WHAT IS "SIGNIFICANT LEARNING"?

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One of the first tasks teachers face when designing a course is deciding what they want students to learn or get out of their course. Students will always learn something, but good teachers want their students to learn something important or significant, rather than something relatively insignificant. This leads to a question that is key to the whole teaching enterprise: What are the ways in which learning can be significant? If we have or can develop a language and a conceptual framework for identifying the multiple ways in which learning can be significant, then teachers can decide which of various kinds of significant learning they want to support and promote in a given course or learning experience.

It was with this thought in mind that I worked on and eventually put together a new taxonomy of learning, one that is called a "Taxonomy of Significant Learning" (and which is described in more detail in Chapter 2 of Creating Significant Learning Experiences).

My own view is that this new taxonomy can be seen as a successor to the classic taxonomy, the well-known taxonomy of educational objectives formulated by Benjamin Bloom and his associates in the 1950's. Although this group in fact generated three taxonomies (cognitive, affective, and psychomotor), teachers have most frequently referred to the one in the cognitive domain (Bloom, 1956). The cognitive taxonomy consists of six kinds of learning that are arranged in a hierarchical sequence. These are, from the highest to the lowest:
• Evaluation
• Synthesis
• Analysis
• Application
• Comprehension
• Knowledge (meaning "recall" knowledge)

Teachers have used this taxonomy both as a framework for formulating course objectives and as a basis for evaluating student learning.

There is no question about the value of what Bloom and his associates accomplished by creating this taxonomy. Any model that commands this kind of respect half a century later is extraordinary. However, individuals and organizations involved in higher education are expressing a need for important kinds of learning that do not emerge easily from the Bloom taxonomy, for example: learning how to learn, leadership and interpersonal skills, ethics, communication skills, character, tolerance, the ability to adapt to change, etc. My interpretation of these statements is that they are expressing a need for new kinds of learning, kinds that go well beyond the cognitive domain of Bloom's taxonomy and even beyond cognitive learning itself. This suggests that the time may have arrived when we need a new and broader taxonomy of significant learning.

With an awareness of this need in mind, I have reviewed descriptions of high quality teaching and learning and have attempted the task of creating a new taxonomy, one that describes new kinds of significant learning. This taxonomy will describe several ways in which learning can be significant and represents my effort to synthesize several decades of conversations with students and teachers on this topic.
In the process of constructing this taxonomy, I was guided by a particular perspective on learning: I defined learning in terms of change. For learning to occur, there has to be some kind of change in the learner. No change, no learning. And significant learning requires that there be some kind of *lasting* change that is *important* in terms of the learner's life. With this perspective in mind, I created a taxonomy that includes six kinds of significant learning (see Figure 2.1).

**Figure 2.1**

THE TAXONOMY OF SIGNIFICANT LEARNING

- **Learning How to Learn**
  - Becoming a better student
  - Inquiring about a subject
  - Self-directing learners

- **Foundational Knowledge**
  Understanding and remembering:
  - Information
  - Ideas

- **Caring**
  Developing new...
  - Feelings
  - Interests
  - Values

- **Application**
  - Skills
  - Thinking
    - Critical, creative & practical Thinking
  - Managing projects

- **Human Dimension**
  Learning about:
  - Oneself
  - Others

- **Integration**
  Connecting:
  - Ideas
  - People
  - Realms of life
Each category of significant learning contains a number of more specific kinds of learning that are related in some way and has a distinct value for the learner. At this time I will give a quick overview of the six categories. This will be followed by comments on the general nature of the taxonomy.

**Major Categories in the Taxonomy of Significant Learning**

**Foundational Knowledge.** At the base of most other kinds of learning is the need for students to "know" something. Knowing, as used here, refers to students' ability to understand and remember specific information and ideas. It is important for people today to have some valid basic knowledge, for example, about science, history, literature, geography, etc. They also need to understand major ideas or perspectives, for example, what evolution is (and what it is not), what capitalism is (and is not), and so forth. **Special Value:** Foundational Knowledge provides the *basic understanding* that is necessary for other kinds of learning.

**Application.** This familiar kind of learning occurs when students learn how to engage in some new kind of action, which may be intellectual, physical, social, etc. Learning how to engage in various kinds of thinking (critical, creative, practical) is an important form of application learning. But this category of significant learning also includes developing certain skills (e.g., communication, playing the piano) or learning how to manage complex projects. **Special Value:** Application learning allows other kinds of learning to become *useful.*

**Integration.** When students are able to see and understand the connections between different things, an important kind of learning has occurred. Sometimes they make connections between specific ideas, between whole realms of ideas, between
people, and/or between different realms of life (e.g., between school and work or between school and leisure life). **Special Value:** The act of making new connections gives learners a new form of power, especially intellectual power.

**Human Dimension.** When students learn something important about their own Self and/or about Others, it enables them to interact more effectively with themselves or with others. They discover the personal and/or social implications of what they have learned. What they learn or the way in which they learn sometimes gives students a new understanding of themselves (self-image) or a new vision of what they want to become (self-ideal). At other times, they acquire a better understanding of others: how and why others act the way they do, or how the learner can interact more effectively with others. **Special Value:** This kind of learning informs students about the human significance of what they are learning.

**Caring.** Sometimes a learning experience changes the degree to which students care about something. This may be reflected in the form of new feelings, interests, and/or values. Any of these changes means students now care about something to a greater degree or in a way than they did before. **Special Value:** When students care about something, they then have the energy they need for learning more about it and making it a part of their lives. Without the energy for learning, nothing significant happens.

**Learning How to Learn.** This occurs when students learn something about the process of learning itself. They may be learning how to be a better student, how to engage in a particular kind of inquiry (e.g., the scientific method), or how to become self-directing learners. All of these constitute important forms of learning how to learn.
Special Value: This kind of learning enables students to *continue* learning in the future and to do so with *greater effectiveness*.

Interactive Nature of Significant Learning

One important feature of this taxonomy is that it is not hierarchical but rather relational and even interactive. The diagram shown in Figure 2.2 illustrates the interactive character of this taxonomy. This more dynamic diagram is intended to show (a) that each kind of learning is related to the other kinds of learning and (b) that achieving anyone kind of learning simultaneously enhances the possibility of the other kinds of learning being achieved. Why is this so important?

Figure 2.2

**THE INTERACTIVE NATURE OF SIGNIFICANT LEARNING**
This interactive characteristic is important for teachers because it means the various kinds of learning are synergistic. And this in turn means that teaching is no longer a ‘zero sum’ game. That is, teachers don't automatically have to give up one kind of learning in order to achieve another. Instead, when a teacher finds a way to help students achieve one kind of learning, this can in fact enhance, not decrease, student achievement in the other kinds of learning. For example, if a teacher finds a way to help students learn how to effectively use the information and concepts in a course to solve certain kinds of problems (Application learning), this makes it easier for them to get excited about the value of the subject (Caring). Or, when students learn how to effectively relate this subject to other ideas and subjects (Integration), this makes it easier for students to see the significance of the course material for themselves and for others (Human dimension). When a course or learning experience is able to promote all six kinds of learning, one has had a learning experience that can truly be deemed "significant."

Concluding Comments

To return to the original question, "What is significant learning?" the answer being offered here is: Any learning that consists of one or more of the following kinds of learning:

- Foundational knowledge
- Application learning
- Integration
- The Human dimension of learning · Caring
- Learning how to learn
And, the more that these kinds of learning occur, the more significant the learning experience is. In fact, the most significant kind of learning experience is one in which students achieve all six kinds of significant learning. And that is possible - if teachers learn how to design their courses properly with these goals in mind. That is the special capability of "integrated course design."