howard gardner's multiple intelligences

Howard Gardner's multiple intelligence theories model, free multiple intelligences tests, and VAK learning styles

The Multiple Intelligences concepts and VAK (or VARK or VACT) learning styles models offer relatively simple and accessible methods to understand and explain people's preferred ways to learn and develop. Occasionally well-intentioned people will write that the use of such models and tests is wrong because it 'pigeon-holes' people, and ignores the point that we are all a mixture of styles and preferences, and not just one single type, which is true. Please remember that over-reliance on, or extreme interpretation of, any methodology or tool can be counter-productive.

In the case of the Multiple Intelligences model, and arguably to greater extent VAK (because VAK is such a simple model), remember that these concepts and tools are **aids** to understanding **overall** personality, preferences and strengths - which will almost always be a mixture in each individual person.

Therefore, as with any methodology or tool, use Multiple Intelligences concepts, VAK and other learning styles ideas with care and interpretation according to the needs of the situation.

In addition to the VAK guide below, further VAK detail and VAK tests are available on the VAK tests page.

multiple intelligences theory

Howard Gardner's Multiple Intelligence Theory was first published in Howard Gardner's book, Frames Of Mind (1983), and quickly became established as a classical model by which to understand and teach many aspects of human intelligence, learning style, personality and behaviour - in education and industry. Howard Gardner initially developed his ideas and theory on multiple intelligences as a contribution to psychology, however Gardner's theory was soon embraced by education, teaching and training communities, for whom the appeal was immediate and irresistible - a sure sign that Gardner had created a classic reference work and learning model.

Howard Gardner was born in Scranton, Pennsylvania USA in 1943 to German Jewish immigrant parents, and entered Harvard in 1961, where, after Gardner's shift from

history into social relations (which included psychology, sociology, and anthropology) he met his early mentor Erik Erikson. Later Gardner was also influenced by psychologists Jeane Piaget, Jerome Bruner, and philosopher Nelson Goodman, with whom Gardner co-founded 'Project Zero' in 1967 (focusing on studies of artistic thought and creativity). Project Zero's 1970's 'Project on Human Potential', whose heady aim was to address 'the state of scientific knowledge concerning human potential and its realization', seems to have been the platform from which Gardner's multiple intelligences ideas grew, and were subsequently published in Gardner's Frames Of Mind 1983 book. A wonderful example of 'thinking big' if ever there was one.

At time I write this summary (Apr 2005) Howard Gardner is the John H and Elisabeth A Hobbs Professor of Cognition and Education at the Harvard Graduate School of Education; he serves as adjunct Professor at Harvard University, Boston University School of Medicine, and remains senior director of Harvard Project Zero. Gardner has received honorary degrees from at least twenty foreign institutions, and has written over twenty highly regarded books on the human mind, learning and behaviour. How ironic then that Gardner, who has contributed so much to the understanding of people and behaviour, was born (according to his brief auto-biographical paper 'One Way To Make Social Scientist', 2003), cross-eyed, myopic, colour-blind and unable to recognise faces. There's hope for us all.

howard gardner's multiple intelligences theory

This simple grid diagram illustrates Howard Gardner's model of the seven Multiple Intelligences at a glance.

intelligence type	capability and perception
Linguistic	words and language
Logical-Mathematical	logic and numbers
Musical	music, sound, rhythm
Bodily-Kinesthetic	body movement control
Spatial-Visual	images and space
Interpersonal	other people's feelings
Intrapersonal	self-awareness

Free multiple intelligences tests based on Howard Gardner's model are available below in MSExcel self-calculating format, manual versions in MSExcel and pdf, and manual test versions for young people.

Gardner said that multiple intelligences were not limited to the original seven, and he has since considered the existence and definitions of other possible intelligences in his later work. Despite this, Gardner seems to have stopped short of adding to the seven (some might argue, with the exception of Naturalist Intelligence) with any clearly and fully detailed additional intelligence definitions. This is not because there are no more intelligences - it is because of the difficulty of adequately and satisfactorily defining them, since the additional intelligences are rather more complex than those already evidenced and defined.

Not surprisingly, commentators and theorists continually debate and interpret potential additions to the model, and this is why you might see more than seven intelligences listed in recent interpretations of Gardner's model. As mentioned above, Naturalist Intelligence seems most popularly considered worthy of inclusion of the potential additional 'Gardner' intelligences.

gardner's suggested possible additional intelligences

intelligence type	capability and perception
Naturalist	natural environment
Spiritual/Existential	religion and 'ultimate issues'
Moral	ethics, humanity, value of life

If you think about the items above it's easy to see why Gardner and his followers have found it quite difficult to augment the original seven intelligences. The original seven are relatively cut and dried; the seven intelligences are measurable, we know what they are, what they mean, and we can evidence or illustrate them. However the potential additional human capabilities, perceptions and attunements, are highly subjective and complex, and arguably contain many overlapping aspects. Also, the fact that these additional intelligences could be deemed a measure of good or bad poses extra questions as to their inclusion in what is otherwise a model which has hitherto made no such judgement (good or bad, that is - it's a long sentence...).

gardner's multiple intelligences - detail

The more detailed diagram below expands the detail for the original seven intelligences shown above, and also suggests ideas for applying the model and underpinning theories, so as to optimise learning and training, design accelerated learning methods, and to assess training and learning suitability and effectiveness.

	intelligence type	**description**	**typical roles**	**related tasks, activities or tests**	**preferred learning style clues**
1	**Linguistic**	**words and language**, written and spoken; retention, interpretation and explanation of ideas and information via language, understands relationship between communication and meaning	writers, lawyers, journalists, speakers, trainers, copy-writers, english teachers, poets, editors, linguists, translators, PR consultants, media consultants, TV and radio presenters, voice-over artistes	write a set of instructions; speak on a subject; edit a written piece or work; write a speech; commentate on an event; apply positive or negative 'spin' to a story	words and language
2	**Logical-Mathematical**	**logical thinking**, detecting patterns, scientific reasoning and deduction; analyse problems, perform mathematical calculations, understands relationship between cause and effect towards a	scientists, engineers, computer experts, accountants, statisticians, researchers, analysts, traders, bankers bookmakers, insurance brokers, negotiators, deal-makers, trouble-shooters,	perform a mental arithmetic calculation; create a process to measure something difficult; analyse how a machine works; create a process; devise a strategy to achieve an aim; assess	numbers and logic

		tangible outcome or result	directors	the value of a business or a proposition	
3	**Musical**	**musical ability**, awareness, appreciation and use of sound; recognition of tonal and rhythmic patterns, understands relationship between sound and feeling	musicians, singers, composers, DJ's, music producers, piano tuners, acoustic engineers, entertainers, party-planners, environment and noise advisors, voice coaches	perform a musical piece; sing a song; review a musical work; coach someone to play a musical instrument; specify mood music for telephone systems and receptions	music, sounds, rhythm
4	**Bodily-Kinesthetic**	**body movement control**, manual dexterity, physical agility and balance; eye and body coordination	dancers, demonstrators, actors, athletes, divers, sports-people, soldiers, fire-fighters, PTI's, performance artistes; ergonomists, osteopaths, fishermen, drivers, crafts-people; gardeners, chefs, acupuncturists, healers, adventurers	juggle; demonstrate a sports technique; flip a beer-mat; create a mime to explain something; toss a pancake; fly a kite; coach workplace posture, assess work-station ergonomics	physical experience and movement, touch and feel

5	**Spatial-Visual**	**visual and spatial perception**; interpretation and creation of visual images; pictorial imagination and expression; understands relationship between images and meanings, and between space and effect	artists, designers, cartoonists, story-boarders, architects, photographers, sculptors, town-planners, visionaries, inventors, engineers, cosmetics and beauty consultants	design a costume; interpret a painting; create a room layout; create a corporate logo; design a building; pack a suitcase or the boot of a car	pictures, shapes, images, 3D space
6	**Interpersonal**	**perception of other people's feelings**; ability to relate to others; interpretation of behaviour and communications; understands the relationships between people and their situations, including other people	therapists, HR professionals, mediators, leaders, counsellors, politicians, eductors, sales-people, clergy, psychologists, teachers, doctors, healers, organisers, carers, advertising professionals, coaches and mentors; (there is clear association between this type of intelligence and what is now termed 'Emotional Intelligence' or	interpret moods from facial expressions; demonstrate feelings through body language; affect the feelings of others in a planned way; coach or counsel another person	human contact, communications, cooperation, teamwork

			EQ)		
7	**Intrapersonal**	**self-awareness**, personal cognisance, personal objectivity, the capability to understand oneself, one's relationship to others and the world, and one's own need for, and reaction to change	arguably anyone (see note below) who is self-aware and involved in the process of changing personal thoughts, beliefs and behaviour in relation to their situation, other people, their purpose and aims - in this respect there is a similarity to Maslow's Self-Actualisation level, and again there is clear association between this type of intelligence and what is now termed 'Emotional Intelligence' or EQ	consider and decide one's own aims and personal changes required to achieve them (not necessarily reveal this to others); consider one's own 'Johari Window', and decide options for development; consider and decide one's own position in relation to the Emotional Intelligence model	self-reflection, self-discovery

Roles and intrapersonal intelligence: Given that a 'role' tends to imply external style/skills, engagement, etc., the intrapersonal ability is less liable to define or suggest a certain role or range of roles than any of the other characteristics. That said, there is a clear correlation between intrapersonal ability/potential and introverted non-judgemental roles/working styles. Intrapersonal capability might also be seen as the opposite of ego and self-projection. Self-awareness is a prerequisite for self-discipline and self-improvement. Intrapersonal capacity enables an **emotionally mature**

('grown-up') response to external and internal stimuli. The intrapersonal characteristic might therefore be found among (but most definitely not extending to all) counsellors, helpers, translators, teachers, actors, poets, writers, musicians, artists, **and also any other role** to which people can bring **emotional maturity**, which commonly manifests as adaptability, flexibility, facilitation, reflection, and other 'grown-up' behaviours. There are also associations between **intrapersonal** capacity and Erikson's '**generative**' perspective, and to an extent Maslow's **self-actualization**, that is to say: both of these 'life-stages' surely demand a reasonably strong level of self-awareness, without which adapting one's personal life, outlook and responses to one's environment is not easy at all.

multiple intelligences tests

free Multiple Intelligences test (based on Howard Gardner's model) - in MSExcel **self-calculating** format, and other versions:

free Multiple Intelligences test - **manual** test in MSExcel

free Multiple Intelligences test - **manual** test in pdf format

free Multiple Intelligences test - **manual test** for **young people** in MSExcel

free Multiple Intelligences test - **manual test** for **young people** in pdf format

Multiple Intelligences descriptions - pdf format

If you are using a test to help people identify and develop unique personal potential, especially for **young people**, try using the test in conjunction with the Fantasticat idea.

gardner's multiple intelligences - principles and interpretation

Howard Gardner asserts certain principles relating to his multiple intelligence theory, which are explained and interpreted here, along with implications and examples:

The multiple intelligences theory represented/represents a definition of human nature, from a cognitive perspective, ie., how we perceive; how we are aware of things.

This provides absolutely pivotal and inescapable indication as to people's **preferred learning styles**, as well as their **behavioural and working styles**, and their **natural strengths**. The types of intelligence that a person possesses (Gardner suggests most of us are strong in three types) indicates not only a persons capabilities,

but also the manner or method in which they prefer to learn and develop their strengths - and also to develop their weaknesses.

So for example:

- A person who is strong musically and weak numerically will be more likely to develop numerical and logical skills through music, and not by being bombarded by numbers alone.
- A person who is weak spatially and strong numerically, will be more likely to develop spatial ability if it is explained and developed by using numbers and logic, and not by asking them to pack a suitcase in front of an audience.
- A person who is weak bodily and physically and strong numerically might best be encouraged to increase their physical activity by encouraging them to learn about the mathematical and scientific relationships between exercise, diet and health, rather than forcing them to box or play rugby.

The pressure of possible failure and being forced to act and think unnaturally, have a significant negative influence on learning effectiveness. Happy relaxed people learn more readily than unhappy stressful people.

A person's strength is also a learning channel. A person's weakness is not a great learning channel. Simple huh?

When you add in what we know about personal belief and confidence it all begins to make even more sense. Develop people through their strengths and we not only stimulate their development - we also make them happy (because everyone enjoys working in their strength areas) - and we also grow their confidence and lift their belief (because they see they are doing well, and they get told they are doing well too).

Developing a person's strengths will increase their response to the learning experience, which helps them to develop their weaknesses as well as their strengths.

Having illustrated that sensible use of a person's natural strengths and types of intelligence is a good thing it's important to point out that intelligence in itself is not a measure of good or bad, nor of happy or sad.

The different intelligences - in Gardner's context (and normally in most other interpretations and definitions of the term) - are not a measure or reflection of emotion type. Intelligences are emotionally neutral. No type of intelligence is in itself an expression of happiness or sadness; nor an expression of feeling good or good or bad.

In the same way, the multiple intelligences are morally neutral too. No type of intelligence is intrinsically right or wrong. In other words intelligences are amoral, that is, neither moral nor immoral - irrespective of a person's blend of intelligences.

Intelligences are separate to the good or bad purposes to which people apply whatever intelligences they possess and use. Intelligences are not in themselves good or bad.

The types of intelligences that a person possesses are in themselves no indication or reflection - whatsoever - of whether the person is good or bad; happy or sad, right or wrong.

People possess a set of intelligences - not just one type and level of intelligence. This was a primary driver of Gardner's thinking; the fact, or assertion, that intelligence is not a single scalable aspect of a person's style and capability. Historically, and amazingly a perception that still persists among many people and institutions and systems today, intelligence was/is thought to be measurable on a single scale: a person could be judged - supposedly - to have a high or low or average intelligence; or a person would be considered 'intelligent or 'unintelligent'. Gardener has demonstrated that this notion is ridiculous.

Intelligence is a mixture of several abilities (Gardner explains seven intelligences, and alludes to others) that are all of great value in life. But nobody's good at them all. In life we need people who collectively are good at different things. A well-balanced world, and well-balanced organisations and teams, are necessarily comprised of people who possess different mixtures of intelligences. This gives the group a fuller collective capability than a group of identically able specialists.

Incredibly many schools, teachers, and entire education systems, persist in the view that a child is either intelligent or not, and moreover that the 'intelligent' kids are 'good' and the 'unintelligent' kids are 'bad'. Worse still many children grow up being told that they are not intelligent and are therefore not of great worth; (the "you'll never amount to anything" syndrome is everywhere).

Schools aren't the only organisations which, despite all that Gardner has taught us, commonly still apply their own criteria (for example IQ - 'Intelligence Quotient' - tests) to judge 'intelligence', and then label the candidate either worthy or not. Adult people in work in organisations and business are routinely judged by inappropriate criteria, and then written off as being worthless by the employer. This type of faulty assessment is common during recruitment, ongoing management, and matters of career development and performance review.

The fact is that we are all intelligent in different ways.

The most brilliant scientific professor may well have exceptional intelligence in a number of areas (probably Logical-Mathematical, and one or two others) but will also be less able in other intelligences, and could well be inept in some.

By the same token a person who struggles with language and numbers might easily be an excellent sportsman, or musician, or artist.

A hopeless academic, who is tone-deaf and can't add up, could easily possess remarkable interpersonal skills.

Many very successful business-people were judged to be failures at school. They were of course judged according to a very narrow definition of what constitutes intelligence.

Many very successful and fulfilled people in life were also judged to be failures at school - brilliant scientists, leaders, writers, entertainers, sports-people, soldiers, humanitarians, healers, religious and political leaders - all sorts of happy, fulfilled remarkable people - they too were judged according to a very narrow definition of what constitutes intelligence.

Each one of us has a unique and different mix of intelligence types, and commonly the people with the least 'conventional' intelligence (as measured using old-fashioned narrow criteria), actually possess enormous talent - often under-valued, unknown and under-developed.

Gardner, and others of course, pointed out that managing people and organising a unique mixture of intelligence types is a hugely challenging affair.

It starts however with the recognition that people have abilities and potential that extend far beyond traditional methods of assessment, and actually far beyond Gardner's seven intelligences, which after all are only a starting point.

Gardner was one of the first to teach us that we should not judge and develop people (especially children, young people, and people at the beginnings of their careers) according to an arbitrary and narrow definition of intelligence. We must instead rediscover and promote the vast range of capabilities that have a value in life and organisations, and then set about valuing people for who they are, what they can be, and helping them to grow and fulfil their potential.

other intelligences and models

Gardner said from the beginning that there could be additional intelligences worthy of inclusion within the model, and I certainly agree. Notably Gardner discussed Naturalist Intelligence (perception of and relationship with the natural environment); Spiritual or Existential Intelligence (as would concern one's relationship with the universe or God, depending on one's personal philosophy); and Moral Intelligence (one's relationship with other living things and their well-being).

Thus the model is extendable to modern ideas beyond those listed in the seven basic intelligences. As already discussed, defining additional intelligences is not easy. But they

do exist, and people do possess capabilities, potential and values far beyond the seven original 'multiple intelligences'.

Gardner knew - as we can now see - that his multiple intelligences theory left some room to grow, however, while so many are still stuck on IQ and the 'Three R's' (the hackneyed 'Reading Writing and Arithmetic' - I ask you - how can so many buy into a framework that has so effortlessly assumed such a ridiculous description?...), the seven intelligences are a bloody good first step towards valuing and developing people in a more compassionate and constructive way.

If first we concentrate on encouraging schools and industry to think beyond IQ and the bleeding three R's - then perhaps soon we'll be ready for morality and spiritualism.

VAK - visual, auditory, kinesthetic learning styles model

The VAK (or VARK or VACT) learning styles model and related VAK/VARK/VACT tests (and for that matter the Multiple Intelligences concepts) offer reasonably simple and accessible methods to understand and explain people's preferred ways to learn. Occasionally well-intentioned people will write that the use of such models and tests can be problematical. This is true of course of any tool if undue reliance is placed on the methodology, or if the results of tests are treated as absolute and exclusive of other styles and considerations in the overall mix of a person's personality and needs.

As with any methodology or tool, use VAK and other learning styles concepts with care. The concepts are an aid, not a dogma to be followed and applied rigidly.

In addition to the VAK guide below, further VAK detail and VAK tests are available on the VAK tests page.

The explanation and understanding of Gardner's Seven Intelligences can be further illuminated and illustrated by looking at another classical intelligence and learning styles model, known as the **Visual-Auditory-Kinesthetic** (or Kinaesthetic - either is correct) learning styles model or 'inventory', usually abbreviated to VAK. Alternatively the model is referred to as Visual-Auditory-Physical, or Visual-Auditory-Tactile/Kinesthetic. The VAK concept, theories and methods (initially also referred to as VAKT, for Visual-Auditory-Kinesthetic-Tactile) were first developed by psychologists and teaching specialists such as Fernald, Keller, Orton, Gillingham, Stillman and Montessori, beginning in the 1920's. The VAK multi-sensory approach to learning and teaching was originally concerned with the teaching of dyslexic children and other learners for whom conventional teaching methods were not effective. The early VAK specialists recognised that people learn in different ways: as a very simple example, a child who could not easily learn words and letters by reading (visually) might for instance learn more easily by tracing letter shapes with their finger (kinesthetic). The VAK theory is a favourite of

the accelerated learning community, and continues to feature - although not nearly as strongly as it should do - in the teaching and education of young people. The Visual-Auditory-Kinesthetic learning styles model does not overlay Gardner's multiple intelligences; rather the VAK model provides a different perspective for understanding and explaining a person's preferred or dominant thinking and learning style, and strengths. Gardner's theory is one way of looking at thinking styles; VAK is another.

learning style	description
Visual	seeing and reading
Auditory	listening and speaking
Kinesthetic	touching and doing

According to the VAK model, most people possess a dominant or preferred learning style, however some people have a mixed and evenly balanced blend of the three styles.

A person's learning style is a reflection of their mix of intelligences. It is also a reflection of their brain type and dominance, for which a wonderful perspective is provided by Katherine Benziger's brain dominance model.

It is also helpful to look at Kolb's learning styles model.

vak visual-auditory-kinesthetic learning styles

The VAK learning styles model provides a very easy and quick reference inventory by which to assess people's preferred learning styles, and then most importantly, to **design learning methods and experiences that match people's preferences**:

Visual learning style involves the use of seen or observed things, including pictures, diagrams, demonstrations, displays, handouts, films, flip-chart, etc.

Auditory learning style involves the transfer of information through listening: to the spoken word, of self or others, of sounds and noises.

Kinesthetic learning involves physical experience - touching, feeling, holding, doing, practical hands-on experiences.

The word 'kinesthetic' describes the sense of using muscular movement - physical sense in other words. Kinesthesia and kinesthesis are root words, derived from the Greek kineo, meaning move, and aisthesis, meaning sensation. Kinesthetic therefore describes

a learning style which involves the stimulation of nerves in the body's muscles, joints and tendons. This relates to the colloquial expression 'touchy-feely'.

It is easy to begin to assess your own or another person's learning style within the Visual-Auditory-Kinesthetic model.

vak visual-auditory-kinesthetic learning styles indicators and quick free test

Here are some common indicators, which can be converted into a questionnaire very easily. Ask the person to score each statement and then total each column to indicate learning style dominance. There are no right and wrong answers. See also the longer version free VAK learning styles test.

	visual	**auditory**	**kinesthetic / physical / tactile**
operate new equipment	read instructions	listen to explanation	have a go
travel directions	look at a map	ask for spoken directions	follow your nose and maybe use a compass
cook a new dish	follow a recipe	call a friend for explanation	follow your instinct, tasting as you cook
teach someone something	write instructions	explain verbally	demonstrate and let them have a go
you'd say..	I see what you mean	I hear what you are saying	I know how you feel
you'd say..	show me	tell me	let me try
you'd say..	watch how I do it	listen to me explain	you have a go
faulty goods	write a letter	phone	send or take it back to the store
leisure	museums and galleries	music and conversation	playing sport or DIY
buying gifts	books	music	tools and gadgets
shopping	look and imagine	discuss with shop staff	try on and test

choose a holiday	read the brochures	listen to recommendations	imagine the experience
choose a new car	read the reviews	discuss with friends	test-drive what you fancy

You can use this grid as a simple learning style indicator questionnaire - for example score each box out of five or ten and then put the total for each column in the boxes below. The totals will indicate your relative learning style preference and mix. There are no right or wrong answers.

totals indicate preferred learning style(s)			

See also the longer version free VAK learning styles test questionnaire, including assessment and scoring instructions.

vark and vact learning styles models

Consistent with many other classical models and theories (for example Tuckman's Forming Norming etc., Conscious Competence learning stages model, and others), certain people have chosen to augment the VAK model.

This has been done by the addition of R for 'Reading'.

Or by the addition of T for 'Tactile'.

Accordingly you may see the VAK model represented in this elongated VARK or VACT forms. You might even see it expressed as VARKT, combining the two variations.

I leave it to you to decide whether it's worth introducing these fourth and/or fifth elements to what is otherwise an adequate and nicely balanced model, in which the Visual style arguably (and many would suggest, certainly) covers a person's preference towards absorbing via the written or printed word, which is obviously a **visual** sensory activity, and in which the Kinesthethic style arguably encompasses a preference for tactile experiences (touching and holding things), because this is obviously a sensory activity related to **muscular movement and sensation** (see the definition of Kinesthetic above).

It's up to you. As ever, use these models and theories in ways that suit your purposes.

Apply your own judgement and interpretation so that you get the best out of them, and where possible even improve and adapt them for your own situation. As the quote says, "A dwarf standing on the shoulders of a giant may see farther than the giant himself" (Didacus Stella, circa AD60).

Also relevant to the subject of intelligence, particularly the fact that 'intelligence', however it is defined, is never as important as the way we use our brains, and make the best of ourselves:

"Many highly intelligent people are poor thinkers. Many people of average intelligence are skilled thinkers. The power of a car is separate from the way a car is driven." (Edward de Bono, b.1933, British psychologist, writer and expert on thinking.)

(More inspirational quotes.)

Relevant publications and references:

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