

The Second Principle

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The second principle of magic:
"Things which have once been in contact with each other
continue to act on each other at a distance even
after the physical contact has been severed."
James Frazer

Selection, Detection, Connection - A Self-directed Teaching Model

SDC MODEL - A Personal Teaching Model for Encouraging Critical Thinking:

How to get students to become self-directed critical thinkers

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Rationale: I created this model when I was in graduate school, many moons ago. I would place it in Joyce, Weil's, and Calhoun's (2014) Personal Family Category because its intent is to allow learners to define their own needs, their own limitations, and goals within the confines of the purposes of the model. It is intended specifically for use with high school students in areas currently categorized as the sciences, the social sciences and the humanities.

As we all know we are living in an Information Age that is replete with data overload. Evaluation and the rapid analysis of huge amounts of information are imperative skills for the citizens of both today and tomorrow. However, schools, especially high schools, still insist on the strict departmentalization of knowledge. Knowledge and information in the real world is not specialized or divided into neat curriculum packages. Knowledge is, and always has been, an integrated process. Disciplines are connected, not segregated. Economics is affected by sociology, sociology is affected by psychology and anthropology, art is affected by sociology, and music is affected by political science. And so it goes on and on like a whirling wheel; each spoke leading somewhere else; each spoke connected to the essence of humankind; each spoke leading to a new path.

The ***SDC Model*** embodies the following principles and premises:

1. That humans should learn to make choices about what they want and need to know (**selection**).

2. That information is often processed through human bias and that students need learn how to think critically and to judge and evaluate information sources. (detection).

3. That information (knowledge) is an integrated process that leads to new knowledge, new "need-to-knows", new insights into the pageant of life (connections).

Traditionally schools have decided what needs to be known by students. As institutions, schools offer very little opportunity for students to analyze, evaluate, or synthesize information that will ultimately affect their lives. It is the intention of this model to provide them with that opportunity.

This model professes ownership; ownership of direction, ownership of choice, ownership of personal bias, ownership of end product, ownership and responsibility for self. Knowledge has no meaning unless it has personal meaning; if we don't want to own it, why know it? *"We are what we think, having become what we thought.....(Buddha).*

Underlying Assumptions:

The **SDC Model** is a highly integrated model. It makes certain assumptions about the nature of the learner, about education, about teachers, and about the nature of humankind. It assumes that:

1. Humans are by nature curious about the world around them
2. Humans are delicate, precious beings that deserve special care and nurturing.
3. Humans have the right to be self-directed, self-actualizing, and self-evaluative.
4. Teachers are capable of being eclectic, as well as capable of allowing learners to freely express their preferences for particular learning styles.
5. Teachers are intelligent, intuitive beings, capable of recognizing and accommodating the individual differences of students.
6. Teachers and students both have the right to explore and personalize their ideas, feelings, and beliefs.
7. Teaching can and should be a reverent and joyful experience.
8. Students and teachers have the right to explore what is personally possible, plausible, probable and preferable.
9. Students are unique, different and varied.
10. Schools need to reconceptualize learning, methods of teaching and instructional media to meet the needs of a rapidly changing world and the needs of individual learners.
11. Learning is a life long process.
12. Knowledge is a highly personalized and internal experience.

13. Knowledge, information, perceptions, and opinions are meant to be shared, and opportunities to do so should be part of the schooling experience.

14. Critical thinking is an important intellectual and emotional skill that can be fostered, practiced, enjoyed, and refined as an integral part of the schooling experience.

15. The final, and perhaps most important assumption, is that teachers and learners can meet and share all of the above "in a place called school".

The previous assumptions are obviously based on educational and philosophical subsets of experimental, existential, phenomenological, humanistic, and hermeneutical scholarship. They are also based on religious thought, especially the Judeo-Christian tradition of "concrete individualism"

As James Mac Donald (1977) defines "concrete individualism,

" it conceives of the individual as a person, an agent of choice - a source of (yet to be discovered) intentional purposes, capable of valuing (yet to be discovered) activities and involvements and capable of (yet to be discovered) forms of self-development. (p.10)

The concept of "concrete individualism" goes hand-in-hand with that of self-actualization as professed by Carl Rogers and Abraham Maslow. (Combs, 1982, 104-106)

The **SDC Model** depends heavily on the principles of concrete individualism, self-direction and self-actualization. The learners involved in this model must possess enough self-confidence in their decision making processes to be able to:

1. **Select** the learning styles they prefer.
2. **Select** appropriate topics for examination.
3. **Select** media that will aid them in the examination of their chosen topics.
4. **Detect** inconsistencies in informational sources.
5. **Detect** the importance of source and authorship
6. **Detect** methods that will support personal views and theories.
7. **Connect** their chosen topics and findings to other existing knowledge and information.
8. **Connect** information found to other sources and other related topics.

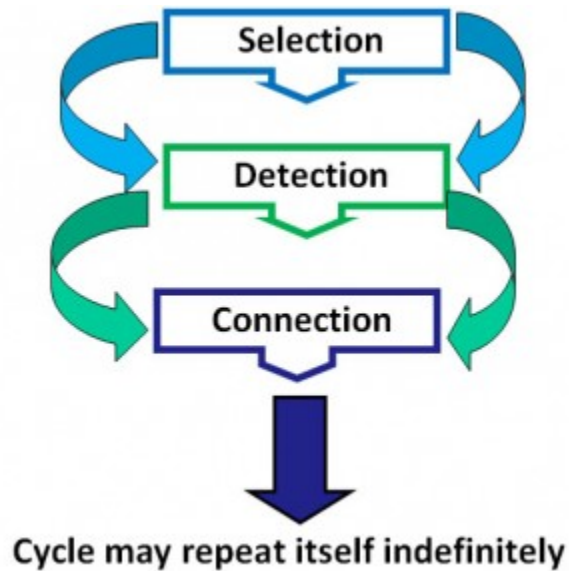


Diagram 1.1 ©L. O. Wilson 1989

Processes:

Selection

1. Student selects topic for investigation.
2. Student matches topic to preferred method of investigation.
3. Student chooses material to expand topics under investigation.
4. Student selects culmination method of presenting information for sharing

Detection

5. Student notes differences in topic's presentation in selected media.
6. Student investigates possible reasons for differences in material presentation (investigation of biases)

Connection

7. Student notes related topics that pertain or are off-shoots of original topics.
8. Student may continue to investigate expanded topics.

The ***S D C Model*** can continue indefinitely, the process narrowing or expanding, depending on the level of interest and energy of the learner.

Cognitive skills:

1. Students must evaluate existing information to determine topics of personal interest.
2. They must examine and analyze their personal preferences in learning styles.
 - a. Do they want to work alone or in a group?
 - b. How much outside help will they need?
 - c. How do they want to collect and present their chosen topic?
3. They must synthesize information from various sources.
4. They must evaluate sources of information for factual truth, political, historical and personal bias and validity of authorship.
5. They must evaluate and analyze related topics for possible expanded research.

The teacher's role: The teacher's role in this model is primarily that of a facilitator, guide, mentor, friend, counselor, resource person, and learner. We can say learner because the culmination of this model is the act of presenting information, knowledge, or personal theory of truth. Since teachers are not fathomless repositories of knowledge, they will also undoubtedly learn something new from the shared experiences and presentations.

Justification for this model is reiterated by Treffinger (1986).

As, students who seek to become effective independent learners are often able, within areas of their particular strengths and talents, to learn quickly and easily, to be highly curious and interested in a variety of topics and to pursue learning about new concepts and topics eagerly on their own. They are often very proficient at dealing with complex or advanced material, and commonly can deal with abstractions readily. They often prefer to be able to organize and structure their own learning, and to experiment with new possibilities and methods. They can easily learn through presentation in different media or formats, and are not dependent upon a single "channel" or perceptual model. (435-436)

Treffinger's views are supported by others:

1. Carl Rogers's Non-Directive Teaching Model (Joyce and Weil, 1986, 141-158)
2. Max Van Manen addresses the natural curiosity of children. (Tone of Teaching, 1986. 38-41)
3. Arthur Combs relates the personal process of learning throughout his book. (A Personal Approach to Teaching, 1982, especially Chapter 4, "The Perceptual View of Learning".)

Unique differences: Perhaps what makes this model different from other self-directed research models is that it clearly emphasizes the detection and connection aspects of personal research. Students need to

beware of cultural, historic, scientific, personal and political biases. They need to be able to substantiate personal points of view, and investigate through reliable, valid and diverse sources. Their "guide" is honor bound to stress this aspect of the model. Opposing views, conflicting opinions and varied informational sources are stressed in the detection component of this model. These are all skills involved in critical thinking.

The connection aspect of this model is also different from usual research models. The acquisition of information, area expertise and knowledge is an integrated process and a life-long skill. Most good cooks grow in expertise. The purchase of one cookbook leads to the purchase of another. New culinary skills are not a means to an end but usually a means to a beginning. Connection reflects the old adage "the more you know the more you want or need to know".

If we revisit the idea of traditional texts, the connection aspect of this model can best be illustrated by the popular works of the author James Burke. Many years ago Burke authored two very popular books - *The Day the Universe Changed* and *Connections*. He has shown, both in his written works and immensely popular spin-off PBS series, that history, science, politics, social trends, etc. are all interrelated and inseparably webbed. Students can independently come to similar conclusions by doing open-ended research; by intentionally and purposefully looking for their own connections.

Evaluation for this model is continuous and multi-faceted. Teacher suggestions and critique, peer input and evaluation, and self-evaluation of personal process and product are essential components for personal growth. The most important of these is, of course, self-evaluation. Evaluation has absolutely no meaning unless it can be internalized by the learner. In regards to using the model I would suggest that after conferencing, teachers and students devise a series of applicable grading rubrics that have personal meaning for each student and pertinence to each students' culminating project. Also, I think students engaged in this model should be required to complete a piece that is self-reflective covering the entirety of their personal learning journey during this process and annotating lessons learned and internalized.

In the beginning of this discussion I stated that this model was intended for high school students. It is intended as a personal research model. Its success would depend on the maturity, loci of control, academic intentions, prior self-actualization experiences and motivation of the students involved.

Some students have been so totally outwardly directed in their prior school experiences, thus they may find self-definition and autonomy very frustrating without being eased into it. This model is not intended for students who cannot tolerate academic ambiguity, nor is it for those who need very structured curriculum. It is intended for the student who wants to explore their own learning preferences, who is inquisitive, persistent, curious and self-motivated, one whose loci is internal rather than external. It would also require implementation in a school that was not traditionally process-product oriented. The SDC model can best be served in a school environment that is more concerned about student empowerment, fulfillment, and lifetime learning skills, than it is about achievement test scores.

Possible limitations: Traditionally, secondary teachers are so entrenched in the confines of their particular subject matter; they are often unwilling to experiment with integrated processes. Perhaps the best way to facilitate the use of a model like SDC would be for secondary teachers to team with highly integrative elementary teachers as mentors since the latter have to be integrative. Any middle or secondary teacher wanting to use the SDC approach would have to be willing to embrace subject matter integration. They would have to be totally tolerant and knowledgeable of personal learning style preferences. They would have to be willing to tolerate student empowerment and self-direction. They would have to be reasonably

eclectic and certainly well versed in research skills. Perhaps most of all, they would have to perceive students as varied and unique individuals capable of self-direction.

In ending, as the Arthur W. Combs (1972) quote best summarizes the discussion of this model, he says:

I believe it is necessary for us to recognize that the only important answers are those which the individual has within himself, for these are the only ones that will ever show in his behavior.... (from Will the Real Teacher Please Stand Up? p. XXIII)

The SDC Model is a tool for those teachers committed to fostering life-long learning. Because this model aids in teaching inquiry skills, and critical thinking, and in encouraging intrinsic motivation, it would be aligned to those teachers believing in Henry Adams quote. *A teacher affects eternity; he can never tell where his influence stops.*

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