Patzelt, Karen E. 1993. Principles of Whole Language and implications for ESL learners. ERIC Document: ED400526.

Rigg, P. 1991. Whole Language in TESOL. *TESOL Quarterly* 25(3): 521–542.

Rodgers, T. S. 1993. Teacher training for Whole Language in ELT. Paper given at City University of Hong Kong Seminar on Teacher in Education in Language Teaching. April.

Shao, X. 1996. A bibliography of Whole Language materials. Biblio. Series 1993, No. 1. ERIC Document: ED393093.

Stahl, S. A. 1994. The effects of Whole Language instruction: An update and a reappraisal. ERIC Document: ED364830.

Whiteson, V. 1998. *Play's the Thing: A Whole Language Approach.* New York: St. Martin's Press.

10   Multiple Intelligences

Background

Multiple Intelligences (MI) refers to a learner-based philosophy that characterizes human intelligence as having multiple dimensions that must be acknowledged and developed in education. Traditional IQ or intelligence tests are based on a test called the Stanford-Binet, founded on the idea that intelligence is a single, unchanged, inborn capacity. However, traditional IQ tests, while still given to most schoolchildren, are increasingly being challenged by the MI movement. MI is based on the work of Howard Gardner of the Harvard Graduate School of Education (Gardner 1993). Gardner notes that traditional IQ tests measure only logic and language, yet the brain has other equally important types of intelligence. Gardner argues that all humans have these intelligences, but people differ in the strengths and combinations of intelligences. He believes that all of them can be enhanced through training and practice. MI thus belongs to a group of instructional perspectives that focus on differences between learners and the need to recognize learner differences in teaching. Learners are viewed as possessing individual learning styles, preferences, or intelligences. Pedagogy is most successful when these learner differences are acknowledged, analyzed for particular groups of learners, and accommodated in teaching. In both general education and language teaching, a focus on individual differences has been a recurring theme in the last 30 or so years, as seen in such movements or approaches as Individualized Instruction, Autonomous Learning, Learner Training, and Learner Strategies. The Multiple Intelligences model shares a number of commonalities with these earlier proposals.

Gardner (1993) proposed a view of natural human talents that is labeled the "Multiple Intelligences Model." This model is one of a variety of learning style models that have been proposed in general education and have subsequently been applied to language education (see, e.g., Christison 1998). Gardner claims that his view of intelligence(s) is culture-free and avoids the conceptual narrowness usually associated with traditional models of intelligence (e.g., the Intelligent Quotient [IQ] testing model). Gardner posits eight native "intelligences," which are described as follows:

1. *Linguistic:* the ability to use language in special and creative ways, which is something lawyers, writers, editors, and interpreters are strong in
2. *Logical/mathematical:* the ability to think rationally, often found with doctors, engineers, programmers, and scientists
3. *Spatial:* the ability to form mental models of the world, something architects, decorators, sculptors, and painters are good at
4. *Musical:* a good ear for music, as is strong in singers and composers
5. *Bodily/kinesthetic:* having a well-coordinated body, something found in athletes and craftspersons
6. *Interpersonal:* the ability to be able to work well with people, which is strong in salespeople, politicians, and teachers
7. *Intrapersonal:* the ability to understand oneself and apply one's talent successfully, which leads to happy and well-adjusted people in all areas of life
8. *Naturalist:* the ability to understand and organize the patterns of nature

The idea of Multiple Intelligences has attracted the interest of many educators as well as the general public. Schools that use MI theory encourage learning that goes beyond traditional books, pens, and pencils. Teachers and parents who recognize their learners'/children's particular gifts and talents can provide learning activities that build on those inherent gifts. As a result of strengthening such differences, individuals are free to be intelligent in their own ways.

Other "intelligences" have been proposed, such as Emotional Intelligence, Mechanical Intelligence, and Practical Intelligence, but Gardner defends his eight-dimensional model of intelligence by claiming that the particular intelligences he has nominated are verified by eight databased "signs." Detailed discussion of the signs is beyond the range of this chapter. However, signs include such clues as an intelligence having a distinct developmental and a distinct evolutionary history; that is, within individuals there is a similar sequence of development of an intelligence beginning in early childhood and continuing into maturity. This sequence will be universal for individuals but unique to each intelligence. Similarly, each intelligence is deeply embedded in evolutionary history. Human tool using, for example, has such an evidential evolutionary history and is an example, Gardner says, of bodily/kinesthetic intelligence.

Approach: Theory of language and language learning

MI theory was originally proposed by Gardner (1993) as a contribution to cognitive science. Fairly early on, it was interpreted by some general educators, such as Armstrong (1994), as a framework for rethinking

school education. Some schools in the United States have indeed remade their educational programs around the MI model. Applications of MI in language teaching have been more recent, so it is not surprising that MI theory lacks some of the basic elements that might link it more directly to language education. One lack is a concrete view of how MI theory relates to any existing language and/or language learning theories, though attempts have been made to establish such links (e.g., Reid 1997; Christison 1998). It certainly is fair to say that MI proposals look at the language of an individual, including one or more second languages, not as an "added-on" and somewhat peripheral skill but as central to the whole life of the language learner and user. In this sense, language is held to be integrated with music, bodily activity, interpersonal relationships, and so on. Language is not seen as limited to a "linguistics" perspectives but encompasses all aspects of communication.

Language learning and use are obviously closely linked to what MI theorists label "Linguistic Intelligence." However, MI proponents believe there is more to language than what is usually subsumed under the rubric linguistics. There are aspects of language such as rhythm, tone, volume, and pitch that are more closely linked, say, to a theory of music than to a theory of linguistics. Other intelligences enrich the tapestry of communication we call "language." In addition, language has its ties to life through the senses. The senses provide the accompaniment and context for the linguistic message that give it meaning and purpose. A multisensory view of language is necessary, it seems, to construct an adequate theory of language as well as an effective design for language learning.

A widely accepted view of intelligence is that intelligence – however measured and in whatever circumstance – comprises a single factor, usually called the "g" factor. From this point of view, "Intelligence (g) can be described as the ability to deal with cognitive complexity. . . . The vast majority of intelligence researchers take these findings for granted" (Gottfredson 1998: 24). One popular explication of this view sees intelligence as a hierarchy with g at the apex of the hierarchy:

more specific aptitudes are arrayed at successively lower levels: the so-called group factors, such as verbal ability, mathematical reasoning, spatial visualization and memory, are just below g, and below these are skills that are more dependent on knowledge or experience, such as the principles and practices of a particular job or profession. (Gottfredson 1998: 3)

The view of Gardner (and some other cognitive scientists) "contrasts markedly with the view that intelligence is based on a unitary or 'general' ability for problem solving" (Teele 2000: 27). In the Gardner view, there exists a cluster of mental abilities that are separate but equal and that share the pinnacle at the top of the hierarchy called intelligence – thus, the eight Multiple Intelligences that Gardner has described. One way of looking

ing at the learning theoretical argument is to apply the logic of the single factor (g) model to the Multiple Intelligences model. The single factor model correlates higher intelligence (+g) with greater speed and efficiency of neural processing; that is, the higher the g factor in the individual, the greater the speed and efficiency of that individual's brain in performing cognitive operations (Gottfredson 1998: 3). If there is not one I but several I's, then one can assume that the speed and efficiency of neural processing will be greatest when a particular I is most fully exercised; that is, if a language learner has a high musical intelligence, that person will learn most quickly (e.g., a new language) when that content is embedded in a musical frame.

Design: Objectives, syllabus, learning activities, roles of learners, teachers, and materials

There are no goals stated for MI instruction in linguistic terms. MI pedagogy focuses on the language class as the setting for a series of educational support systems aimed at making the language learner a better designer of his/her own learning experiences. Such a learner is both better empowered and more fulfilled than a learner in traditional classrooms. A more goal-directed learner and happier person is held to be a likely candidate for being a better second language learner and user.

Also, there is no syllabus as such, either prescribed or recommended, in respect to MI-based language teaching. However, there is a basic developmental sequence that has been proposed (Lazear 1991) as an alternative to what we have elsewhere considered as a type of "syllabus" design. The sequence consists of four stages:

- *Stage 1:* Awaken the Intelligence. Through multisensory experiences – touching, smelling, tasting, seeing, and so on – learners can be sensitized to the many-faceted properties of objects and events in the world that surrounds them.
- *Stage 2:* Amplify the Intelligence. Students strengthen and improve the intelligence by volunteering objects and events of their own choosing and defining with others the properties and contexts of experience of these objects and events.
- *Stage 3:* Teach with/for the Intelligence. At this stage the intelligence is linked to the focus of the class, that is, to some aspect of language learning. This is done via worksheets and small-group projects and discussion.
- *Stage 4:* Transfer of the Intelligence. Students reflect on the learning experiences of the previous three stages and relate these to issues and challenges in the out-of-class world.

MI has been applied in many different types of classrooms. In some, there are eight self-access activity corners, each corner built around one of the eight intelligences. Students work alone or in pairs on intelligence foci of their own choosing. Nicholson-Nelson (1998: 73) describes how MI can be used to individualize learning through project work. She lists five types of projects:

1. *Multiple intelligence projects:* These are based on one or more of the intelligences and are designed to stimulate particular intelligences.
2. *Curriculum-based projects:* These are based on curriculum content areas but are categorized according to the particular intelligences they make use of.
3. *Thematic-based projects:* These are based on a theme from the curriculum or classroom but are divided into different intelligences.
4. *Resource-based projects:* These are designed to provide students with opportunities to research a topic using multiple intelligences.
5. *Student-choice projects:* These are designed by students and draw on particular intelligences.

In other, more fully teacher-fronted classrooms, the students move through a cycle of activities highlighting use of different intelligences in the activities that the teacher has chosen and orchestrated.

The following list summarizes several of the alternative views as to how the MI model can be used to serve the needs of language learners within a classroom setting:

- *Play to strength.* If you want an athlete or a musician (or a student having some of the these talents) to be an involved and successful language learner, structure the learning material for each individual (or similar group of individuals) around these strengths.
- *Variety is the spice.* Providing a teacher-directed rich mix of learning activities variously calling upon the eight different intelligences makes for an interesting, lively, and effective classroom for all students.
- *Pick a tool to suit the job.* Language has a variety of dimensions, levels, and functions. These different facets of language are best served instructionally by linking their learning to the most appropriate kind of MI activity.
- *All sizes fit one.* Every individual exercises all intelligences even though some of these may be out of awareness or undervalued. Pedagogy that appeals to all the intelligences speaks to the "whole person" in ways that more unifaceted approaches do not. An MI approach helps to develop the Whole Person within each learner, which best serves the person's language learning requirements as well.
- *Me and my people.* IQ testing is held to be badly biased in favor of Western views of intelligence. Other cultures may value other intelli-

gences more than the one measured in IQ testing. Since language learning involves culture learning as well, it is useful for the language learner to study language in a context that recognizes and honors a range of diversely valued intelligences.

Each of these views has strengths and weaknesses, some of a theoretical, some of a pedagogical, and some of a practical nature. It seems that potential MI teachers need to consider each of these possible applications of MI theory in light of their individual teaching situations.

Campbell notes that MI theory "is not prescriptive. Rather, it gives teachers a complex mental model from which to construct curriculum and improve themselves as educators" (Campbell 1997: 19). In this view, teachers are expected to understand, master, and be committed to the MI model. Teachers are encouraged to administer an MI inventory on themselves and thereby be able to "connect your life's experiences to your concept of Multiple Intelligences" (Christison 1997: 7). (The MI inventory is a short checklist that enables users to create their own MI profiles and use these as a guide to designing and reflecting upon their learning experiences [Christison 1997]). Teachers then become curriculum developers, lesson designers and analysts, activity finders or inventors, and, most critically orchestrators of a rich array of multisensory activities within the realistic constraints of time, space, and resources of the classroom. Teachers are encouraged not to think of themselves merely as language teachers. They have a role that is not only to improve the second language abilities of their students but to become major "contributors to the overall development of students' intelligences" (Christison 1999: 12).

Like teachers, learners need to see themselves engaged in a process of personality development above and beyond that of being successful language learners. The MI classroom is one designed to support development of the "whole person," and the environment and its activities are intended to enable students to become more well-rounded individuals and more successful learners in general. Learners are encouraged to see their goals in these broader terms. Learners are typically expected to take an MI inventory and to develop their own MI profiles based on the inventory. "The more awareness students have of their own intelligences and how they work, the more they will know how to use that intelligence [*sic*] to access the necessary information and knowledge from a lesson" (Christison 1997: 9). All of this is to enable learners to benefit from instructional approaches by reflecting on their own learning.

Where MI is richest is in proposals for lesson organization, multisensory activity planning, and in using realia. There are also now a number of reports of actual teaching experiences from an MI perspective that are both teacher-friendly and candid in their reportage. Activities and the materials that support them are often shown or suggested in tables in

TABLE I. TAXONOMY OF LANGUAGE-LEARNING ACTIVITIES FOR MULTIPLE INTELLIGENCES

Linguistic Intelligence	
lectures	
small- and large-group discussions	student speeches
books	storytelling
worksheets	debates
word games	journal keeping
listening to cassettes or talking books	memorizing
publishing (creating class newspapers or collections of writing)	using word processors
Logical/Mathematical Intelligence	
scientific demonstrations	
logic problems and puzzles	creating codes
science thinking	story problems
logical-sequential presentation of subject matter	calculations
Spatial Intelligence	
charts, maps, diagrams	
videos, slides, movies	visualization
art and other pictures	photography
imaginative storytelling	using mind maps
graphic organizers	painting or collage
telescopes, microscopes	optical illusions
visual awareness activities	student drawings
Bodily/Kinesthetic Intelligence	
creative movement	
Mother-may-I?	hands-on activities
cooking and other "mess" activities	field trips
role plays	mime
Musical Intelligence	
playing recorded music	
playing live music (piano, guitar)	singing
music appreciation	group singing
student-made instruments	mood music
	Jazz Chants
Interpersonal Intelligence	
cooperative groups	
peer teaching	conflict mediation
group brainstorming	board games
	pair work
Intrapersonal Intelligence	
independent student work	
individualized projects	reflective learning
options for homework	journal keeping
inventories and checklists	interest centers
personal journal keeping	self-esteem journals
self-teaching/programmed instruction	goal setting

which a particular intelligence is paired with possible resources useful for working with this intelligence in class. Such a table from Christison (1997: 7–8) is reproduced in Table 1.

Procedure

Christison describes a low-level language lesson dealing with description of physical objects. The lesson plan recapitulates the sequence described earlier in the "Design" section.

- *Stage 1*: Awaken the Intelligence. The teacher brings many different objects to class. Students experience feeling things that are soft, rough, cold, smooth, and so on. They might taste things that are sweet, salty, sour, spicy, and so on. Experiences like this help activate and make learners aware of the sensory bases of experience.
- *Stage 2.* Amplify the Intelligence. Students are asked to bring objects to class or to use something in their possession. Teams of students describe each object attending to the five physical senses. They complete a worksheet including the information they have observed and discussed (Table 2).
- *Stage 3:* Teach with/for the Intelligence. At this stage, the teacher structures larger sections of lesson(s) so as to reenforce and emphasize sensory experiences and the language that accompanies these experiences. Students work in groups, perhaps completing a worksheet such as that shown in Table 3.
- *Stage 4:* Transfer of the Intelligence. This stage is concerned with application of the intelligence to daily living. Students are asked to reflect on both the content of the lesson and its operational procedures (working in groups, completing tables, etc.).

TABLE 2. THE SENSORY HANDOUT

Name of team _____

Team members _____

Sight _____

Sound _____

Feel _____

Smell _____

Size _____

What it's used for _____

Name of the object _____

TABLE 3. MULTIPLE INTELLIGENCES DESCRIPTION EXERCISE

What am I describing?
Directions: Work with your group. Listen as the teacher reads the description of the object. Discuss what you hear with your group. Together, decide which object in the class is being described.

Name of the object
Object 1 _____

Object 2 _____

Object 3 _____

Object 4 _____

Object 5 _____

Next have each group describe an object in the classroom using the formula given in Stage 2. Then, collect the papers and read them, one at a time. Ask each group to work together to write down the name of the object in the classroom that you are describing.

This particular lesson on describing objects is seen as giving students opportunities to "develop their linguistic intelligence (for example, describing objects), logical intelligence (for example, determining which object is being described), visual/spatial intelligence (for example, determining how to describe things), interpersonal intelligence (for example, working in groups), and intrapersonal intelligence (for example, reflecting on one's own involvement in the lesson)" (Christison 1997: 10–12).

Conclusion

Multiple Intelligences is an increasingly popular approach to characterizing the ways in which learners are unique and to developing instruction to respond to this uniqueness. MI is one of a set of such perspectives dealing with learner differences and borrows heavily from these in its recommendations and designs for lesson planning. The literature on MI provides a rich source of classroom ideas regardless of one's theoretical perspective and can help teachers think about instruction in their classes in unique ways. Some teachers may see the assumptions of identifying and responding to the variety of ways in which students differ to be unrealistic in their own settings and antithetical to the expectations of their students and administrators. There are, however entire schools as well as language programs being restructured around the MI perspective. Evaluation of how successful these innovations are will be needed to more fully evaluate the claims of MI in education and in second language teaching.

Bibliography and further reading

Armstrong, T. 1994. *Multiple Intelligences in the Classroom*. Alexandria, Va.: Association for Supervision and Curriculum Development.

Campbell, L. 1997. How teachers interpret MI theory. *Educational Leadership* 55(1): 15–19.

Christison, M. 1997. An introduction to multiple intelligences theory and second language learning. In J. Reid (ed.), Understanding Learning Styles in the Second Language Classroom. Englewood Cliffs, N.J.: Prentice Hall/Regents. 1–14.

Christison, M. 1998. Applying multiple intelligences theory in preservice and inservice TEFL education programs. *English Language Teaching Forum* 36(2) (April–June): 2–13.

Christison, M. 1999. Multiple Intelligences: Teaching the whole student. *ESL Magazine* 2(5): 10–13.

Christison, M. 2001. *Applying Multiple Intelligences Theory in the Second and Foreign Language Classroom*. Burlingame, Calif: Alta Book Center Publishers.

Gardner, H. 1985. *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Gardner, H. 1993. *Multiple Intelligences: The Theory and Practice*. New York: Basic Books.

Gottfredson, L. 1998. The general intelligence factor. *Scientific American* 9(4) (Winter): 24–29.

Lazear, D. 1991. *Seven Ways of Teaching: The Artistry of Teaching with Multiple Intelligences*. Palatine, Ill.: IRI Skylight.

Marzano, R., R. Brandt, C. Hughes, B. Jones, B. Presseisen, and S. Rankin. 1988. *Dimensions of Thinking: A Framework for Curriculum and Instruction*. Alexandria, Va.: Association for Supervision and Curriculum Development.

Nicholson-Nelson, K. 1988. *Developing Students' Multiple Intelligences*. New York: Scholastic.

Reid, J. 1997. *Understanding Learning Styles in the Second Language Classroom*. Englewood Cliffs, N.J.: Prentice Hall/Regents.

Teele, S. 2000. *Rainbows of Intelligence: Exploring How Students Learn*. Thousand Oaks, Calif.: Corwin Press.

Weinreich-Haste, H. 1985. The varieties of intelligence: An interview with Howard Gardner. *New Ideas in Psychology* 3(4): 47–65.

11   Neurolinguistic Programming

Background

Neurolinguistic Programming (NLP) refers to a training philosophy and set of training techniques first developed by John Grindler and Richard Bandler in the mid-1970s as an alternative form of therapy. Grindler (a psychologist) and Bandler (a student of linguistics) were interested in how people influence each other and in how the behaviors of very effective people could be duplicated. They were essentially interested in discovering how successful communicators achieved their success. They studied successful therapists and concluded that they "followed similar patterns in relating to their clients and in the language they used, and that they all held similar beliefs about themselves and what they were doing" (Revell and Norman 1997: 14). Grindler and Bandler developed NLP as a system of techniques therapists could use in building rapport with clients, gathering information about their internal and external views of the world, and helping them achieve goals and bring about personal change. They sought to fill what they perceived to be a gap in psychological thinking and practice of the early 1970s by developing a series of step-by-step procedures that would enable people to improve themselves:

NLP is . . . a collection of techniques, patterns, and strategies for assisting effective communication, personal growth and change, and learning. It is based on a series of underlying assumptions about how the mind works and how people act and interact. (Revell and Norman 1997: 14)

The NLP model provides a theoretical framework and a set of working principles for directing or guiding therapeutic change, but the principles of NLP have been applied in a variety of other fields, including management training, sports training, communications sales and marketing, and language teaching. Since NLP is a set of general communication techniques, NLP practitioners generally are required to take training in how to use the techniques in their respective fields. NLP was not developed with any applications to language teaching in mind. However, because the assumptions of NLP refer to attitudes to life, to people, and to self-discovery and awareness, it has had some appeal within language teaching to those interested in what we have called humanistic approaches –