

# The Ten Principles of Changing Wisdoms

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**Dimensions.** Wisdom in the Bible was a single quality. In our complex world today, it is made up of multiple areas of expertise that we can divide into *dimensions*. A rich and powerful way to understand the development of wisdom involves the principle of dividing expertise into dimensions, plus nine other principles relating to modes of practice, transformative learning, praxomics, description, scale, competition parameters, resolutions, aborted learning, and wisdoms.

In his twenties, Benjamin Franklin decided to improve his conduct by working on thirteen virtues. Each virtue is an example of a dimension of practice

that relates to social expertise. They were Temperance, Silence, Order, Resolution, Frugality, Industry, Sincerity, Justice, Moderation, Cleanliness, Tranquility, Chastity, and Humility. If he had focused on his printing expertise, his list would have been quite different, consisting of dimensions such as loading type, selecting paper, preparing ink, maintaining the press, etc.

**Modes of Practice.** Each dimension of an area of expertise is learned independently from the other dimensions.

Learning progresses through five levels of complexity called *modes of practice*. When we think about learning how to type on a keyboard, we either avoid typing altogether or begin by hunting for individual letters on the keyboard. It does not take long for us to acquire the next mode of typing whole words. After a few years of experience, we type

whole phrases. One study of expert copy typists pulled the source from their desks only to find them typing a dozen more words. This showed that the experts were typing whole sentences rather than just phrases. After these five modes of practice, the activity becomes too complex for our brains to produce in a single instance.

**Praxomics and Description.** We call the description and measurement of individual and cultural practices “praxomics.” Using developmental interviews, we ask experts to *describe* dimensions of their area and five modes of practice within each. Developmental interviews of more than three hundred experts revealed that the five modes of practice occur in dimensions of widely diverse fields of expertise. Measurement consists of counting the frequencies of these modes over time.

**Scale.** My colleagues and I studied thousands of instances of drawing, writing, and developmental research articles and found a single equation that described how often each mode of practice was used over time for all three areas of expertise. Thus, we can *scale* the equation from individual to historical development, presumably from conversations to whole disciplines.

**Competition Parameters.** The frequencies of use depended on the initial usage when the area of expertise began, how fast it grew, how effective it was, and how well-accepted by other people it was. The areas of expertise in the interviews ranged from musicianship to architecture, game design to rabbinics, and auto sales to teaching, as well as 20 fields of design and 30 fields of liberal arts. As we conducted interviews over the decades, labels for the five levels of complexity evolved:

1. *Avoid*: It takes only seconds to avoid a dimension of practice.
2. *Begin*: It takes a few minutes to try the dimension. This is where people start learning.
3. *Explore*: Learners explore the dimension of practice, often for a few weeks or months using modes of practice that are learned quickly and performed ineptly.
4. *Sustain*: It takes years of experience before people acquire modes of practice that can be performed well enough to be socially acceptable over time in most situations.
5. *Inspire*: Ultimately a few learners make discoveries or innovations about the dimension of practice. When other people copy these, we call them “inspiring.”

**Transformative Learning and the DEEP Resolutions.** For learners to move from one mode to the next

involves a process that Jack Mezirow called “*transformative learning*.” He identified ten activities that occurred within it, but a detailed study of over 500 learning sessions found that some of those activities usually occurred in the same sessions. This resulted in there being four different types of resolutions. We call them the *DEEP resolutions*:

- *Discern dilemmas*: Recognize any increasingly frequent accumulation of problems with a current mode of practice.
- *Examine*: Reflect, assess one’s own role, discuss with trusted others, and identify a next mode of practice.
- *Enable*: Plan, get help from someone with more advanced experience in the dimension, and rehearse.
- *Perform*: Introduce in public and then use regularly.

Transformative learning at simple levels like Beginning or Exploring involves the same first three resolutions as transformative learning at complex levels like Sustaining or Inspiring. Nevertheless, the “public” grows more complex as we perform later modes of practice, being absent for avoiding, then a mentor, companions doing the same thing, collaborators adding a different skill, and ultimately collaborators from a different discipline.

**Aborted Learning.** When we curtail transformative learning for any reason, we say that it has been *aborted*. Though the resolutions are similar for all five modes of practice, learning is aborted for unique reasons within each mode. The table below identifies these differences. Decisions to try or abort transformative learning have such long-range social consequences that creative writers often turn them into great stories.

## Transformative Learning of Any Dimension of Practice

Mode	Try	Abort
<b>Avoid</b>	Dilemmas	<i>Indifferent</i>
	Examine	<i>Reject</i>
	Enable	<i>Mistrust</i>
	<i>Ignore leaving the situation</i>	
<b>Begin</b>	Dilemmas	<i>Continue to avoid</i>
	Examine	<i>Embarrassed</i>
	Enable	<i>Procrastinating</i>
	<i>Perform after being shown</i>	
<b>Explore</b>	Dilemmas	<i>Start over at beginning</i>
	Examine	<i>Wishful thinking</i>
	Enable	<i>Caution and evil</i>
	<i>Perform with a companion</i>	
<b>Sustain</b>	Dilemmas	<i>Explore to excess</i>
	Examine	<i>Frustrated</i>
	Enable	<i>Precluded</i>
	<i>Perform with division of labor</i>	
<b>Inspire</b>	Dilemmas	<i>Acquiesce to sustain</i>
	Examine	<i>Overspecialized</i>
	Enable	<i>Stagnated</i>
	<i>Perform with multi-disciplinary integration</i>	



When we create curriculum or assess learning in any area of expertise, we first identify its dimensions. Each expert in the entire set of interviews identified between 5 to 20 dimensions (so, Ben Franklin's 13 virtues were a typical number). Expert curriculum designers and program assessors give each mode of practice in each dimension a unique name. This resulted in needing 25 to 100 terms for labelling all the modes of practice in each area of expertise. We define each mode so that any single performance can have only one mode of practice from each dimension. If we identified all the five modes of practice in Ben Franklin's virtues, we would label them using 65 different terms.

**Wisdoms.** A *wisdom* is the pattern in a single performance involving all the dimensions of the area of expertise where it is observed. We can describe the Franklin virtues in any single

performance using 13 terms. We only use 65 terms, but these can distinguish  $5^{13}$  (just over a billion) possible patterns of performances. Thus, the ten principles make it possible for a small number of terms to distinguish all the enormous variety of wisdoms humanly possible in any area of expertise.