Chapter Four
How Should We Select a Repertoire of Teaching Practices

Little learning occurs as a result of instruction alone. The kind of true learning that lasts will occur only if we apply newly acquired concepts outside of the initial learning experience, and if we spend time reflecting on and processing what we’ve learned (Wormeli, 2005, p. 5).

The last decades of research in human learning have presented new insights into the ways that learners are active in constructing their own understanding. Constructivist learning theories have shown the limitations of viewing ‘learning’ as something we can ‘give’ to students that they will ‘receive’ or learn in exactly the same form, at exactly the given time (Saskatchewan Education, 1988, p. 10).

What is Teaching?

In a discussion of teaching practices, one of the first questions that comes to mind is, “What is teaching?” Most educators would agree with a variation of the following definition of teaching: “…a complex act requiring expertise relative to content, students, and the myriad of alternatives available to bring the two together in meaningful ways” (Love, 1994). Let’s further examine this definition in order to understand teaching strategies better.

In order to teach content, we need knowledge, which requires research on the part of the teacher. All teachers can’t be expected to know everything off the top of their heads, and some study is inevitably required to be able to offer the students a high-quality educative opportunity. Home economics is no different from other subjects in this manner, and perhaps even more so: we want our students to understand the reasons for certain processes and also be able to examine them critically. Preparation may take different forms such as teaching oneself a specific skill, researching the role of particular ingredients; or simply practicing ahead of time. The role of the student must also be considered:

As you enter a classroom ask yourself this question: ‘If there were no students in the room, could I do what I am planning to do? If your answer to the question is yes, don’t do it. (Cubero, n.d.).

How does this statement apply to home economics? A demonstration that is simply a lecture and does not require participation can be done without an audience; a video that requires students to sit passively can be viewed anywhere; a worksheet that is answered from a textbook can be done anywhere. In home economics (an most other subjects), active student participation is critical to student learning. The artificial separation of “theory” and “practice” must be questioned. We do not need to look too far to see classroom examples where our theory and our practice differs substantially:

- using a worksheet to teach “Sugar Theory” while students are drinking soft drinks at their tables
- discussing inclusion and group dynamics when six students are sitting together at one table and one student is sitting alone at another
- inviting elementary students in to make sugar cookies and then distributing a colouring book on good nutrition
Our challenge then is to consider ways of engaging students in meaningful ways with the content of our subject area. How are home economics classes different from other classes? Whether it is foods, family or textile studies, there are seldom textbooks from which one can assign a set of questions. Some teachers might find video clips for motivators or have students read articles for background; but for the most part, the classes are hands-on and pose particular learning challenges both in terms of preparation and presentation. It is important to look at these challenges as opportunities for enriched learning that is an important constituent of hands-on learning. By seeking the relevancy of certain teaching strategies to home economics, you will be better equipped to make reasoned judgments without resorting to the fallback positions of demonstration and worksheet today, lab tomorrow.

Principles of Learning

Teachers recognize the value of teaching strategies that engage and motivate students and lead them to deeper understanding of subject matter. As home economics educators, we often pride ourselves on the hands-on aspects of our classes that enable our students to learn through their senses more fully than if they were in a more textbook-driven course. However, we still need to help our students identify salient information and structure it for meaning and successful application (Wormeli, 2005). How do we choose appropriate teaching strategies? A good place to start is the BC Home Economics IRP which states three principles of learning (p. 4):

- Learning requires the active participation of the student.
- People learn in a variety of ways and at different rates.
- Learning is both an individual and a group process.

Basic principles of educational psychology that facilitate learning according to Chamberlain (1992, p. 10) include:

- Active learner involvement increases retention
- Persons learn best that which is relevant to their immediate lives and future goals
- Positive reinforcement speeds learning
- Learning takes place best in a non-threatening, accepting environment
- Learning that can be generalized is more readily used

None of these principles are brand-new. The challenge is how to implement the principles in ways that engage students, cover the curriculum, and work within the allotted resources of time, money and facilities. Many books have been published that promise to help teachers improve their teaching strategies and by association, the learning of their students. The books frequently read like “how-to” manuals, consisting of page upon page of detailed instructions that make teaching into a cut-and-dried science. In reality, teaching isn’t like that. It is an art as much as a science; the art of getting to know one’s students and the curriculum in an educative setting.

Models of Learning - Multiple Intelligences

Getting to know one’s students includes understanding the way they learn best. Most teachers would agree with the cartoonist George Evans who wrote that, “Every student can learn, just not on the same day, or the same way.” Two main models of learning, multiple intelligences and learning styles, have taken a firm grip on educational thought. Each model has particular strengths and weaknesses that makes them more effective when used together, or when a variety of teaching strategies are used in a classroom.
The multiple intelligences model holds that intelligence as measured by I.Q. tests does not account for the many other ways that people are intelligent. It is primarily concerned with the content or the “what” of learning. Howard Gardner and his associates have developed nine intelligences that fit into three domains.

**Interactive Domain:** You invite and encourage interaction to achieve understanding.
- **Kinaesthetic** — ability to control one’s body movements and to handle objects skillfully. This intelligence uses body movement to absorb information — either by fine motor skills (manipulating objects as in labs) or gross motor skills (moving your body as in drama).
- **Interpersonal** — capacity to detect and respond appropriately to moods, motivations and desires of others. This intelligence supports learning with others; you thrive in situations such as co-operative groups or open class discussions.
- **Verbal/Linguistic** — well-developed verbal skills and sensitivity to sounds, meanings, and rhythms of words. This matches that way students are traditionally taught (lecture, recitation, textbooks and board work). It includes the ability to express yourself orally and in writing as well as the ability to master another language.

**Analytic Domain:** You prefer to analyse and take information and see how it fits into what you already know.
- **Logical** — ability to think conceptually and abstractly, and capacity to discern logical or numerical patterns. This is highly valued in traditional instruction, especially in math. It includes logic and reasoning, problem solving. You seek structure and prefer sequenced, orderly lessons.
- **Musical** — ability to produce and appreciate rhythm, pitch and timbre. This is the influence of patterns on you through songs, poetry, instruments, environmental sounds and response to rhythms. This does not only mean by hearing sounds, but any kind of pattern by any sense.
- **Naturalist** — Not only do you have the skills of the musical intelligence, but you want to see where information fits in the broad spectrum. You enjoy classifying, categorizing, and hierarchical frameworks.

**Introspective Domain:** You prefer to look inward and make new information connect to your own experiences and beliefs.
- **Visual/spatial** — capacity to think in images and pictures, to visualize accurately and abstractly. This intelligence uses spatial reasoning; using charts, graphs, maps, tables, illustrations, art, puzzles, costumes etc. You can picture ideas and solutions in your mind before you can talk about them or put them into practice.
- **Intrapersonal** — capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes. This is the intelligence of feelings, values, and attitudes. You are the person who sees the lesson and has to know “Why do I have to learn this?”
- **Existential** — sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here. You want to see your place in the big picture. Not only do you want to know “Why do I have to learn this?” in the classroom, but where you fit into the community, world, or universe.

Rather than teaching a subject or topic, multiple intelligences theory suggests that learning be structured around learning activities that focus on an issue or question and connect multiple subjects. Multiple intelligences focus on the “how” of learning, advocating that teachers develop instructional methods to allow students to demonstrate multiple ways of understanding. For example, instead of using a short-answer test to check for student understanding (which would not measure mastery or deep understanding), teachers might draw upon some of the classroom activities listed below that tap into multiple intelligences:

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>Examples of Classroom Activities</th>
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<tbody>
<tr>
<td>Verbal-Linguistic</td>
<td>Discussion, debates, journal writing,</td>
</tr>
<tr>
<td>Logical – Mathematical</td>
<td>Calculations, experiments, comparisons, using evidence, formulating and testing hypothesis, deductive and inductive reasoning</td>
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<td>------------------------</td>
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<tr>
<td>Spatial</td>
<td>Concept maps, graphs charts, art projects, metaphorical thinking, visualization, videos, slides, visual presentations</td>
</tr>
<tr>
<td>Bodily-Kinesthetic</td>
<td>Role-playing, dance, manipulatives, hands-on demonstration</td>
</tr>
<tr>
<td>Musical</td>
<td>Playing music, singing, rapping, whistling, clapping</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Community-involvement projects, discussion, cooperative learning, team games, peer tutoring, conferences, sharing</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Student choice, journal writing, self-evaluation, independent study, reflecting</td>
</tr>
<tr>
<td>Naturalist</td>
<td>Gardening projects, ecological field trips, environmental study, outdoor activities</td>
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</tbody>
</table>

Also note that some activities tap into more than one intelligence, for example:

<table>
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<tr>
<th>Choreography</th>
<th>Musical-Rhythmic; Verbal-Linguistic; Interpersonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructing timelines</td>
<td>Logical-Mathematical; Visual-Spatial</td>
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<tr>
<td>Putting on a play</td>
<td>Rhythmic; Verbal/Linguistic; Interpersonal; Visual-Spatial</td>
</tr>
<tr>
<td>Making a video</td>
<td>Logical-Mathematical, Musical-Rhythmic; Verbal/Linguistic; Interpersonal; Visual-Spatial</td>
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<tr>
<td>Making graphs</td>
<td>Logical-Mathematical; Visual-Spatial</td>
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<tr>
<td>Designing posters</td>
<td>Verbal-Linguistic, Visual-Spatial</td>
</tr>
<tr>
<td>Communicating with peers or experts online</td>
<td>Verbal-Linguistic; Interpersonal</td>
</tr>
<tr>
<td>Hands-on experimentation</td>
<td>Kinesthetic; Logical/Mathematical</td>
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<tr>
<td>Composing a song</td>
<td>Musical/Rhythmic; Verbal-Linguistic</td>
</tr>
<tr>
<td>Building a model or 3-D displays</td>
<td>Kinesthetic; Logical-Mathematic</td>
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**Models of Learning - Learning Styles**

The learning styles model of learning was first developed by the famous psychologist, Carl Jung, and is based on how people learn. Awareness of learning styles allows us to see how the preferences of individuals for certain types of thinking processes affect their learning behaviors. Several different learning style models exist (e.g. Gregorc, Myers-Brigg, Felder-Silverman, Kolb) but experts concur that following a particular model is irrelevant; it is more important to use a variety of activities in every class so that there is something for all students.

The basic terms used in learning style models are auditory, visual and kinesthetic learning. The Felder-Silverman model classifies learners as follows:

- *sensing learners* (concrete, practical, oriented toward facts and procedures) or *intuitive learners* (conceptual, innovative, oriented toward theories and meanings);
• **visual learners** (prefer visual representations of presented material—pictures, diagrams, flow charts) or **verbal learners** (prefer written and spoken explanations);
• **inductive learners** (prefer presentations that proceed from the specific to the general) or **deductive learners** (prefer presentations that go from the general to the specific);
• **active learners** (learn by trying things out, working with others) or **reflective learners** (learn by thinking things through, working alone);
• **sequential learners** (linear, orderly, learn in small incremental steps) or **global learners** (holistic, systems thinkers, learn in large leaps).

Suggested teaching strategies for learning styles include:

• **Teach theoretical material by first presenting problems and observations that relate to the theory** (sensing, inductive, global).

• **Balance conceptual information** (intuitive) with **concrete information** (sensing). Give students a chance to taste and touch.

• **Use physical analogies and demonstrations** (sensing, global). For example, the threading route on a sewing machine can be compared to a horse’s head.

• **Occasionally give some experimental observations before presenting the general principle, and have the students (preferably working in groups) see how far they can get toward inferring the latter** (inductive). When showing the differences between baking powder and baking soda, have the students observe what happens when acid is added (for example) before giving them the definition.

• **Provide class time for students to think about the material being presented** (reflective) and for **active student participation** (active). Occasionally pause during a lecture to allow time for thinking and formulating questions. Assign "one-minute papers" near the end of a lecture period, having students write on index cards the lecture's most important point and the single most pressing unanswered question. Assign brief group problem-solving exercises in class that require students to work in groups of three or four.

• **Encourage or mandate cooperation**. Hundreds of research studies show that students who participate in cooperative learning experiences tend to earn better grades and display more enthusiasm.

• **Demonstrate the logical flow of individual course topics** (sequential), but also point out connections between the current material and other relevant material in the same course, in other courses in the same discipline, in other disciplines, and in everyday experience (global).

**Types of Instruction**

While a long list of types of instruction could be generated, for the purposes of this discussion, five types of instruction have been delineated with some overlap among them ("Instructional Strategies Online, n.d.")
• **Direct Instruction** – is a commonly used form of instruction that is teacher-directed and effective for providing information or for developing step-by-step skills. It also works well for introducing other teaching methods or actively involving students in construction of knowledge. The most usual form of direct instruction is through a lecture and notes although demonstrations and didactic questioning (e.g. questions that are convergent, factual and often begin with “what”, “where”, “when” and “how”) also fit into this category.

• **Indirect Instruction** – is mainly student-centred and includes a high level of student involvement in observing, investigating, drawing inferences from data, or forming hypotheses. It uses students’ interest and curiosity to generate alternatives or solve problems. The teacher facilitates rather than directs, and arranges the learning environment, provides opportunity for student involvement, and provides feedback to students as needed. Examples are case studies, concept attainment and mapping, and reflective discussion.

• **Experiential Learning** – is inductive, learner-centred and activity-oriented. The emphasis on the process of learning, and not on the product. Effective experiential learning includes personal reflection about an experience and generalization of the learning to other contexts. Examples might include field trips, simulations, storytelling and role-playing.

• **Independent Study** – refers to the many activities that encourage the development of individual student initiative, self-reliance and self-improvement. The focus is on planned independent study by students under the guidance or supervision of a classroom teacher. Independent study could include small group work, computer-assisted instruction, journals, learning logs and research projects.

• **Interactive Instruction** – relies substantially on discussion and sharing among participants. Students learn from peers and teachers to develop social skills and abilities, to organize their thoughts, and to develop rational arguments. The teacher needs to set the stage for discussion by outlining the topic and amount of discussion time, attending to group composition and size, and having strategies for sharing. This type of teaching depends on the expertise of the teacher in structuring and developing the dynamics of the group. Examples are role playing, brainstorming, Think-Pair-Share, cooperative learning and structured controversy.

**Conclusion**

Every lesson should include a number of teaching strategies that provide a variety of learning opportunities for the students. As always the onus to provide the learning opportunities falls to the teacher. Jessie McLenaghan, first Director of Home Economics in British Columbia once wrote that, “The teacher, not the program, is the keystone of the educational arch” (Peterat & de Zwart, 1995, p. 81). These words still hold true today. The teacher holds the key to student learning through the strategies she or he chooses to employ.

**References and Further Reading:**


