

Multiple Intelligences Revisited

by Helga Hohn

In 2002 the concept of Multiple Intelligences was introduced in the field of creative facilitation. This helped facilitators furnish their creative processes sessions and enrich the results of their session.¹ In the meantime other fields have also profited from this concept.

The paper will give us an explorative view on the MI profiles of a number of professions: hotel managers, remedial teachers, professional facilitators and industrial design students. Hotel managers who are developing a new vision on the possibilities of their employees and their work; remedial teachers working with their students and renewing their diagnostics and teaching methods, professional facilitators enriching their creative sessions and industrial design students matching and stretching their personal capacities.

Finally, the study will examine commonalities in the work of these professions with multiple intelligences and reflect on general patterns how the use of the multiple intelligences can aid the problem solving capacity of persons and support their performance and development.

1. Introduction

The idea for this paper originated during a number of phone calls. First, a friend invited me to work with him on a new program for managers in the hotel world and build a program based on the concept of multiple intelligences. I had just written my paper about MI's and facilitation finalizing the subject. Although I figured how important this might be I felt rather reluctant to jump into this at first. Then a chairman of an association of remedial teachers asked me to do a second presentation on MI's for remedial teachers. Again I had said to say no, the paper was presented already, no need to repeat myself. Finally one of my favourite clients called, complimented me on my facilitation paper, but said that he and his crew were in need of new working material. They wanted more examples, applications and know when to use what. Again I couldn't provide instantly but now the urgency of the calls came through. I knew that the richness of the field needed further exploration to make it possible for the so called non-canonical intelligences to get the right appreciation. Then more of the talents of individuals could be developed and used in the fields where they were of value. Indeed, wasn't that one of the reasons Gardner started out his quest in the first place?

Betty Edwards, a professor in art and drawing, once told me: if we were to stop teaching math at the age we stop teaching people about drawing and leave it all to talent, there would be very few people left who could calculate at all. Faculties have to be trained and developed and drawing is one of them². She does have a point here! In our post-industrial world it seems to me that there is an overvaluation of the verbal and mathematical /logical skills in contrast to an underestimation of the kinaesthetic, bodily skills, the rhythm and musicality, the visual sense and the naturalistic knowing about plants and categorization of natural life.

The biologist who explored naturalistic intelligence with my students worked experientially with the participants and showed them that the original sense of categorising could be

identified in all of them. Knowing what is poisonous and what is edible, what to use as a weapon and what to use as shelter for instance is still there when elicited. It seems somewhere hidden, but when asked people know how to do it, and some of the solutions are superb and they surprise themselves. One might argue that the naturalistic abilities are not needed any more in our manufactured world, but to quote Gardner: 'shorn of our naturalistic intelligence we become completely dependent on someone else's capacity to discern patterns in the world.'³

Recently, the personal intelligences made it into the business and managerial world under the cover of emotional intelligence; on the one hand the ability to look inside and to know oneself on the other hand and the social ability to understand and empathise with others. Although a minority of managers stay sceptical, leadership trend is adopting this concept⁴.

So, what could I contribute? As I had made my say, maybe it was time to listen to what others had to say and think about what this meant. The stories and visions in this paper are from the professions and professionals themselves. They were listened to, observed by their own teachers and their narratives were written down. Thus the paper will revisit the multiple intelligences enriched with new thoughts Gardner brought in about them and it will relate about applications in different professions each with their own perceived MI profiles. The observations will be used to find common denominators in the stories about how multiple intelligences can be applied to enhance the problem solving capacity of persons and support their performance and development.

2. 8 ½ Multiple Intelligences

By now the theory of Multiple Intelligences that Gardner introduced in his book *Frames of Mind*⁵ is more known albeit not generally accepted. Gardner suggested that the psychological construct 'intelligence' should be formally measured in more ways than simply through the widely accepted logical / linguistic IQ-type tests. His claim is that our intelligences are organized 'vertically', as a number of almost different faculties, rather than 'horizontally', as a set of general abilities. In order to identify an intelligence, he proposed eight criteria of difference⁶.

According to Gardner intelligences are not fixed for life. All human beings possess them, but each person has a different intellectual composition. An intelligence can be strengthened and developed. Thus multiple intelligence theory is a means to empower people and not to label them. Gardner theorized eight and recently an extra half intelligences, as he laughingly said about his last brainchild the 'existential intelligence'. For completeness sake they are explained below with examples from outstanding individuals and everyday life situations.

The Symbolic Intelligences found in IQ tests and valued in general education

Verbal-linguistic Intelligence: well developed verbal skills and sensitivity to sounds, meaning and rhythms of words. Examples are the American journalist and producer Oprah Winfrey and the Danish poet Hans Christiaan Andersen. Examples of the everyday

world are any kind of storyteller like maybe your grandmother or aunt and often people who love to play scrabble, write beautifully crafted letters or long e-mails.

Logical-mathematical Intelligence: the ability to think conceptually and abstractly, the capacity to discern logical and numerical patterns. Examples are the French scientist Marie Curie and the American statistician and astronomer Elisabeth Scott . Examples from our daily life are found in the person who first reads the stock market or other figures in the newspaper. The lovers of Sudoku or other logical puzzles qualify as well for this intelligence.

The Neglected 'Non-canonical' Intelligences

Musical- rhythmic Intelligence: the ability to produce and appreciate rhythm and beat, pitch and timber. People with outstanding musical-rhythmic intelligence are the African singer Myriam Makeba and the Dutch violinist Isabelle van Keulen. In our current life imagine the one person that always hums a tune, or the kid in the disco that is always found on the dance floor or hammering along the rhythm of any kind of music.

Visual-spatial Intelligence: the capacity to think in images and pictures, to visualize accurately and abstractly. Examples are the Mexican painter Frida Kahlo and the French fashion designer Gabrielle 'Coco' Chanel. In the everyday world think of your colleagues or designer friends who seems to have fallen in love with their Apple computer and cannot understand how one can bear to work with anything else or the friend who visits galleries and museum, or any good map reader for that matter.

Bodily-kinaesthetic Intelligence: the ability to control and coordinate one's body movements



and handle objects skilfully, Examples are the American tennisprof Martina Navratilova or the Russian dancer Rudolf Nureyev. In the everyday world, think of the kid around the corner who never stops playing football, or the girl who like in the picture loves to work on printing her own stuff for a hobby. We al know the guy who stays in his garage forever working on small but intricate gadgets of his bike, car or motorcycle.

Naturalistic Intelligence: the ability to recognize and categorize plants, animals and other objects in nature and have a feel for ecological balance. Examples are the English biologist Jane Godall, the Nobel price winning chemist Gertrude Elion and the environmentalist Jane Fonda. In your own life it might be one of your friends who

loves to select fresh food at the farmer's market and then prepares a delicious and nutritious meal without even so much as look at a recipe or the stamp collector who loves to spend hours categorising and re-categorising his stamps and of course the people who have real insight into their body and health.

The Personal Intelligences

Interpersonal Intelligence: the capacity to detect and respond appropriately to the moods, motivations and desires of others. Examples of extraordinary individuals are the late Princess Diana, the American therapist Virginia Satir, the entrepreneur Anita Roddick who created the Body Shop. In our daily life, it might be the person in the train whom you gradually tell your whole life story because he listens so interested, or the saleswoman that sells you in the end something you do not really need but still seem to want.

Intrapersonal Intelligence: the capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes. Examples are the psychoanalyst Melanie Klein and the writer Virginia Woolf. In daily life it could be the person who loves to write a diary or this friend who now and then asks you to leave so she can have some time to herself and sort out her thoughts and ideas.

Existential Intelligence

Existential Intelligence: the capacity to ask the bigger questions of why this all is and what to do with it. I am not fully sure of the examples, but think of the German mother superior Hildegard von Bingen and the American philosopher Martha Nussbaum. This intelligence might also be connected to persons who are interested in the spiritual dimension of life and philosophize about the meaning of it all.

3. Matching , Stretching, Celebrating

1998 Kagan & Kagan⁷, introduced three concepts for the learning class room and means to help teachers vary their program accordingly. The vision of Kagan is very strongly influenced by his view on student-centred and cooperative learning. Every person should be able to interact, socialize and be able to express himself. They closely follow the views of Gardner that the intelligence concept is there to empower people and not to label them. After the intelligences of a person have been identified, three basic concepts for development of intelligences are defined.

Matching

Heighten learning success by matching didactic structure with the dominant intelligences of a person. Work from a strong intelligence to a more unfamiliar one. The vision is that a great

deal of failure is eliminated by the match between didactical structure and dominant intelligences of the person.

Stretching

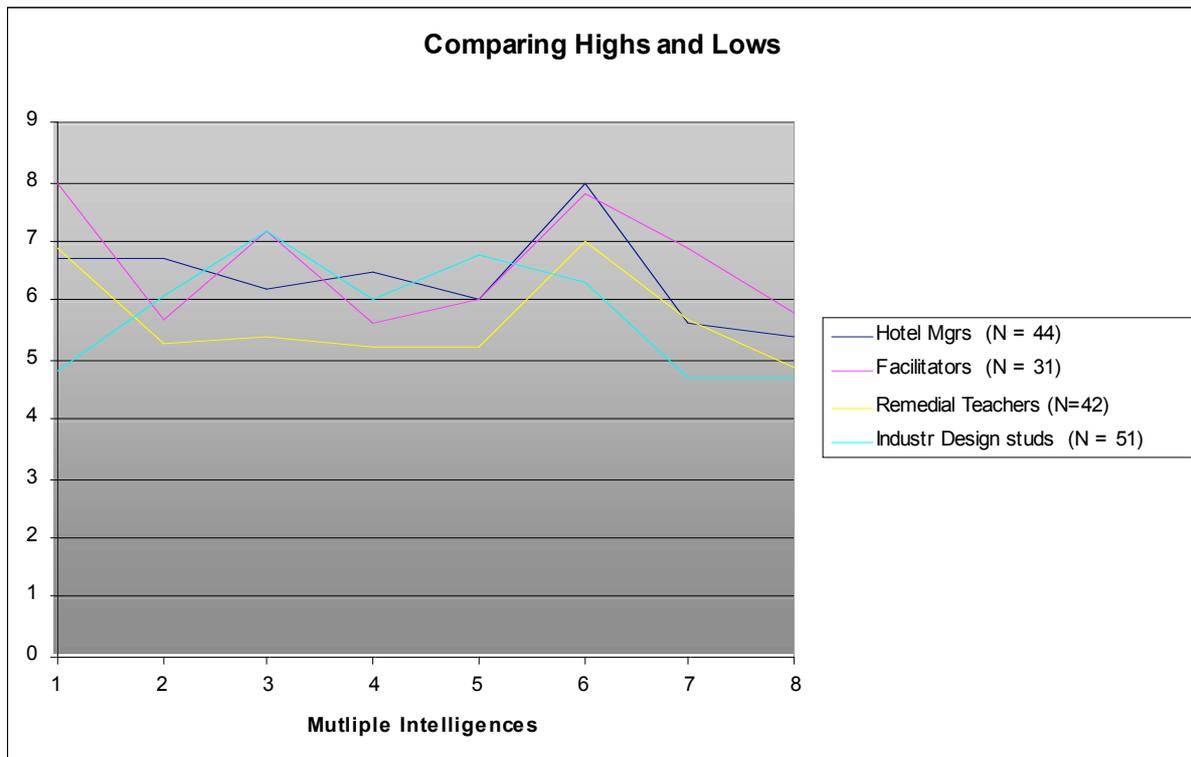
A strong development of all intelligences through content and didactic form, that will stretch every of the intelligences. The content of the training is designed and varied with the vision that every participant can grow in all the intelligences

Celebrating

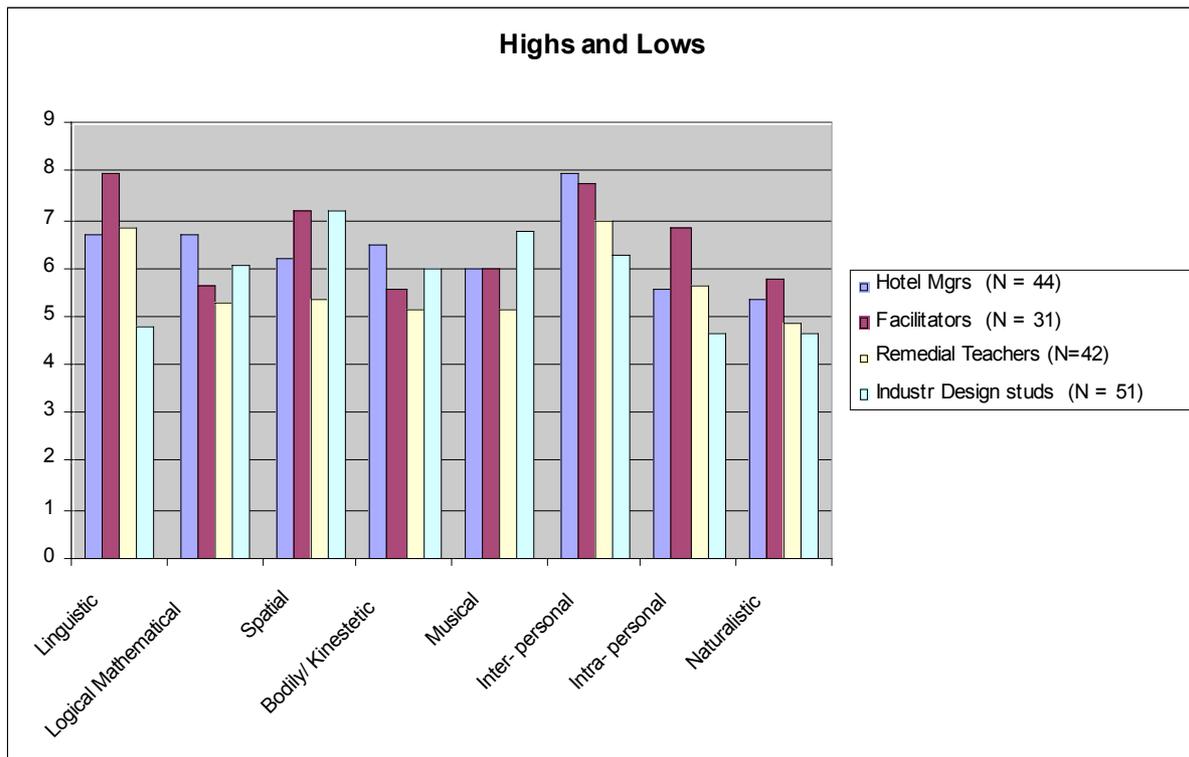
Understand and positively appreciate our uniqueness and other’s as well, thinking and sharing about the MI concept and make sure participants understand about it. Respect is created in the participants about each others positive side of their MI profile. Understanding of diversity is provoked and the possibility to deal with it in a positive way allows a person to grow a tolerance for difference.

4. Different professions; their profiles and their challenges

Measurement of Multiple Intelligences is a still a weak point in the elaboration of the theory of Multiple Intelligences. No fully validated instruments have been found as yet and trainers and teachers use questionnaires all of whom do not fulfil the qualification of a reliable and validated questionnaire. They have, however, some value as a basic quiz relating self-perception of the person who completes the questionnaire. With this limitation in mind the following data are discussed to look at the highs and lows of four different professional fields.



This exploratory study was done based on data collected during multiple intelligence workshops for different professional groups of teachers, facilitators and industrial design engineering students in the years 2002 - 2007. Looking at the graphical representations of the four different groups we can make a cautious visual comparison of the shown peaks and lows. Depicted are four groups: hotel managers (N = 44), professional facilitators (N = 31), remedial teachers (N = 42) and Industrial Design Engineering students (N = 51) who all participated in a variety of programmes including the concepts of Multiple Intelligences.

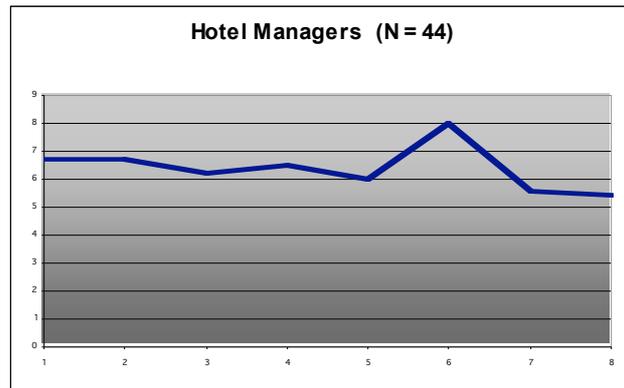


The study has the following limitations; as the questionnaire is a self-perception list, the graph does not depict an objective appreciation of the professions but a subjective one. The data is not normalised at this moment, which means that the levels of the groups cannot be compared. What can be compared are the profiles of highs and lows and the variance within every profile. These will be described in the following vignettes of the professional groups.

5. Narratives on the Professional Groups

Vignette Hotel Managers

The different observations and visions described in this part are from several training programs for hotel managers in the Netherlands and Germany who worked with the multiple intelligence theory. One thing that stands out is that according to hotel managers their business needs logical mathematical



skills as much as linguistic skills next to a general high understanding of interpersonal relationships. In spite of the fact that all of the hotel managers score high on the interpersonal intelligence that is not necessarily so for the other two. The small narratives are examples from the work life of the hotel managers and what they did in terms of getting the best out of their people. The interpretations were made together with an executive coach, who has coached hotel managers for over ten years. ⁸

Logical Mathematical skills (stretching)

One of the hotel managers agreed that her mathematical skills were wanting and that she needed to train them and work on them. As a help next to the training her executive thought up what they called a 'Spiel' (German for game or play) for the whole management team.

Many of the managers had acknowledged that their numerical skills were not up to the high speed of presentation of the budgets. To improve the logical mathematical skills the executive decided to make this Spiel, a 'case' of a budget meeting. Instead of having the employees listen to a budget presentation with lots of spreadsheets passing before their eyes a case study was given and, this time the presentation and the graphics were presented in a pressure-free environment with lots of questions as to the understanding of the numbers and graphs. Basic mathematical skills were retrained in a playful manner and next to having fun the managers also learned a lot about their daily work and understanding budgets. This example of stretching to the logical mathematical but celebrating their interpersonal skills worked a miracle for the manager who had asked the question in the first place. She went through her own training and with the fun of the budget game she regained her self confidence. In the end she made it a habit to add facts and figures to all of her proposals.

Verbal linguistic skills (stretching)

For an employee, who lacked linguistic skills and consequentially did not have the courage to verbalise what he had to say, his manager asked him to read a book of his choice and present it to the team. The manager was highly competent in interpersonal skills and thought it would be helpful for the employee if he were not alone in this. So he invited all team members to

read a book and give a presentation. The presentations became quite a happening and the employee in question grew more self-confidence and was encouraged by his colleagues to speak up..

A Slavic manager, who spoke good English but less well German gave himself the difficult assignment to speak German during the whole of the program. She succeeded and the participants of the program had great laughs about the sometimes strange German but also high respect for the courage of the manager. In the end she gained a lot of experience and more important self confidence and ease in using this less familiar language.

Interpersonal skills (matching)

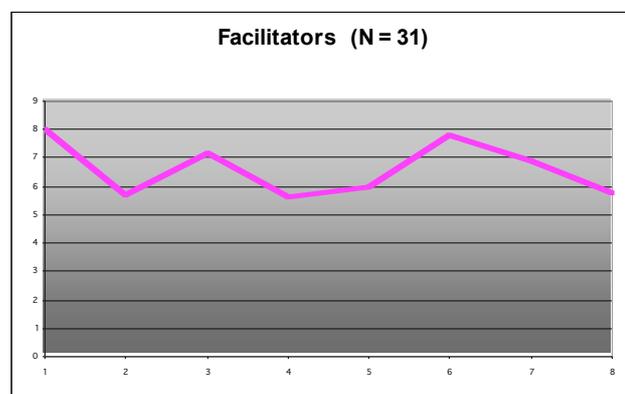
Hotel managers usually are not the foremost people to sit still and think about themselves and their inner workings. The urgency of the daily workload usually does not give them a lot of time to reflect. Usually they use their interpersonal skills to be sociable and charming to their guests which leaves little to no time for their own people.

When trying to find solutions to their questions of motivating their employees they came up with some new insights. Having been made familiar with the theory of multiple intelligences they came up with the idea to play to the strength of their employees and when things were wrong, work from there. Because of the time factor they decided on 10 minute talks with their employees about their practical qualities, optional improvements and an action plan which would be followed up. Good managerial practice, one can say. However, these new insights went further; the managers wanted to identify and work from the strength of the employee. For instance not talk at a desk, but go for a walk with a naturalistic and kinaesthetic employee when doing these short appraisals. Give more space to execute the abilities in the job once employees show interest. Have round table talks and a diner with the team of employees and discuss changes and propositions. The managers still worked with their own strengths of interpersonal relationships, but put them now to good use for their employees too.

Vignette Professional Facilitators

According to Gardner's Multiple Intelligence theory is best thought of as a tool, rather than a goal in itself. This certainly would hold for facilitators, who work with varied populations and have to adjust their art and craft to the different cultures of organisations they work with.

The facilitators perceive themselves as strong in four intelligences, foremost the

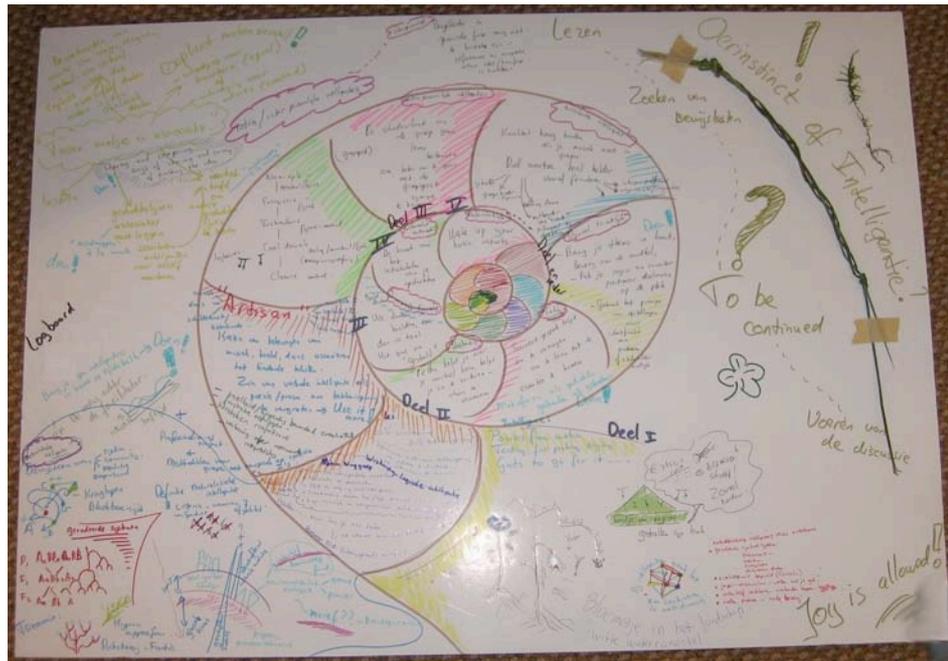


verbal intelligence and the interpersonal, then the visual and the intrapersonal intelligence. The visual comes kind of as a surprise and the intrapersonal as a special gift. It should be mentioned that facilitators are a rather diverse group and that in the future it will be seen whether this pattern will stay this way. In that sense the following stories are but a minor view into the larger field of facilitation.

Log-boards; matching intrapersonal intelligence

A way for facilitators and participants of a training alike is to use log-boards as means of enhancing and supporting the growth of their intrapersonal intelligence. Logbooks are well known

instruments. Log-boards are something else because the visual and the intrapersonal are used together. Because of the inviting large space on the log-board, it is easier to draw than to write so the use of other intelligences is encouraged.



Especially if they are presented at the end of the project or the training log-boards have great impact for all participants. As people have invested a lot of energy in them the log-boards are quite beautiful and often taken home where they become conversation pieces and are helpful to share what happened in the training.

Musical Intelligence (stretching)

Understanding how musical intelligence can be used in the managerial world doesn't necessarily come easy. This facilitator, who had highly developed musical skills worked with a group of professionals from a Dutch ministry to improve their team working.

He asked them to play out in terms of music what their morning rush hour was looking like. They came up with a cacophony of mobile phones ringing in front of the microphone with different ring tones resulting in utter chaos. After people had unplugged their ears and the laughter had subsided; the facilitator asked a second question; how would you like to have it. Their second performance was harmonious and peaceful, giving space to everyone.' That sounds beautiful', was his comment, 'now, how about adding the stress of the morning and keep it beautiful'. Great embarrassment and silence, nobody wanted to go back to the chaotic part. The facilitator helped a bit; what if we add some rhythm. The group started out, no

instruments were needed; a beautiful, jazzy rhythm was created by the group made solely by mobiles, having them all together, but in rhythmic harmony.

This was a revelation for the group and the concept of rhythm was used to create less stress in the morning rush and still get everything done. People had fun and could handle the urgency.

Celebrating intelligences; design your personal tool box

When training facilitators, we gradually realized that almost none learn or use techniques or tools out of a book. Indeed, experiencing a technique gives better understanding of its flow, its feel and its effect than any book can do as many other than linguistic intelligences are involved when facilitating groups.

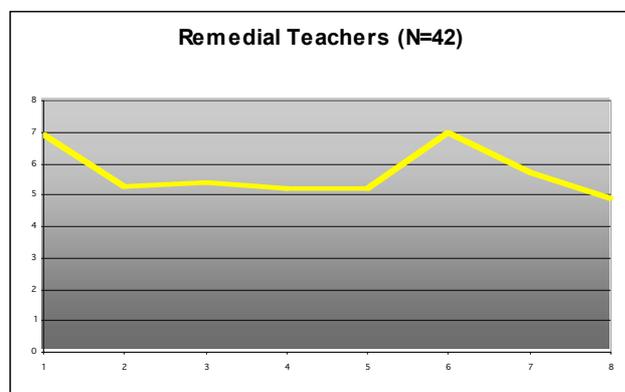
The facilitators were asked to design their own toolbox based on their experience and knowledge. Make your own working model in your preferred style or intelligence. The tool box should reflect their uniqueness and style and crystallize the ways, values and beliefs they use intuitively and they were given real boxes.

The tool boxing exercise proved to be quite an aha for the experiences facilitators who had never taken the time to reflect on and view and give order to the riches of experience they had assembled over time. For the less experienced facilitators it was valuable to start sorting and clustering their experiences in an own way to eventually develop their own unique style.

In an earlier article^x the author devised indications for tool building divided in active and receptive part of the intelligences.

Vignette Remedial Teachers

Remedial teachers or, broader, teachers for children with special educational needs are a group of their own in the educational field. Because their students have often learning problem next to emotional challenges they do benefit very much from the concept of multiple intelligences.



Yet remedial teachers perceive their own intelligences to be in the realm of linguistic and interpersonal intelligence. Necessary indeed, but there could be so much more. This professional field in the Netherlands is often hampered by its history; the linguistic and personalised approach, the medical labelling, high performance indicators for schools, all define a rather narrow and formal realm to be worked in.

Ginny Vlieks, professor in pedagogy relates⁹ that many remedial teachers intuitively use other intelligences when working with children, but are little aware of that. ‘Oh, I didn’t know that that belonged to this intelligence’; thus they often work in a trial and error manner.

The anecdotes below show what can happen in this field when intelligences are used with professional care.

Diagnostics and experiments

In a field that can profit so much from the systematic use of intelligences a lot of energy is put into developing diagnostics respecting their very principles.

1. Cardgame in which children can sort their own intelligence; the ones they liked and the ones they are good at. One boy while doing this said: Well, one card is missing. After being asked, he said: playing with the dog. He had trouble reading; but his natural intelligence was a start to match this capacity with the lesser linguistic capacity. So the teacher and he read and wrote stories about dogs, the boy read the weather forecast in class and had lots of fun trying to follow the forecasts written and drawn in the newspapers.

2. Camera's everyone who works with children knows that when you give them a camera they will photograph the things they like best (grown ups will too, by the way). The pictures are a good diagnostic tool for starting a conversation with the child about her interests and capacities.

3. Suitcase A closed suitcase is always intriguing; what do you think is in there might be a first question? Then the suitcase is opened and the child can choose from all the materials interesting textbooks, picture books, lego, maps, a camera, a flute and a drum, ballet slippers, a football, a card game to play with others, intriguing logical puzzles, rocks, shells and pineappels and what have you.

A new way of thinking about children with special educational needs is instead of labelling them, chart the system and identify the so called 'risk factors' and 'beneficial factors' for the development of the child in the school and outside of the school. Working from these strength and beneficial factors, the assumption is not any more that the child is 'sick' or hampered, but that a new road to achieving the learning objectives has to be found.

All the wrong entries (intrapersonal matching)

A typical example is the teacher who with the best of intentions went all the wrong way in the beginning. A young girl had trouble relating to others (interpersonal) and could not read very well (linguistic); yet the teacher in spite of the training she invested on these points got very poor results. In fact the girl's performance got worse and the negative labelling would have kept the child in this poor position with a bleak future as an outlook. Afterwards the teacher reported that she had totally overlooked the girl's capacity to work on her own (intrapersonal) and her capability of sorting and organising her work environment (naturalistic).

Once the teacher had been made aware of her own risk factor (emphasizing what the child could not do) she changed her teaching strategy matching the naturalistic and intrapersonal

intelligence with the more difficult fields of the interpersonal and linguistic intelligence. She asked the girl to organise a cooking day for her class and read about all the recipes. This went very well and brought the girl many new contacts and positive social appreciation. The relationship problems evaporated and the child started to grow a new self-confidence. She bloomed and prospered with her newly found competences and from then on the reading problems were much easier to tackle.

Reading challenges impossibilities (naturalistic matching)

This is an almost miraculous case of a thirteen year old boy who read on the level of a six year old. In class that is most embarrassing for a child and he was not doing well at all in spite of his good relational and speaking capacities. Upon being asked what he liked most, he told about the pigeon house that he and his grandfather were building for homing pigeons travelling many miles.

The teacher asked him to give a talk about homing pigeons in class which he did superbly. During the talk she wrote an ad verbatim account of every word the boy said. Afterwards she asked him to read it. Still with wonder in her voice, she told me, ' ... and this child could read. No doubt about it. He read his own words. Amazing how the brain works.'

Elaborating on this principle, children were writing their own books in classes and read them with their class. Together with the teacher the children made the books illustrating them with pictures and put them in the library of the school. Up to this day these are the most read books in the school.

Use of space (celebrating all intelligences)

The workshop of Multiple Intelligences for remedial teachers was very highly appreciated. One of them said actually that he had liked this day best of all the programs offered. Upon



being asked why that was, he said it was the energy and fun everybody had during this day. Asked for more concrete specification he told us because of the full offering of material. For every intelligence a corner or room by itself had been allocated with all instruments, materials, knowledge that could be found for teachers on this particular intelligence. That was the challenging and

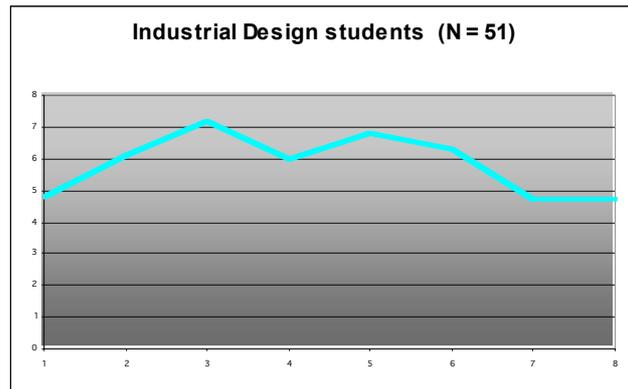
really engaging part, especially when the teachers were asked to create exercises, training and teaching devices and share their findings.

Expanding on that day the pedagogic department has worked with 300 teachers of all schools in the South of the Netherlands in a conference about Multiple Intelligences; introducing every intelligence in specific workshops and then asking teachers to expand on, create and write or draw their own sourcebook. The books were assembled and every school in the South of Holland has now one of these sourcebooks that teachers can work with.

Vignette Industrial Design Students

Design students have quite a different profile than the other groups. They perceive their strength foremost in the visual field then in the musical and interpersonal intelligences closely followed by the numerical and bodily-

kinaesthetic abilities. They prefer to design rather than to talk or write and they are good at getting things done. Their work is to make something beginning with the first idea for the design, logically thinking it up, drawing it and working through the different steps from the prototype to the definite object.



Linguistic, Interpersonal and Visual Intelligence (matching and celebrating)

In the program of Creative Facilitation the students had a workshop about multiple intelligences. They were asked to create different ice-breakers on the basis of the multiple intelligences. The ice-breakers were also tried out in various groups and shared in the computer logs of the course. Interestingly enough many of the ice-breakers were drawn and visualised in a scheme or in colours without using much verbal descriptions. The workshop had given the designers a language for describing the intelligences and also a full appreciation of their capacity of the spatial intelligence as much as the musical intelligences, interpersonal and numerical intelligences.

Intrapersonal Intelligence (stretching)

In the program of industrial designers in Delft University of Technology¹⁰ much attention is given to the development of inter- and intrapersonal intelligence. Again not through the verbal lectures, but through more experiential methods of learning by doing and reflecting on what has happened. At the beginning of the course the students create their own learning contracts in any shape they like. To finalise the course a student has to hand in a reflective log which is then fitted to the personal contract they made in the beginning. The students enjoy to make the contracts but are usually not too happy writing the reflections. However,

once the reflections are written, many important insights have been put into words and this stretching exercise has proven its value.

Mobilion Session (celebrating the intelligences)

Students and teachers alike have most fun when the celebration of all intelligences is taking place. This happens on special occasions. In the subject Creative Facilitation clients from the business world are invited to come with real questions and sometimes a day long session is organised to work on a particular large issue. Often a special accommodation is chosen to inspire the participants. The Mobilion is one of these places; people walk on a transparent floor, below a huge map of the transportations systems of the Netherlands is laid out, water, highways, pastures, villages, cities; it is as if you are a landscape planner in the middle of



your subject. What a great space to work on transportation issues. For the students this is their master work in creative facilitation. Usually clients love to work with the university. Not only because the sessions are for free, but also because the generated solutions are often very creative and full of new options.

The creative part of these days is a celebration of all intelligences; especially the non-canonical intelligences, visual, musical, bodily-kinaesthetic, naturalistic as much as the personal intelligences are put to work. First and foremost the intelligences are used in a playful manner but fairly quick serious business will come about. Once then ideas and plans

are put together to be presented to the sponsor, the verbal and sometimes numerical intelligences come into the forefront to verify and assert the content of the found ideas.

6. Observations and first conclusions

In this paragraph first observations and insight that reach further than the examples of the groups are collected. It is a start to find commonalities and reflect on them from a psychological and developmental learning perspective. Further research is needed to build on the first insights and conclusions that are voiced here

The power of matching

It is interesting and important to note that the matching to develop intelligences, working from strength to the less developed intelligences, works much smoother than the stretching the other way around. Especially in the stories of remedial teachers, but also with the students and the hotel managers sudden jumps in learning and creativity can be seen. Even the stretching in the hotel manager's cases on verbal and numerical intelligences was helped by the groups work. This was matching with the interpersonal intelligence and once the whole group was involved in the task, things became fun.

I attribute this to the power of analogy that is hidden in the matching concept of Kagan. Analogies help us to work from familiar space to define and grasp the unknown. The familiar and enjoyable in the strength is used to reach the skill in the unfamiliar intelligence. And instead of perceiving the skill as something difficult is suddenly is taken into the realm of the pleasing and in the end can be done. Others might call this process the use of pattern recognition which according to some is one of the most important functions in learning. I believe the emotional aspect of pleasure and trust is a very important part here. Working with change and development the principle of matching can be used in groups and by individuals. If we are willing to use all intelligences as defined by Gardner the possibilities are literally multiplied.

Managing anxiety and allergies

Just like pleasure and inspiration are great movers of development, anxieties and allergies are strong blockers. In an earlier piece I defined an allergy as a disproportionably strong negative emotional reaction to for instance working with a particular part of an intelligence (i.e. a fear of numbers).¹ One has to handle and manage the allergies and anxieties that come about; like a fear of change and allergies to certain intelligences.

Looking at the narratives of the different groups, I find that the function of a facilitator, not necessarily that role, but someone who can lead the way into the unknown territory is most important. This person who facilitates, literally makes it easier, is at ease in the new territory. Then principles like starting with the reflective side of an intelligence, when it is not familiar, are still valid, but beginning with many vivid and evocative examples and then thrust people into work with the intelligences can be done as easy.

The facilitator who worked with the musical intelligence, the executive who dares the group to make and design a case for budgeting, the professor who asks for personal reflection; they all are enough at ease in the assignments they give. In psychological terms, they ‘contain’ the anxiety of their participants, managers and students and help them to make the first steps.

Notes

1. ‘Multiple Intelligences in Creative Facilitation’, Proceedings from the Creativity and Innovation Conference in Lodz, Poland, 2005.
2. Interview with Betty Edwards, professor of Arts University of California, Santa Monica, 1992
3. Gardner, H. *Changing Minds* 2006.
4. Goleman, D., *Emotional Intelligence*, 1998.
5. Gardner, H. (1983). *Frames of Mind; The Theory of Multiple Intelligences*. Basic Books: New York.
6. The eight criteria of an intelligence are: (1) Existence of a discrete symbol system; (2) evidence for specialised representation in the brain; (3) a distinctive evolutionary history; (4) a distinctive developmental pattern; (5) identifiable core psychological operations; (6) existence of special populations that highlight or lack capacity; (7) patterns of results on psychometric measures of intelligence and (8) patterns of transfer or lack of transfer across tasks that putatively involve a specific intelligence. An additional criterion, sometimes cited, is the existence of roles that foreground the intelligences in different cultures. from *Frames of Mind* chapter 4 H. Gardner
7. Kagan, S., & Kagan, M. (2004). *Meervoudige Intelligentie. Het complete MI Boek. Deel 1,2 en RPCZ*, educatieve uitgaven: Middelburg. English version: Kagan Cooperative Learning, 1998.
8. (2007) Interview with Frits Schoeren: ten year long international executive coach of hotel managers.
9. (2007) Interview with Ginny Vlieks: professor of pedagogy and special educational needs in the Polytechnic university of Utrecht.
10. Talks with Marc Tassoul: Creative Facilitation professor Delft University of Technology.