

Manual competence: Hand tools in a technology age

I am a maker at heart. I take personal satisfaction in creating things whether it's through woodworking, cooking, leather-work, metal-working, or electronics. I have a joy in working with the computer as well, though as a maker, the computer is an indispensable tool to aid in the planning and designing of projects. Computer work is generally not a project in its self. I believe that using ones hands is a real necessity in personal and professional development. In the technology education classroom, students are using their hands all of the time, which is great, yet often, they are encouraged to stick with using power tools. I have observed that hand tool use has been designated as a waste of time in the classroom. Many classes start out with a unit on hand tool use, and once completed, the students move on to "real" tools. The scrutiny is equally shared on job sites as well, where a worker who uses a hand saw, or block plane would be consider strange, or inefficient. I believe this logic to be untrue. The use of hand tools can be beneficial in many ways in the classroom, as well as in industry. My inquiry will to be focused on the validity of using hand tools on a regular basis in an age when power tools reign supreme.

There are several questions that I will be meaning to ask throughout my inquiry season. For one, can students learn the concepts of woodworking more thoroughly with hand tool use being a focus? This question comes from my theory that, while power tools make work much faster and repeatable, one cannot understand the qualities of materials and how to work them properly while using power tools. Hand tools force the understanding of how blades cut, why sharpness is important and how you need to understand fully the material being used. Another question that I will be asking is whether learning hand processes require higher levels of thought and problem solving? This question relates greatly to my first question, but this one has a broader scope. Manual work, like we do in shop class, that builds manual competence can be just as mentally stimulating, and foster as much, or more, creativity and problem solving skills as white collar type work. Through asking these last two questions, I must ask, is giving greater weight to learning hand tool skills viable in a society that values speed, efficiency and cost cutting.

"When you go deep into some particular art or skill, it trains your powers of concentration and perception. You become more discerning of the object of this particular art and begin to care about excellence in this domain because you've been initiated into an ethic of caring about what you're doing." "Technical training, though narrow in its immediate application may be understood as part of education in the broadest sense, that is intellectual and moral formation" –Matt Crawford (TED talk)

This is an important topic because as time goes on, the skills of manual dexterity, hand-eye coordination and the understanding of concepts is being lost. This may be a result of our societies focus on high technology and mass production and the devaluing of hand skills, because they are viewed as being archaic and non-relevant. Matthew Crawford writes in his

book, "Shop Class as Soul craft," that the streamlining of our societies into specialties is degrading knowledge and abilities of a great portion of society, and making people fully dependent on capitalism and corporations that run everything. Woodworking with hand tools, taking time to focus and produce something can foster many great attributes in a person and can lead to that person having increased confidence and competence and a lot of areas in life.

Key or Critical Concepts:

- (i) Learning to use hand tools effectively is the foundation of woodworking and learning to use other power tools afterwards will be much easier. Scaffolding.
- (ii) Using hand tools can make certain processes easier and more efficient.
- (iii) Learning to craft with hand tools increases understanding of the craft much more than power tools.

Ethical Considerations:

Ethical considerations for my inquiry project are mostly that I need to be careful with my questioning and observations of students. I will make sure to focus on my own observations of what is happening in my classroom and not report on specific student comments or anything about them.

References and Apps:

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