

What You Should Know About Hands-On Learning

5 Facts for Homeschool and Traditional Classrooms
for Any Age

What You Should Know About Hands-On Learning

5 Facts for Homeschool and Traditional Classrooms for Any Age

Copyright 2019. History Unboxed

All rights reserved.

HISTORYUNBOXED

Table of Contents

| | |
|--|----|
| About this Book | 4 |
| #1 What is the History of Hands-On Learning?..... | 5 |
| Learning Long Ago..... | 5 |
| The Psychology of Learning | 6 |
| #2 Why is Hands-On Learning So Important? | 8 |
| Retention..... | 8 |
| Engagement..... | 10 |
| Suitable for All Learning Styles | 10 |
| Development | 10 |
| #3 When Should I Plan Hands-On Activities?..... | 11 |
| #4 How Can I Use Hands-On Learning in My Lessons?..... | 12 |
| #5 Where Can I Find Resources? | 13 |
| More Info..... | 15 |

About this Book

This book is meant to inspire and offer a starting point for exploring the value of hands-on learning. It is not a complete scholarly essay on the topic, but further resources for reading are provided at the end.



In the context of this book, “hands-on” learning refers to learning procedures, methods or techniques by actually applying them in practical use. It also refers to a multi-sensory learning approach, involving more than one of the five human senses. In both of these meanings, educators recognize that a hands-on approach has significant value for learners of all ages.

#1 What is the History of Hands-On Learning?

Learning Long Ago

As early as 350 BBC, Aristotle recognized the importance of hands-on learning, stating,

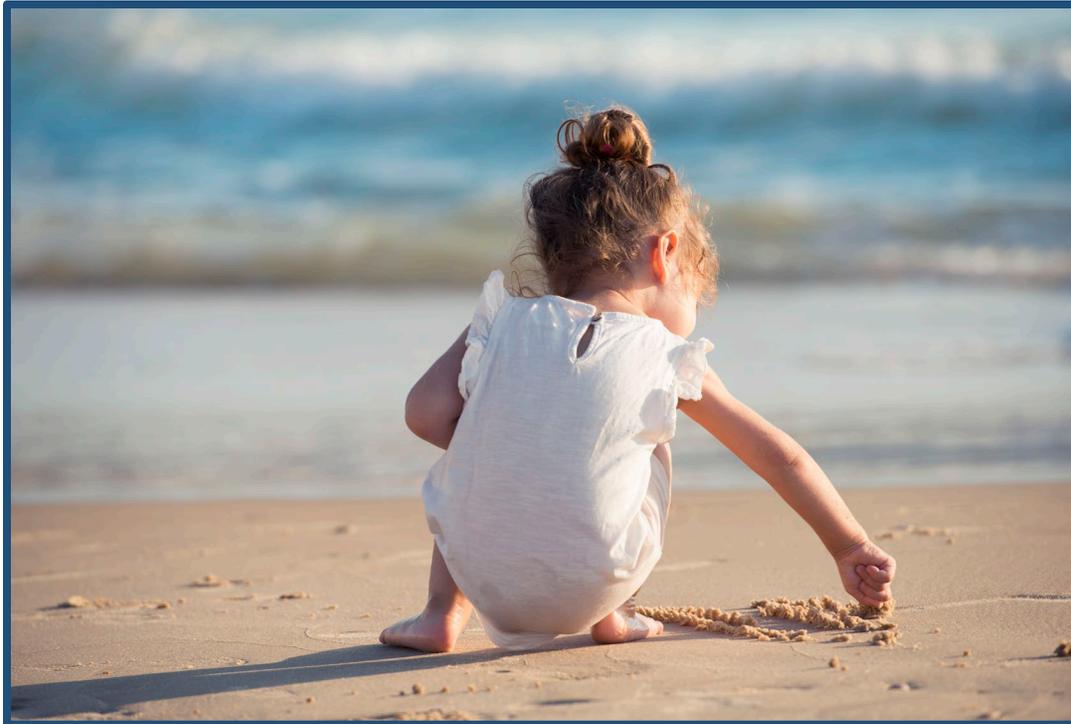
“For the things we have to learn before we can do them, we learn by doing them.”

Prior to the twentieth century, many children, even if they went to school, received significant education at home. Children learned important skills as they assisted with the family cooking, sewing, farming and other chores, or as they apprenticed for a trade.



Measurements and math, fibers and textiles, plant and animal biology, meteorology, and many other subjects now relegated to textbooks were part of their daily lives. These activities were, of course, hands-on, requiring the young learner to accomplish and perfect tasks, rather than simply listen or read about facts and concepts. Successfully accomplishing tasks promoted confidence and independent thinking.

The Psychology of Learning



The concept of hands on learning can be applied to almost any subject. In the early 20th century, psychologists, including Jean Piaget, Kurt Lewin and John Dewey promoted the value of hands-on, or experiential, learning.

In the early 1900's John Dewey, educated at the University of Vermont, with a PhD. from Johns Hopkins University, developed the theory of progressive education, based on the idea that even though the body of knowledge presented in

textbooks is important, students ultimately learn through experience. Then, in the late 1930s, Piaget developed his theory of cognitive development. Piaget emphasized the value of trial-and-error, focus on process rather than just outcome, and independent discovery – all components of experiential learning. Kurt Lewin is another psychologist who rose to prominence in the 1930s, postulating that children learn primarily in response to their environment, thus indicating that experiential learning is important.

And, even as modern schools developed and there was gradually less emphasis on learning skills at home, schools provided a well-rounded education that included subjects that are inherently hands-on: home economics, shop, music and art.

Unfortunately, with increased emphasis on standardized tests along with budget restrictions, many of those inherently hands-on courses have been cut in favor of core STEM classes. There is much discussion around what has been gained or lost with this approach. But, even with academic subjects, a hands-on approach is entirely possible and has significant value.



#2 Why is Hands-On Learning So Important?

Retention

According to the National Training Laboratories (NTL), founded by Kurt Lewin, in Bethel, Maine, not all learning produces equal results.

Rather, there is a learning pyramid, indicating that students retain:

- 90% of what they learn if they teach someone else or apply what they learn immediately
- 75% of what they learn if they engage in practice
- 50% of what they learn if involved in a discussion with group
- 30% of what they learn via watching a live demonstration
- 20% of what they learn from audio-visual
- 10% of what they learn through reading.
- 5% of what they learn listening to lecture



There are numerous studies supporting these conclusions. Clearly, methods with a greater “hands-on” component produce better results. And, these conclusions apply not only to craft-oriented young learners, but teens and adults as well. We all learn by doing.

“Our care of the child should be governed
not by the desire to make him learn things,
but by the endeavor always to keep
burning within him that light which is
called intelligence.”

-Maria Montessori

Not having heard of it is not as good as having heard of it.

Having heard of it is not as good as having seen it.

Having seen it is not as good as knowing it.

Knowing it is not as good as putting it into practice.”

-Confucius

“All our knowledge begins with the senses,
proceeds then to the understanding, and
ends with reason.

There is nothing higher than reason.”

-Immanuel Kant

Engagement



Children, teens and adults all learn through all five senses. A lecture or a book engages the eyes or ears, but why not engage touch, taste and smell too? The fact is, if learning requires using multiple senses, it's hard not to be engaged, plus it's just more fun. When a lesson about fractions includes slices of pizza, most students are right there with you! Or, when a history lesson includes making your own pottery, the past comes to life!

Suitable for All Learning Styles

For some students, such as students with dyslexia, a multi-sensory approach offers more success. When processing visual or auditory cues is difficult, involving other senses can help. However, there is no need to offer special activities for certain students to give them a multi-sensory experience, since all students can benefit from this kind of enhanced learning.

Development

“Doing” develops confidence and promotes success. Instead of passively absorbing information, students gain tangible evidence of their abilities and have the opportunity to improve through trial and error.

#3 When Should I Plan Hands-On Activities?

You may be a professional educator or an experienced home-schooling parent. Or, you may be brand new to teaching your child. In any case, it is easy to fall into the habit of first identifying courses to be taught and choosing appropriate textbooks. Perhaps later, almost as an afterthought, you think about some fun hands on activities to compliment your curriculum.

Given the value of hands-on learning, wouldn't it be wise to consider this from the very beginning? What are the results that you hope to gain from the course? Do you want the students to understand a process, know facts or have a broad understanding of concepts or cultures? How can you create experiences for the students to allow them to:

- Practice processes?
- Bring facts to life?
- Apply concepts?
- Experience cultures?

If you can answer these questions, you are well on your way to planning a curriculum that is rich in experiential learning opportunities.



#4 How Can I Use Hands-On Learning in My Lessons?

As you plan hands-on learning activities, be sure that they are:

- Relevant

How does the activity relate to the subject you are teaching?

- Age appropriate

Too easy, too hard, or just right?

- Contribute to Memory

Does the activity reinforce what you are teaching? Besides the activity itself, should there be additional discussion, more chances to use what the class makes or additional time to practice or repeat the activity?

- Are a mixture of interactive, with a group, and solo, offering independent practice

There is value in learning to solve problems with a group, but also in figuring out something all on one's own.

#5 Where Can I Find Resources?

Looking for ideas? The good news is, they are all around you!

- ❖ The textbooks you use in your classroom may have activity suggestions.
- ❖ Ask your teaching colleagues for help. The ancient history teacher may be able to help you with an abacus for your math class. Or, the English literature teacher may be able to identify the perfect scene from Shakespeare to introduce an important event in history.



- ❖ Inquire at area museums. In addition to viewing, they may offer hands-on activities too.
- ❖ Check out your local history society or ask a tech meet up group for ideas.
- ❖ Seek out interesting people in your community – the farmer, the factory manager, the theater director and so on all have knowledge to share. Young children and teens alike enjoy interacting with others as they learn.

- ❖ Visit your local craft shop. Some even have pre-cut wood crafts such as birdhouses or treasure boxes. Usually the staff is full of ideas.
- ❖ Look into specialty resources with premium educational products such as [History Unboxed](#). At History Unboxed, there are various age-appropriate versions of each product, so whether you are teaching a four-year-old or a fourteen-year-old, you can get the resources that you need.



More Info

<https://www.historyunboxed.com/>

<https://www.theclassroom.com/apply-piagets-theory-classroom-7741298.html>

<https://www.simplypsychology.org/piaget.html>

<http://www.psychologydiscussion.net/learning/learning-theory/lewins-field-theory-of-learning-education/2525>

https://archive.org/stream/ExperienceAndEducation-JohnDewey/dewey-edu-experience_djvu.txt

<https://www.ntl.org/about-us/ntl-legacy/>

<https://www.scholastic.com/teachers/articles/teaching-content/37-amazing-craft-ideas/>