difficulties. The teachers made concrete suggestions to the class teacher, both parents, and those responsible for recess duty. The results were quick and impressive, and all the difficulties had melted away by the end of the school year.

continued on page 40

WALDORF SCHOOLS IN NORTH AMERICA

(INCLUDING TEACHER TRAINING COLLEGES AND INSTITUTES)

UNITED STATES

ALABAMA: Alabama Waldorf School **ALASKA:** Anchorage Waldorf School **ARIZONA:** Tucson Waldorf School **CALIFORNIA:** Bay Area Center for Waldorf Teacher Training • Camellia Waldorf School • Cedar Springs Waldorf School • Davis Waldorf School • East Bay Waldorf School • Highland Hall Waldorf School • Live Oak Waldorf School • Maple Village Waldorf School • Marin Waldorf School • Pasadena Waldorf School • Rudolf Steiner College • Sacramento Waldorf School • San Francisco Waldorf School • Sanderling Waldorf School • Santa Cruz Waldorf School • Sierra Waldorf School • Summerfield Waldorf School & Farm • Waldorf Institute of Southern California • Waldorf School of Mendocino County • Waldorf School of Orange County • Waldorf School of San Diego • Waldorf School of Santa Barbara • Waldorf School of the Peninsula • Westside Waldorf School **COLORADO:** Denver Waldorf School • Shepherd Valley Waldorf School • Shining Mountain Waldorf School • Tara Performing Arts High School • Waldorf School on the Roaring Fork **CONNECTICUT:** Housatonic Valley Waldorf School **FLORIDA:** Heart Pine School • Suncoast Waldorf School **GEORGIA:** Academe of the Oaks • Waldorf School of Atlanta **HAWAII:** Haleakala Waldorf School • Honolulu Waldorf School • Malamalama Waldorf School **IDAHO:** Sandpoint Waldorf School **ILLINOIS:** Arcturus Rudolf Steiner Education Program • Chicago Waldorf School • Da Vinci Waldorf School • Four Winds Waldorf School • Urban Prairie Waldorf School **KANSAS:** Prairie Moon Waldorf School **KENTUCKY:** Waldorf School of Louisville **LOUISIANA:** Waldorf School of New Orleans **MAINE:** Ashwood Waldorf School • The Bay School • Maine Coast Waldorf School • Seacoast Waldorf School **MARYLAND:** Waldorf School of Baltimore • Washington Waldorf School **MASSACHUSETTS:** Berkshire Waldorf High School • Great Barrington Rudolf Steiner School • Hartsbrook School • Waldorf High School of Massachusetts Bay • Waldorf School of Cape Cod • The Waldorf School of Lexington • Waldorf School of Moraine Farm **MICHIGAN:** Detroit Waldorf School • Oakland Steiner School • Rudolf Steiner School of Ann Arbor • Waldorf Institute of Southeastern Michigan **MINNESOTA:** City of Lakes Waldorf School • Minnesota Waldorf School **MISSOURI:** The Waldorf School of St. Louis **NEVADA:** Nevada Sage Waldorf School **NEW HAMPSHIRE:** Center for Anthroposophy • High Mowing School • Monadnock Waldorf School • Pine Hill Waldorf School • White Mountain Waldorf School **NEW JERSEY:** Waldorf School of Princeton **NEW MEXICO:** Santa Fe Waldorf School • Taos Waldorf School **NEW YORK:** Alkion Center • Aurora Waldorf School • Brooklyn Waldorf School • Green Meadow Waldorf School • Hawthorne Valley School • Ithaca Waldorf School • Lakeside School at Black Kettle Farm • Mountain Laurel Waldorf School • Rudolf Steiner School of New York City • Sunbridge Institute • Waldorf School of Garden City • Waldorf School of Saratoga Springs **NORTH CAROLINA:** Emerson Waldorf School **OHIO:** Cincinnati Waldorf School • Spring Garden Waldorf School **OREGON:** Cedarwood Waldorf School • Corvallis Waldorf School • Eugene Waldorf School • Portland Waldorf School • Shining Star Waldorf School • The Siskiyou School • Swallowtail Waldorf School and Farm • Waldorf School of Bend • Waldorf Teacher Education Eugene **PENNSYLVANIA:** Camphill Special School • Kimberton Waldorf School • River Valley Waldorf School • Susquehanna Waldorf School • Waldorf School of Philadelphia • Waldorf School of Pittsburgh **RHODE ISLAND:** Meadowbrook Waldorf School **SOUTH DAKOTA:** Lakota Waldorf School **TENNESSEE:** Linden Waldorf School **TEXAS:** Austin Waldorf School **VERMONT:** Lake Champlain Waldorf School • The Initiative: A Vermont Waldorf High School • Orchard Valley Waldorf School • Upper Valley Waldorf School **VIRGINIA:** Charlottesville Waldorf School • Potomac Crescent Waldorf School • Richmond Waldorf School **WASHINGTON:** Bright Water School • Madrona School • Olympia Waldorf School • Seattle Waldorf School • Sound Circle Center • Sunfield Waldorf School & Biodynamic Farm • Tacoma Waldorf School • Three Cedars Waldorf School • Whatcom Hills Waldorf School • Whidbey Island Waldorf School **WISCONSIN:** Great Lakes Waldorf Institute • The Madison Waldorf School • Pleasant Ridge Waldorf School • Prairie Hill Waldorf School • Tamarack Waldorf School • Youth Initiative High School

CANADA

ALBERTA: Calgary Waldorf School • Waldorf Independent School of Edmonton **BRITISH COLUMBIA:** Cedar Valley Waldorf School • Island Oak High School • Kelowna Waldorf School • Nelson Waldorf School • Saltwater School • Sunrise Waldorf School • Sunshine Coast Waldorf School • Vancouver Waldorf School • West Coast Institute for Studies in Anthroposophy • Whistler Waldorf School **ONTARIO:** Halton Waldorf School • London Waldorf School • Mulberry Waldorf School • Rudolf Steiner Centre Toronto • Toronto Waldorf School • Trillium Waldorf School • Waldorf Academy **QUÉBEC:** Ecole Imagine • Ecole Rudolf Steiner de Montreal

MÉXICO

AGUASCALIENTES: Colegio Waldorf Amanecer **GUANAJUATO:** Colegio Yeccan Waldorf **JALISCO:** Waldorf de Guadalajara **MORELOS:** Centro de Desarrollo Antroposofico • Escuela Waldorf de Cuernavaca **OAXACA:** Papalotes Oaxaca • Papalotes Puerto Escondido **QUERÉTARO:** Escuela Libre Lila K'erendarhu **QUINTANA ROO:** Ak Lu'um International School **STATE OF MÉXICO:** Colegio Inlakesh

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