the wisdom of the hands

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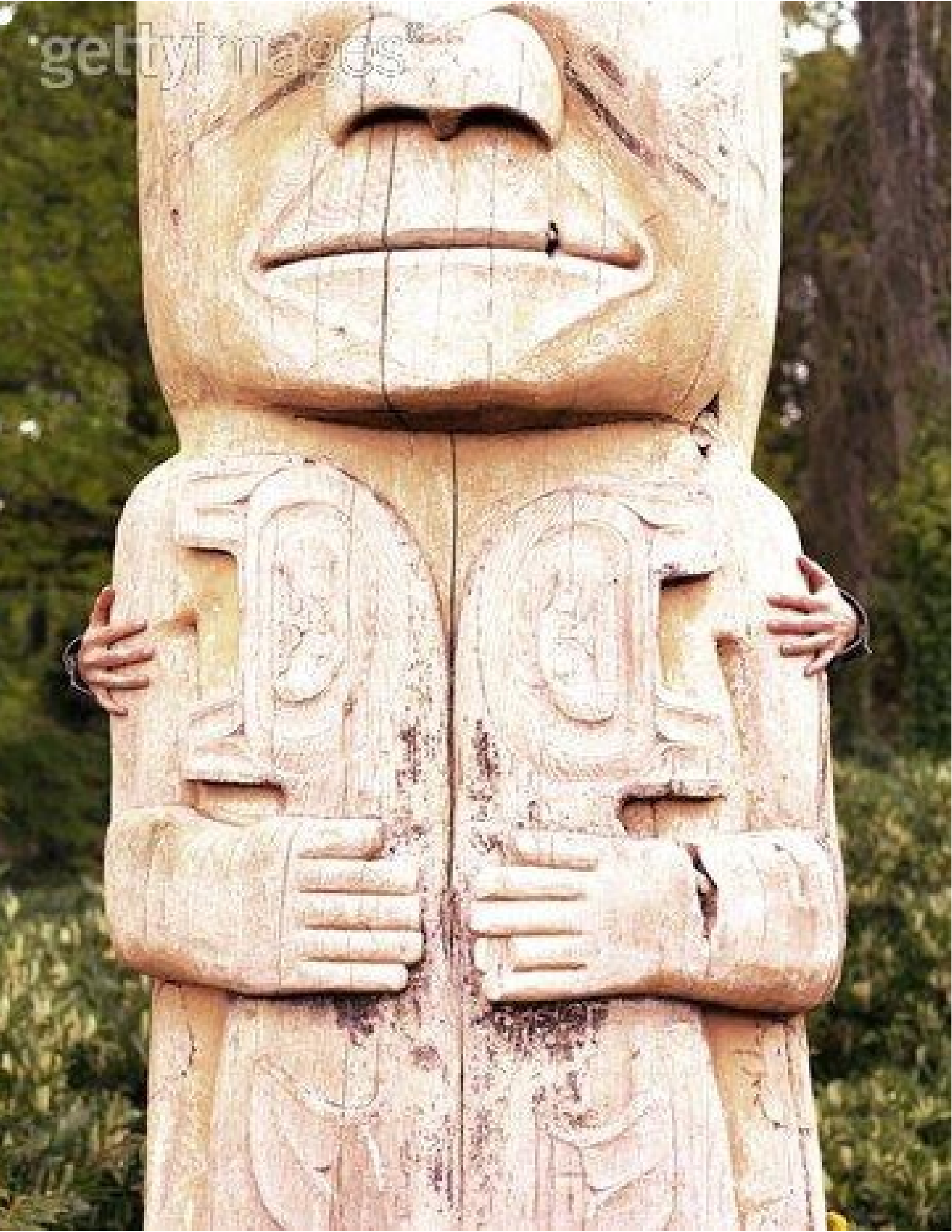
> "...[T]he great secret of education is to combine mental and physical work so that one kind of exercise refreshes the other."
> — Jean Jacques Rousseau (1712–1778)

By Doug Stowe

Editor's Note: The following is adapted from a paper presented to the First International Conference on Sloyd, Traditions in Transition, Umeå Universitet Sweden, May 2006.

In 2000, in the midst of a 25-year-long career as a professional woodworker, I found myself in conversations on Internet newsgroups and via e-mail with educators about what was happening to woodworking programs in schools in the United States. School woodshops were closing in record numbers. In general, woodworking was no longer regarded as relevant in American education.

Those of us discussing the matter were deeply concerned. You may have observed in your own learning process that, when you have a direct application for a skill or knowledge, you will find more energy for learning even when the subject is difficult or the skill hard to master. One of the major challenges facing educators is that of helping students to understand the relevance of subject matter to their own lives. Fractions? Geometry? Algebra? Environmental studies? History? Physics? These subjects may seem unrelated to each other and to life — and it is often difficult to help students understand how they will be useful in life. One of the greatest values of woodshop is its ability to bridge the gap between the theoretical and the practical. Time in the woodshop can amply demonstrate the connections between these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"isolated" subjects, and their own lives, bringing their study into practical application and use.

When I was a student, working with my hands, in fact, was my personal salvation. As an adult, I've come to believe that having the hands engaged in learning is important for *all* students, even those planning academic careers. The common view that hands-on education is only for slow learners as a precursor for vocational training is *way* off the mark.

My experience was reinforced by stories from local parents and teachers and from the national press that paint a picture of modern education in which too many students are disengaged from the learning process and, out of frustration, disruptive of the education of others. I began to wonder whether there was a link between the failure to engage the hands, and the failure to engage the head and heart in the learning experience.

With all this in mind, in the fall of 2001, we began a woodworking program, *Wisdom of the Hands*, to explore the potential of the woodshop in general education. In the woodshop at The Clear Spring School in Eureka Springs, Arkansas, we adopted as our mission:

• TO MAKE woodshop participation relevant to the lives of *all* of our students and meaningful in their education.

• TO UTILIZE the woodshop to encourage the students' interests in other areas of study.

• TO SERVE as a model to demonstrate the relevance of woodworking in modern education.

During my first month of teaching, I discovered I was relatively unprepared for meeting the needs of my students, so I decided to attend the first conference of the New England Association of Woodworkers as a way to get grounded in my new profession, to become acquainted with other

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teachers, and to begin seeking theoretical support for ideas that had, at first, been simple observations based on my own experience. It was during this trip that I became acquainted with an almost forgotten system of woodworking education called "Educational Sloyd." Upon returning home from the conference, I began my personal research into Sloyd and discovered within its theoretical framework what I have since come to regard as a clear guide in the use of arts and woodworking in meeting the developmental needs of children. Among the things that I found to be of greatest value, was its clear support for the role that the hands can play in education.

When I began my research into Educational Sloyd, I found that it had largely disappeared from the American educational landscape. But I was fortunate to locate a few old books for sale through antiquarian booksellers. I was also very fortunate to discover a small but enthusiastic corps of international scholars dedicated to exploring and preserving an awareness of Educational Sloyd. Through the conversations and reading, one of the important things I noted was that Sloyd was actually a movement rather than a fixed method of teaching. It was designed to be flexible to fit the circumstances of various teachers, schools, and communities throughout the world. Another system of woodworking education was introduced in the same time period that brought Educational Sloyd to America, the "Russian System" introduced by Victor Della Vos. There were major distinctions in the underlying purposes of the two similar methods. Educational Sloyd was designed to have a formative role in the development of the child. The Russian system was designed to have vocational purposes, preparing students for jobs in modern industry. That Educational Sloyd was intended as a formative method concerned with the basic educational needs of the child gave it relevance to the Wisdom of the Hands program at Clear Spring School.

What I discovered in Educational Sloyd was a succinct strategy for meeting the educational needs of children that could be applied to all their learning needs at all grade levels — that instruction should move gradually from the known to the unknown, from the easy to more difficult, from simple to more complex, from the concrete to the abstract.

In addition, lessons should involve the senses, particularly touch and sight. Activities should be designed to reinforce the connections between the child, the family, the school, and the community.

The Clear Spring School

In order to fully understand the Wisdom of the Hands program, it is important to understand its academic setting. Clear Spring School is the oldest accredited independent school in Northwest Arkansas. It has 94 students pre-kindergarten through 12th grade. At the elementary and middle school levels, the classes are divided into two-grade instructional groups, with each core teacher covering two grade levels. While the tuition rate is one of the lowest among accredited independent schools, parents' placing their children at Clear Spring rather than public school requires significant economic sacrifice and illustrates a

great level of commitment to the educational welfare of each child.

Like many independent schools, Clear Spring has a number of rather unusual programs that were in place before the start of the Wisdom of the Hands program, and it has been largely due to the already creative environment maintained at Clear Spring School that the Wisdom of the Hands has had the opportunity to take root and succeed.

We have experimented with projects drawn directly from early Sloyd texts, but most of our efforts have been in designing projects in collaboration with the core classroom teachers. Core teachers make suggestions for woodworking projects that reinforce the current area of classroom study. The woodshop staff evaluates the ideas as to practicality, degree of difficulty and fit specific to grade level, and potential for learning and completion. We then develop lesson plans and prepare materials for a once-a-week woodworking class. Occasionally, projects can be completed in a single week, but more advanced projects may take two or three weeks.

We try to minimize the amount of preparation required to have materials ready for student use so that, as much as possible, the objects made are student-made. The classes extend for about one hour in length, but with some flexibility, allowing classes to run longer on occasion if necessary.

Lesson plans are written on a white board so that the students can follow along, step by step, and answer many their own questions by reading the process. Developing new projects for four distinct classes a week is a challenge that requires some formal training in woodworking tools, and materials along with an active imagination and a love for problem solving.

In most schools, core teachers sit at the sidelines during art classes, taking the time to socialize with other teachers or using the period as prep time. Our core teachers are fully involved as participants in woodshop, usually working alongside the children to

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complete their own projects. They are involved from the initial stages of project planning, and have become very enthusiastic about the results of prior woodworking activities. If you were to visit any of our classrooms, you would see the results of student efforts, bringing abstract learning into tangible, physical expression and confidence.

Woodworking is not regarded as a primary activity, but instead plays a supporting role, building interest and enthusiasm for other areas of study. We stay current in our knowledge of the lesson plans at various grade levels to help in planning projects. Here is an actual example of the way woodshop can work to integrate and enrich studies: In planning a trip to Springfield, Missouri, the third and fourth graders wanted to do a woodworking fundraising project. At the time, they were also studying the economy. Because they had previously made stamp and penholder toy trucks as Christmas/Holiday gifts, they decided to start making more for the fund-raiser, and as an excise in economics. In a practice session, they made stamp-dispenser toy trucks to keep for their own use, refining their techniques, and raising their standards of workmanship. Then they each made one for sale at a parent/teacher meeting and developed their own sales flyers, marketing strategy, and cost analysis. The stamp trucks sold for $10 each. In further studies of the economy, they became interested in processes of manufacturing and wanted to make trucks again, using Henry Ford's assembly-line methods. The first trucks sold at the parent/teacher meeting had created a demand for more. One parent, a clerk in a judge's office, found herself taking orders from the judge and visiting attorneys. So we did the same project a third time, with each student assigned a position along the assembly path. It is easy to see how this project integrated math, history, introductory studies in economics, quality control, self assessment, development of attention, skilled tool use, understanding of basic production processes, cooperative project participation, and more.

It was also fun.

At the high school level, students take woodworking as an elective for fine arts credit, in addition to participating in integrated activities planned with their various core subject teachers. In the elective classes, we place a heavy emphasis on design, making custom furniture, boxes, and lathe-turned objects. Integrative projects are generally more complicated at the high school level, requiring a higher level of skill and a greater commitment of preparation time, so, rather than being on a weekly basis, these projects take place when they are most relevant to the course of study. An example of a recent project was the making of collection boxes for developing student collections of rocks and minerals, as part of an Earth Science class. We made the trays with dividers for thirty compartments as a collaborative effort, with each student milling and assembling his or her own collection box. Then the students collected their own mineral samples through a series of field trips within our rich geologic region. Students also use the woodshop for special projects related to other classes and are able to earn extra credit for those classes in the woodshop. An example is the making of geometric solids for the study of geometry.

One of the most important aspects of woodworking in schools is the opportunity it presents at all ages to use math, measuring, fractions and geometry in practical applications, providing concrete learning experience as a foundation for classroom studies.

Most important, however, has been the growing impact of the Wisdom of the Hands program on the educational culture at Clear Spring School, helping it to meet its original mission as a role model for the dawn of a new day in American education.

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