SKILLS, Several Keys In Learning to Learn Skills

ANALYSIS OF LEARNING STYLES AND STRATEGIES

SKILLS

PROGRAMA EUROPEO DE FORMACIÓN PARA EL APRENDIZAJE DE ADULTOS

SKILLS

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Introduction

This document is the product of the study entitled **Analysis of Learning Styles and Strategies**, which is part of the research tasks, included in the Multilateral Grundtvig Project **SKILLS.** Several Keys in Learning to Learn Skills, is co-funded by the European Commission.

Its main objectives are:

- To analyze the main learning styles and provide an inventory of strategies for each style to determine how every learner prefers to learn
- Identify what strategies are intuitively used
- Identify how strategies can be transferred, strengthen and perfected.
- And finally integrating the above with a computer tool to find out each person's learning style.

In order to do this, an analysis of the competence learning to learn was undertaken by the SKILLS partners, who identified four significant sub competences essential to lifelong learning which focuses on the fundamentals such as the need for learners to organise their own learning, including effective management of time, information and self motivation. Following this, an investigation was carried out to identify and describe target groups of each of the partners in various countries. Further to this a study into learning styles and strategies to help identify and describe learning styles and offer strategies to map to the styles. Also included is a short definition of methodologies and strategies.

In compiling this document a broad section of learning styles from various sources were studied in the evaluation process before deciding and offering strategies for a few styles based on the VARK model.

The Sub competences

Prior to the **Analysis of learning styles and strategies; inventory of strategies**, the SKILLS partners undertook an analysis of the competence learning to learn and identified four sub competences fundamental to the main competence of learning to learn. These competences were evaluated and cultivated in the paper, **Sub Competences, Levels and Descriptors**. Listed below are the four sub competences and a short definition of each.

Time Management

Time management refers to all of the practices that an individual follows to make better use of their time. Such as, being able to identify the final target and knowing how to set the objectives and tasks that will lead to achieving goals.

Organizing Information

Organizing information is the act of rearranging information in a purposeful and useful manner. It involves being able to select, classify, analyze, summarize, combine, understand, file … new information.

Team Work

Team Work is the concept of people working together cooperatively as a team in order to accomplish the same goals/objectives.

Motivation and Self esteem

Motivation is the basis that allows us to start and succeed at learning throughout our lives. People's ability to learn, handle obstacles and change, depends on a positive attitude towards problem-solving.

To help address the above sub competences, the SKILLS partners created a brief description and a list of descriptors to help educators implement the competence and help to promote reflection on the meaning of the competence.

The Target Group Profile

Profiles

The short-term target groups, directly involved in the project, are:

- Adults with basic levels of education.
- Young adults failing in education and leaving school who should continue in learning or need to develop a basic vocational profile in order to seek gainful employment.
- Minorities learning a second language for example, women and men with basic or poor education levels in their country who need to learn the language of their host country.
- Adults with a low professional profile with a desire to improve this.
- Educators and trainers working with groups, who need to complete or update or improve their training to develop the learning to learn competence in the learners and need particular innovative tools to do it.

The medium and long-term beneficiaries will be:

- A larger number of the beneficiaries described above close profiles, for example, adults wanting to strengthen their leaning competences in specific areas – educational or professional, i.e. learning a second languages or ICT; learners with special learning needs, people with a moderate psychic disability for who functional learning methodologies are key;
- Educators in general who wish to improve their learning to learn skills.
- Organizations and institutions – as identified within the exploitation and dissemination plans - who wish to improve their staff profiles
- Educators and trainers, who want to find out the learning to learn level of competence in their environment to adapt their learning provision, or who want to make a learning to learn offer.

What are Learning Styles?

A learning style is the way in which a person learns, i.e. gains knowledge or skills. In a broader sense of learning style, it means also how the person interprets, distinguishes, processes and understands knowledge and phenomenon of context.

It is commonly recognised that people learn and process information in very different ways. Some people prefer to learn by listening, others by reading, some prefer working with people in a group, others prefer to work things out on their own. These are all preferences and methods of different learning styles. It is also important to mention that when an individual identifies a preferred learning style of their own, the person will become motivated and adopt the best attitude for learning.

Over the years, learning styles have been categorised in many different ways. In this document we have provided a list and brief descriptions of different learning styles and strategies on the following pages. First, we have given a brief outline of learning styles used in a cross culture context.

Sometimes people use more than one learning style, sometimes a person might change how they learn depending on the situation they are in. In Finland, it has been identified that many students prefer a few learning styles, but are not so interested in embracing new styles which would be better suited for a particular situation. Perhaps there is apprehension, lack of motivation, unwillingness to work harder. According to lifelong learning the positive attitude to change and improve one's learning styles are essential now and in future.

In Italy, the traditional organization of education aims to favour the activities of listening and writing, by favouring in this way only the visual and audio students benefit, to the detriment of kinesthetic students, whose necessity of movement is always penalized, with negative consequences on the learning stage. So, it is important to introduce some activities addressed to all kind of students (visual, audio,

kinesthetic) maybe in a diversified way. This information is taken by FILIM, Training for teachers of Italian mother tongue in the world.

In Poland, they pay attention to learning styles especially in the sphere of teaching of foreign languages. The classification of the learning styles is known for a long time, though the style read/write was not distinguished, but considered as visual one. The variety of the methods of learning is connected with the active methods that are very popular not only among polish language teachers. These methods enable to connect many kinds of learning styles with the students' style of thinking in one didactic process.

In Spain, the learning styles approach is widely used in the field of second and foreign language acquisition, whereas in other fields it is mostly unknown or only very recently started to be considered.

In Scotland, we see many learning styles in use, but the VARK learning style is one of the most familiar methods. However, learning styles are used mostly within the bounds of Student services and are not currently part of a curriculum based student learning cycle. Some educators find them useful, but there are studies such as the one carried out and published by TES - Britain’s leading publication covering the world of primary, secondary and further education. The research goes as far as challenging any labelling of students with a particular style in any learning context from pre-school to lifelong learning because of the unscientific basis of most of the instruments surveyed.

Methodologies and Strategies explained

Methodology is the way in which information is found, a process is undertaken or something is done to gain the information.

A methodology is a documented method for performing activities in a logical, consistent, responsible and repetitive manner.

Strategy is a series of actions a learner takes to assist the completion of a learning task.

A strategy starts when the learner has analysed the task and identified his or her own strengths in order to carry that task out, this can be referred to as an action plan. The learner can then select, organize, observe, and evaluate the effectiveness of their actions and decide if the action plan needs adjustment.

Analysis of Learning Styles and Strategies

Purpose of this Analysis

The purpose of this analysis is to continue the theme of the learning to learn competence discussed in the task based Learning and Teaching Methodology which identifies and defines competences as a combination of knowledge, skills and attitudes adapted for a specific context.

The above-mentioned methodology, highlights to the individual that several learning models are common in the process of learning. And can be used to help students engage in existing learning behaviours and develop new ones.

SKILLS will help to determine what methods and strategies were used by individuals in the past to learn and will also help to identify other strengths of current techniques used in the learning process. SKILLS will also build on existing techniques to enhance other learning methods. When you have an understanding of the methods currently used, this analysis will help you develop you're understanding of existing skills and introduce you to new useful ones.

Inventory of Styles

There are various learning styles. Some are more common and well known than others.

These are:

- The Sensory Model - Visual, Auditory, Read/Write, Kinesthetic
- Multimodal
- The Left Right Brain Model
- The Social Solitary Model
- Kolb's Learning Cycle
- Honey and Mumfords Model
- Blooms Taxonomy

Foreword:

> **The Sensory Modalities** acronym **VAKO** is taken from the first letters of the sensory-specific modalities: **v**isual, **a**uditory, **k**inesthetic, **o**lfactory recognized as the **4-tuple. The 4-tuple** is a Neuro-linguistic programming model which examines how the human mind processes information.
>
> However, for the purposes of this analysis we will not describe the olfactory or gustatory sensories instead we will include **Read/Write** as part of the Modalities. If you wish to find further information in relation to all the modalities **www.wikipedia.org** is a useful resource:

In this analysis the most common learning styles have been discussed and listed next in order to identify a style, which best fits with the **SKILLS Learning to Learn Methodology**.

Styles Explained

The next stage of the analysis is to offer a simplified explanation of the inventory of learning styles from above. This has been achieved, by method of researching learning styles from the World Wide Web, analysing and summarising these to offer a concise explanation of each one. However, it should be understood that one learning style is no better than another. Context and purpose of learning are essential when choosing the learning style. Styles do not have strengths and weaknesses, but you may find that you prefer one over another. The idea is how the learner can utilise different styles in a flexible manner.

The Sensory Model (VARK) Learning Style

The **Sensory Modalities** states that for practical purposes, information is processed through the senses. These are vision, hearing, sensation and touch.

The VARK Categories

The VARK acronym: Visual, Aural, Read/write, and Kinesthetic sensory modalities utilised for acquiring skills and knowledge and which reflect how people learn are defined by Fleming and Mills (1992) as the four categories that appear to reflect the experiences of students and teachers. However, at times there is some overlap between categories. Each one described below:

The **Visual** sense absorbs what a person sees and can also be described or explained as; an individual constructing pictures in their mind when in thought or day-dreaming, this is the visual sense at work.

> **Visual (V) sourced from VARK Website:**
>
> This preference includes the depiction of information in maps, spider diagrams, charts, graphs, flow charts, labelled diagrams, and all the symbolic arrows, circles, hierarchies and other devices that instructors use to represent what could have been presented in words. It could have been called Graphic (G) as that better explains what it covers. It does NOT include movies, videos or PowerPoint. It does include designs, whitespace, patterns, shapes and the different formats that are used to highlight and convey information.

The **Auditory** sense is the process of listening and can also be referred to as hearing your own inner voice even if there are no words spoken out loud.

> **Aural / Auditory (A) sourced from VARK Website:**
>
> This perceptual mode describes a preference for information that is "heard or spoken." Students with this modality report that they learn best

from lectures, tutorials, tapes, group discussion, email, using mobile phones, speaking, web chat and talking things through. It includes talking out loud as well as talking to yourself. Often people with this preference want to sort things out by speaking, rather than sorting things out and then speaking.

The **Read/Write** function is heavily connected to the visual sense by nature. It relies on visual cues in order to process and make sense of information.

Read/write (R) sourced from VARK Website:

This preference is for information displayed as words. Not surprisingly, many academics have a strong preference for this modality. This preference emphasises text-based input and output - reading and writing in all its forms. People who prefer this modality are often addicted to PowerPoint, the Internet, lists, filofaxes, dictionaries, thesauri, quotations and words, words, words...

The **Kinesthetic** senses use the practical hands on approach and considers *feelings* in the body and emotions when absorbing information.

Kinesthetic (K) sourced from VARK Website:

By definition, this modality refers to the "perceptual preference related to the use of experience and practice (simulated or real)." Although such an experience may invoke other modalities, the key is that people who prefer this mode are connected to reality, "either through concrete personal experiences, examples, practice or simulation" [See Fleming & Mills, 1992, pp. 140-141]. It includes demonstrations, simulations, videos and movies of "real" things, as well as case studies, practice and applications.

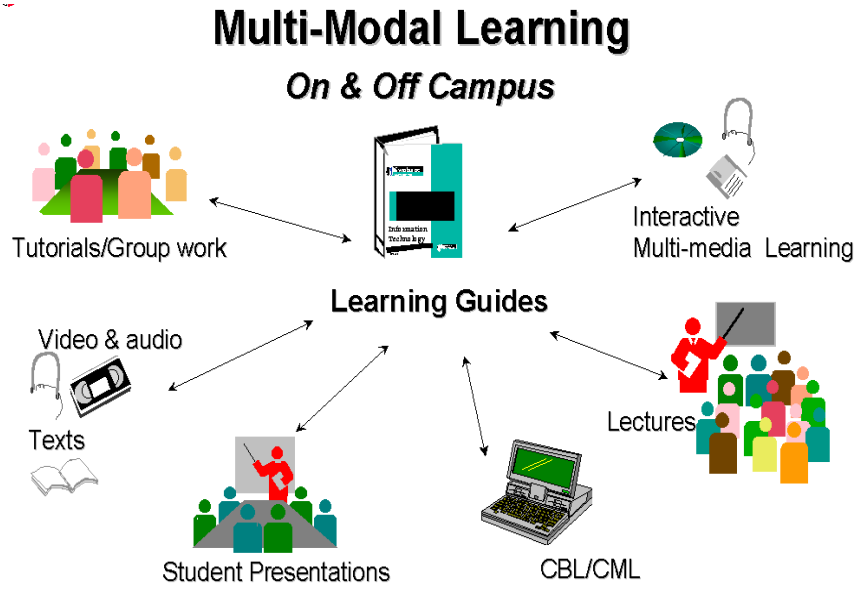
The Sensory Model works well with the **SKILLS, Learning and teaching Methodology** and highlights the use of several methods in assisting the learner to absorb process and construct information in a context suited to them individually.

Multimode Learning Style

Multimodes - Life is multimodal – usually more than one learning style is used, and it is very rare that one learning style is enough to take in all the information.

People who prefer many learning styles almost equally fall into one of two types of learners. Type one, are those who are context specific, which means they change their learning style to suit the situation.

Type two, are learners who will utilise many styles to process the same information by various methods when learning. They take longer to gather information but, as a result, they often have a deeper and broader understanding.



Adapting to the Model

To facilitate learner's improvement in using a Multi-Modal model, it is important to offer multiple learning styles by presenting the learner with as many different methods to learn a specific skill and giving them the option to select one or more.

This could consist of:

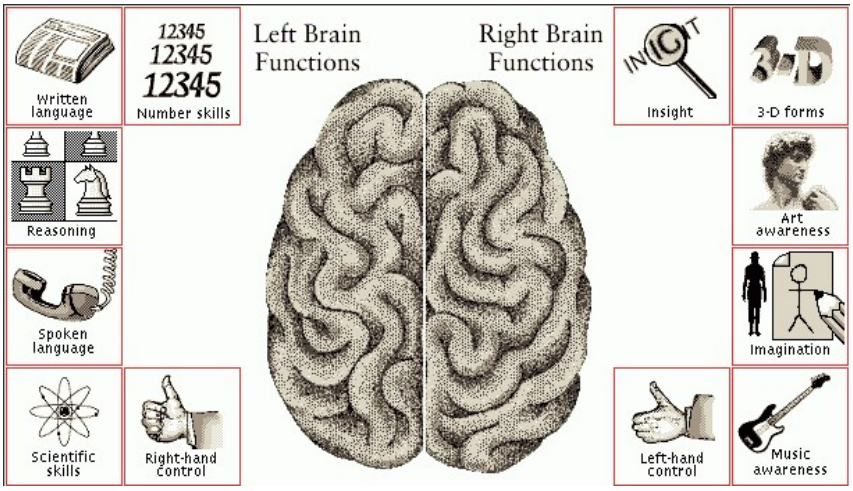
- instructional text
- An audio deconstructing the skill
- An interactive animation performing the skill in full, in reverse or connected to the basic steps
- Advice on how to improve on the basic skills in text and audio
- A video or a real person executing the skill.
- A built in self assessment to reassemble the task learned.

Left/Right Brain Learning Style

The brain is split into two different sides or hemispheres. It is known and accepted that both sides of the brain are involved in nearly every human activity, but we also know that each side of the brain processes information in different ways. If we think about learning the left/right model will help the learner to understand their way of processing information.

The left side of the brain is logical and analytical, while the right side is more visual and intuitive. Most people seem to have a dominant side, and when learning something new or difficult we prefer to learn in a certain way.

Illustration similar to this would possibly suit the dominant right side learner.

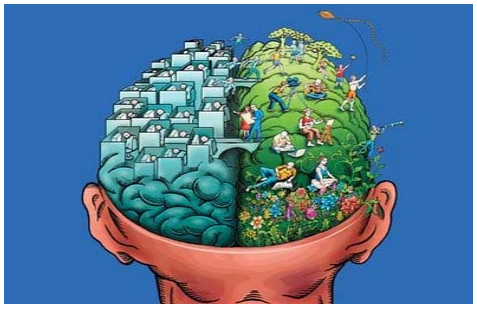


Left-Brain Dominated Learners

People who are **Left Brain** dominant, tend to be logical, and prefer clear, accurate information. They are well organised, and often prefer to work alone.

These people tend to ask questions and take notes to come to a logical conclusion.

Left-brain dominated learners often become scientists, engineers, lawyers and accountants. They are more likely to plan carefully and consider options more than **Right-Brained** learners.



Right-Brain Dominated Learners

People who are **Right Brain** dominated tend to be more intuitive and subjective. They work well in active, noisy environments where they can be creative and discuss things with other people.

Right-brain dominated students tend to make emotional decisions rather than logical ones – they will say something 'feels' right or wrong and will quickly get a feel for situations.

Right-brain dominated learners often become musicians, actors or artists. They prefer active participation and are more likely to make snap decisions than left-brained learners.

Broad generalised theory on the Genders

It has been broadly identified in Neurolinguistic studies; the male of the species has a tendency to be right side dominant and the female left side dominant.

Lists similar to this would possibly suit the dominant left side learner.

Neurolinguistic male theory

- More likely to be right-brain-dominant
- Language is processed only in the left hemisphere
- It can take more time to develop verbal fluency as infants.
- Speech tends to be goal oriented
- Learns language best with demonstrated, illustrated, or symbolic instructions
- Experiments with language randomly and with less restraint
- Reliance on images in thinking and remembering language
- Prefers drawing and manipulating objects
- Pays attention to body language as much as verbal speech

Neurolinguistic female theory

- More likely to be left-brain-dominant
- As infants, develop verbal fluency relatively quickly
- Learn to read more quickly than males
- Better than males at acquiring a second language
- Better than males at hearing fine distinctions in speech sounds
- Speech tends to be relationship oriented
- Reliance on language in thinking and remembering language
- Prefers talking and writing
- Tends to ignore body language and instead focus on speech
- Rarely uses metaphors

It is important to note that the information provided here does not suggest that there is an inherent difference in ability between genders, or equally is it promoting division of genders in the learning process. This study asserts that males and females have difference preferences in learning style. As suggested by Lie et al (2004). This supports mixed gender classrooms and study groups to allow both genders the opportunity to learn from each other.

Social Learning Style

The social learners

Is based on the socio-constructive understanding and it emphasises learners activity and collaboration.

Social learners communicate well with other people. They are good listeners and can understand other people's views well.

People often come to social learners for advice. Social learners make good counsellors, teachers and mentors.

Social learners enjoy learning in groups or one-to-one with a tutor. They learn well by discussing ideas with other people and 'brainstorming' sessions.

Outside the classroom, a social learner prefers team sports and games, and enjoys talking with people. Computer-supported collaborative learning has also been seen as one way to support learner outside the class.

Solitary Learning Style

The solitary learners

Solitary learners, tend to be private and independent. They concentrate well, and focus on the current topic taking time to assess any challenges.

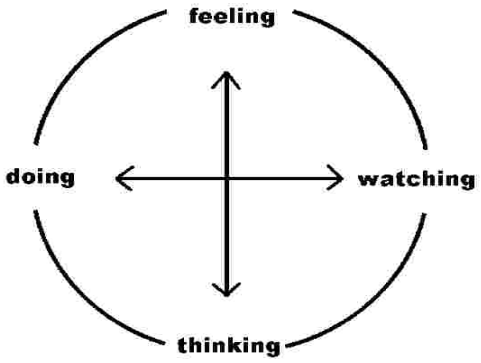
A solitary learner may keep a diary or journal to record thoughts and events. They also think independently and prefer to work on problems by themselves, somewhere quiet.

Solitary learners like to have plans and goals to work to. They often work for themselves.

Outside the classroom, solitary learners may have a personal hobby such as gardening or jogging, something that can be done alone.

Kolb Learning Style

This cycle is made up of four different stages of learning from experience. It can be entered at any point but all the stages must be followed in sequence for successful learning to take place.



	doing (Active Experimentation - AE)	watching (Reflective Observation - RO)
feeling (Concrete Experience - CE)	accommodating (CE/AE)	diverging (CE/RO)
thinking (Abstract Conceptualization - AC)	converging (AC/AE)	assimilating (AC/RO)

Concrete Experience

This is the 'doing' component of the learning cycle. This part of the cycle might involve attending workshops, or classes, following a set of instructions or reading a textbook. People who learn well during this stage tend to be outgoing, open minded, sociable.

Reflective Observation

The 'Reflective Observation' part includes the analysis of events, reviewing the lecture or workshop and reflecting on what has been learned from the concrete experience. A learner might do this through keeping a diary or journal, or through class discussions. In order for development to take place, learners must act on their reflections and analysis. People who learn well during this stage tend to be thoughtful.

Abstract Conceptualization

This part of the learning cycle involves taking what the learner has learned and the analysis and review, thinking through in logical steps, coming to his own conclusions and planning what would be done differently next time, or what went well. People who learn well during this stage tend to be logical

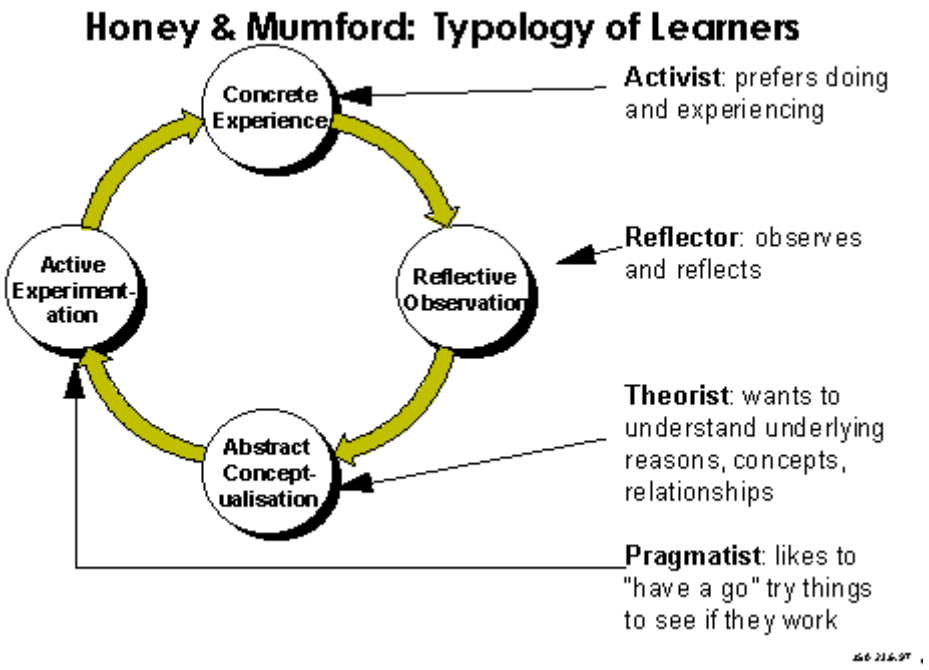
Active Experimentation

Using the conclusions that the learner has come to through, to plan and try out new ideas. These new ideas, in turn, then form part one of the cycle, the 'concrete experience' People who learn during this stage are practical and enjoy problem solving.

Source: http://www.ldu.leeds.ac.uk

Honey and Mumford Learning Style

Honey and Mumford also identified four different styles of learning, and related these to a learning cycle, similar to the Kolb cycle. According to them, people move around the learning circle, through each of these four stages as many times as needed until the learner has successfully learned. The four different 'states' of learning are activist, reflector, theorist and pragmatist. A learner will probably use one state more than the others. These are discussed in more detail below:



Activists

This is the 'doing' stage of learning and people who learn well during this stage of the learning cycle like to involve themselves in new experiences. They enjoy working with others in problem solving and role-playing.

They do not learn well in lectures or reading/writing.

Reflectors

This is the 'review' stage of the learning cycle. People who learn well during this stage learn by watching and thinking. They consider all the possibilities before

coming to a conclusion. They sometimes take more time to think about a situation, and do work well with tight deadlines, or if they are rushed.

Theorists

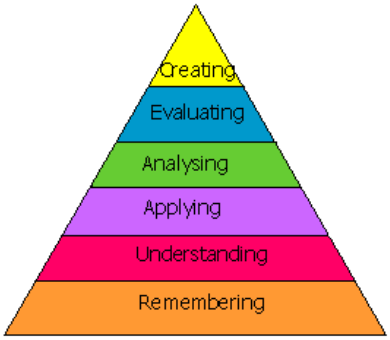
This is the 'conclusions' stage of learning. People who learn well during this stage of the learning cycle, are logical, they like an activity to be backed up with ideas, facts and systems. They like having a chance to ask questions and get explanations. Theorists do not like unstructured activities.

Pragmatists

This is the 'planning' stage of the learning cycle. People who learn well during this stage tend to be practical people. They are impatient during discussion, preferring to get on with the task, rather than talk about it, they like putting new ideas into practice. Pragmatists like to know there is a link between what is being learned and a current need, they also like feedback when they are trying things. People who learn during this stage do not like doing something when there is no clear benefit, or when an activity is all theory, with no practical work.

Blooms Taxonomy Learning Style

Bloom identified three different types of learning. He called these Cognitive (knowledge) Affective (attitude) and Psychomotor (skills). Each of these learning types has then been divided further. Each learning style is discussed in detail below.



Cognitive

This area involves remembering facts, developing intellectual skills, and understanding and then assessing / applying those facts to everyday life. At its most basic, cognitive learning involves simply remembering facts, but moves through a set of increasingly involved subdivisions. It is accepted that each subdivision has to be mastered before moving onto the next:

Subdivision	Example
Remembering facts	Quote safety rules
Understanding facts	Explain something in your own words
Applying facts to everyday life	Using instructions to make something
Analysing and evaluating the facts	Choose the best solution for a problem
Creating new knowledge	Coming up with your own solution for a problem

Affective

This area is about our attitude towards learning, so includes our emotions, values, and motivations. This area has five subdivisions, which are organised in a similar way as for cognitive learning:

Subdivision	Example
Receiving knowledge	Listen to others with respect
Responding to knowledge	Join in with class discussions
Valuing	Respect individual or cultural differences
Organisation	Accept responsibility for your own behaviour
Internalising	Value people for who they are, not how they look

Psychomotor

This area is about developing physical skills. Development of these skills can be measured by speed, techniques, precision and distance. There are seven subdivisions in this area, again going from the simplest to the most complicated:

Subdivision	Example
Perception	Able to tell where a ball will land after it is thrown.
Set	Knows the steps in a manufacturing process
Guided Response	Follows instructions to build a model
Mechanism	Can use a computer or drive a car.
Complex Overt Response	Can park in a tight parking space, can play the piano well.
Adaptation	Can explain something in different ways so different people can understand.
Origination	Develops a new training program

Proposal of Styles from the Task-based Teaching and learning Methodology

The following information is a summary of the draft copy of the **Analysis of the Portfolio and Task-Based Teaching and Learning Methodology**. In summarizing the document we can see the basis and formulation of the **Analysis of learning styles and strategies** paper.

The Lisbon European Council (2000) Education and Training 2010, key role is to drive forward a programme to "improve the command of basic competences" within Europe. These competences have taken into account the many settings which combine societies' knowledge and learning in terms of working, personal and social roles. The programme has been developed to drive forward the competence-based approach in all areas of education.

The main aim is to identify the basic skills currently drawn on in adult education to achieve knowledge through learning. To develop a strategy to integrate these skills into the educational systems and lifelong learning programme to actively promote its core principle to drive forward successful training and gainful employment now and in the future in terms of the Learning to Learn Competence.

This is the Competence which the **SKILLS** project is currently analyzing to determine how a person learns and whether they are satisfied with their current learning style or would they like to further develop a preferred learning style to improve their learning in terms of competence planning, educational development and evaluation.

The theory of competence is based on the understanding and knowledge gained using different approaches to apply concepts and stressing the useful importance of knowing how to engage in learning successfully using a portfolio of tools based on a curriculum of processes and techniques such as tests, questionnaire, interviews and case studies. This will be followed by an evaluation to determine if the portfolio has been successful in fulfilling its objective, in terms of gaining individual feedback of existing and new capabilities from the learner.

The concept of the portfolio as a curriculum of techniques to help engage learners in the learning process, leads us to the next step of offering learner's tools to best identify individual learning styles with the integration of research knowledge into a reasoned focus for developing strategies and frameworks in terms of learning to learn.

The Framework enables educational communities to explore new meanings, examine current practices, focus learning and develop context-specific strategies.

Findings

This analysis has outlined only a few learning styles out of many that are well documented elsewhere. Unfortunately, it would be a long and complicated task to study and implement strategies for all learning styles which goes beyond the brief of this project. Furthermore, we do not recommend the use of one learning style over another. This is purely a personal decision and should be determined by the individual. It should also be noted that learning styles do not have strengths or weaknesses – they are preferences.

In trying to identify learning styles that encompass a broad range of methods to complement the **Task Based Learning and Teaching Methodology**, we have chosen to expand on the Sensory Model. This Model covers the fundamentals and a wide-spectrum of learning styles, which in the initial investigation of the evaluative questionnaires conducted by the educators on the target groups, identified a clear association between the learner and the learning styles contained within the Sensory Model.

The Kolb, Honey and Mumford, and Blooms Taxonomy learning styles are quite different from the Sensory Model and are very interesting, but we recognized these styles did not correlate to our target groups' profile. The authors of The Kolb, Honey and Mumford, and Blooms Taxonomy learning styles believed that learning is cyclical and all learning involves more than one strategy or style, and although we might learn better during one stage than another, we need to involve all stages in order to learn effectively. This theory did not map to the Task Based Learning and Teaching Methodology to necessitate further investigation.

Matching your learning style and Strategies

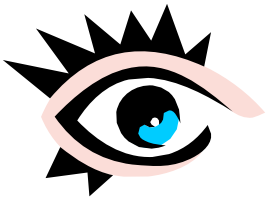
Finding a learning style to complement how a particular course is being delivered and how the learner absorbs information requires the learner to practice a degree of self awareness and possibly adopt the use of an evaluative learning styles diagnostic tool to first identify their preferred learning style and then apply a strategy to suit. For example, a visual learner signed up to a conventional lectured course might find it difficult to maintain their attention on whatever the instructor is discussing. This could lead to a gap in gaining information in relation to the course and would be deemed as a mismatch in terms of how they learned. However, if the learner understood this and adopted the strategy of adapting their style of note taking by either recording the lesson or illustrating key points by drawing diagrams this would help when reviewing their notes later. This is an example of the learner taking responsibility for their learning even though the lesson is being delivered in a style that the learner does not prefer.

On the other hand, being acquainted with the different learning styles there are and with a wide range of strategies suitable for each of them, promotes the educator's creativity, who sometimes simply does not know how to use the learning tool which is best in every case to achieve the objectives, only because they are unaware of which tools there are; if they are given a suitable catalogue of strategies they can choose, diversify, use several at the same time, think of new proposals… Using a variety of strategies improves the educators' performance and the learners learning opportunities.

Learning Strategies

The Visual Learning Strategies

Visual Learning



Visual learners are people who tend to think in pictures, rather than in words.

These learners prefer information to be colourful, shown in maps, diagrams, charts, graphs, rather than describing things in words.

The Visual/Spatial Learner

Their first priority is to ensure that their workspace is well ordered with every item in its place.

The visual/spatial learners are uncomfortable, even restless when they come across incomplete or unsettled situations.

They are adept at working with mirror images and rotating images in their minds, and strive to bring order by constructing, arranging, and colour coding or fixing things.

You learn best when:

- When trying to remember something you often visualise information.
- Information is presented visually and in a written format.
- You benefit from instructors who use visual technologies.
- An instructor who provides you with a handout to follow along with a lecture.
- You benefit from information obtained from textbooks and class notes.
- You tend to like to study by yourself in a quiet room.

Visual Learning Strategies and Sub Strategies

No 1. Focus on the purpose of the lesson

- It is vital that they have a clear understanding of the learning goal.
- If possible they should meet with a teacher to help achieve a better understand of what is required of them.
- Write down and detail the advice offered from the meeting.
- Apply the advice offered to help achieve learning goal.

No 2. Request Information in advance of a lesson

- This will relate to a specific topic the teacher is focusing on.
- Having prior information about a subject lets individuals think about the topic before the lesson and will also help them to think about and apply what they already know about the subject.
- Can give an opportunity to work with, manipulate and/or engage with new material. For example, colour coding the text.

No 3. Assessment Pointers

- Trying to maintain focused on a task can be difficult. Therefore, it could be helpful to create a step-by-step illustrated checklist.
- Think of visual cues and try to associate them with something specific to help remember information. For example, try to visualise the location of an answer rather than the answer itself!
- If there is a tendency to worry at the thought of completing a standard or timed assessment. Ask to meet with a teacher to discuss alternatives for the assessment.
- Seek out independent and open-ended studies, problem-based learning, case studies, or ways you can be more active with the material to be learned and have alternative strategies of assessment or demonstrating learning.

Read/Write Study Strategies

Read/Write

Read/Write – Learners in this category learn best when using written words.

This type of learner uses reading and writing in all its forms – for example PowerPoint, the Internet, lists, dictionaries, textbooks and magazines.

You learn best when:

- Repeat writing out the same words again and again.
- Quietly and repeatedly read over your notes.
- Rewrite the ideas and principles into other words.
- Remodel diagrams and graphs into meaningful sentences, for example. "You can see from the graph the overall trend is..."
- Turn reactions, actions, diagrams, charts and flows into words.
- You also benefit from teachers who use words well and have lots of information in sentences and notes

Read/Write Strategies and sub strategies

No 1. Ensure that the learning materials are suited to you

- Try to get a handout of the lesson
- It is important that to have learning materials in list format.
- Documents should contain distinct headings.
- The use of dictionaries is helpful
- Making use of glossaries helps too
- Search for various definitions

No 2. Combining different types of Medium

- Make sure you know what the topic is about and use learning resources such as books, journal articles, handout materials and own notes.
- Read essays on the subject from your local library and compile notes often.
- Also make use of interactive computer-based communications media, including computer conferencing, electronic mail, on-line databases, and the Internet
- Laboratories which have media-based resource materials, including videotapes, audiotapes, and practical kits can be useful too.

No 3. Assessment Pointers

- Convert all your notes into a simple list structure and revise them repeatedly.
- Obtain some multiple-choice questions and practice with them.
- Practice writing new paragraphs with fixed focus on a beginning and an end.
- Layout the information in bulleted list format with hierarchies of points.

Auditory Study Strategies

Auditory

Auditory – Students learn best when they hear the information. They prefer lectures, tutorials, group discussion, speaking, web chat and debate.

The Auditory Learner

The Auditory learner should make use of listening techniques in order to absorb process and retain information. Active listening is a structured form of listening and responding that focuses the attention on the speaker.

The learner must focus on paying attention to the speaker, and repeat, in the learner own words, what he or she thinks the speaker has said. The learner does not have to agree with the speaker he or she must simply state what they think the speaker said. This enables the speaker to find out whether the learner really understood. If speaker feels that the learner did not comprehend the information then the speaker can elaborate further.

You learn best when:

- You learn best when interacting with others in a listening/speaking exchange.
- Information is presented to you verbally and in audio format.
- You benefit from instructors who deliver a lecture and then allow for classroom debate.
- An instructor who provides you with an audio transcript of a lesson after a lecture.
- You benefit from information obtained from audio recordings of class lessons rather than note taking.
- You tend to like to study in company and discuss the material.

Audio Learning Strategies and Sub Strategies

No 1. Ensure Comprehension of the Question

- Similarly to the Visual and Read/Write learners it is important that you have a clear understanding of the learning goal.
- Attend discussions, debates and tutorials
- Spend time in group discussion and debating the learning materials
- Record, listen and continuously review the question.

No 2. Work with Other – Group Work

- Join an informal learning group.
- Talk to other people about the subject to ensure your comprehension is accurate.
- When presented with new information, repeatedly talk your way through the materials with a study partner.
- Verbally describe and explain your notes to other learners.
- When placed in a group, ensure the workload is divided up equally.
- When working on project based tasks agree a completion date for compiling work with others

No 3. Assessment Pointers

- Try to organise assessment where learning is completed in projects.
- Summarise your notes and read them out loud to help stimulate new ideas.
- Write down any new ideas you have.
- Find a quite room and spend time recalling your ideas.
- Imagine having a discussion with the examiner.
- Ask the tutor if you can first discuss the assessment question as a group.
- Complete some past exam papers.

Kinesthetic Study Strategies

Kinesthetic – Kinesthetic learners learn best by doing things. They learn by experience, example and practice.

Kinesthetic learning includes demonstrations, videos and movies of "real" things, as well as case studies, practice and applications.

The Kinesthetic Learner

Kinesthetic learning is a teaching method which allows an individual to learn best by the learner carrying out a physical activity, rather than listening or watching a demonstration. Learners who have a tendency to favour this learning style are said to be natural discovery learners; they have realizations through doing, rather than thinking about a task prior to beginning.

You learn best when:

- You learn best when you are physically engaged in an activity.
- Information is presented to you to let you physically work with.
- You benefit from instructors who encourage in-class demonstrations.
- An instructor who provides you with "hands on" student learning experiences.
- You tend to like fieldwork outside the classroom.

Kinesthetic Learning Strategies and Sub Strategies

No 1. Stay with familiar study techniques

- When studying, walk about reading a book or your notes out loud
- Attend study groups

- Spend time engaging in fieldwork such as visiting a museum to gain first-hand experience of your subject matter
- Study in short blocks of time rather than extended periods
- Take frequent breaks when studying
- Try using Games and simulators whilst practicing the subject

No 2. Focusing in the Class

- Take notes throughout the lesson
- Write down Key words to assist you in remembering audio information.
- Draw pictures or make charts relating to audio information.
- Sit near the front of the room
- Enrol in courses that meet in short blocks such as one-hour.
- If you have a choice, try to have as many experimental learning opportunities as possible, such as lab courses, as opposed to lectured classes.

No 3. Assessment Pointers

- Try to organise assessment where learning is completed in projects.
- Summarise your notes and read them out loud to help stimulate new ideas.
- Make up practice exams to help review the material
- The learner should also discuss with the teacher an optional testing method to traditional written exams, such presenting a project.

Benefits

The educational uses and benefits

One of the main benefit of using learning styles and strategies empowers the student to control their study habits and environment when or where possible in a way to maximize their learning potential. It also promotes effective learning and includes increased academic achievement and enhanced academic reasoning skills.

Benefits Available

- Longer retention of information
- Improved ability to apply your main beliefs
- More confidence in the ability to problem-solve
- An ability of creative thought
- Learn from successes - and failures
- Plan and make important changes
- Increase your interpersonal skills
- Value your own skills and experience
- Understand and accept your own strengths and weaknesses
- Understand how you learn best helps you identify study strategies that are helpful and those that might may not
- Develop study strategies that are more effective based upon your learning style resulting in greater academic success
- Because you are studying more effectively you will need less time for studying!

The above list offers an insight into the benefits which can be achieve by students familiarizing themselves with their existing learning styles and strategies and developing others when engaging in learning.

Transference of Learning Strategies

Transfer of Learning Strategies – allows the learner to apply the skills, knowledge, and/or attitudes that were learned in one situation to another learning situation in order to increase their speed of learning.

In a new situation the transference of learning skills, influences prior learning on performance. If we did not transfer some of our skills of strategies used from prior learning, then each new learning situation would have to start from the beginning.

In order to assist the learner with the transference of skills, it is important to raise learner awareness of the existing strategies they are currently using. However, before this stage is achieved the learner must be aware of their styles and be given opportunity to implement them in a supported environment. Ensuring they have the appropriate guidance and feedback to make use of these skills in future learning not only in an educational context, but also in a work based context. For example, incorporating the learner questionnaire from the "**Analysis of What People Already Know**". If this was completed independently by each learner, it could offer a learner insight into the patterns of learning behaviour they already use.

This tool identifies what strategies a learner is employing and helps to stimulate thought for the learner to further examine themselves. It exposes the learner to question themselves on how they learn and about their existing patterns of learning and strategies currently used.

This is how I learn at the moment….

Age: **Level of Education:**		
Where have you studied before?		
Do you use a diary or calendar to plan your time, tasks etc? For Example, making a note of a doctor/hospital or dental appointment.	Yes ☐	No ☐ Give example
Do you prioritise your tasks according to their urgency and importance? For example, pay bills on time?	Yes ☐	No ☐
Do you set yourself small personal targets or Goals?	Yes ☐	No ☐

Another option in achieving this could be within the context of the learner constructing a personal profile. This allows the learner to record their thoughts on the learning context whilst in the midst of their learning. However, the final product of this learning Styles and Strategies paper will see the creation of a Learning Styles diagnostic tool to help learners identify their preferences.

Once learners comprehend their learning styles, they can better adapt to their learning environment. Throughout the educational process, learners enter and work through various situations in varying environments and this makes it very difficult for them to perfect their skills. However, once a learner identifies and understands their unique learning style, they can begin to build upon it and broaden it to encompass other styles. Understanding learning styles is a first step in maximizing potential and

overcoming learning challenges and therefore, a tool which can help to raise learner's awareness, would be a beneficial component in the evolution of learning to learn.

Conclusions

The learning styles are presumed to be relatively stable learning patterns, consisting of processing strategies, learning approaches about learning. The learning styles are widely identified in literature and these styles are regularly identified in different ways and subject areas. The researchers in field of learning have stressed the most important factor that influences learning is previous knowledge and learner's perceptions of his/hers learning skills (e.g. Ausubel 1968; Hakkarainen, Lonka & Lipponen 2002). Some researchers have discovered that the motivation and information processing strategies are more essential. The learning outcomes are better when the learner has an active role. (Biggs 1991; Entwistle 1988; Lindblom-Ylänne et al. 2001)

However, the learning is an extremely complicated phenomenon in which a great number of factors are interrelated. In fact, it is no use to ask the question "What is the most important factor that influences learning?". The teacher cannot have influence on students'personal presage factors. The teacher's role in learning is to create suitable and supportive learning environment to different kind of learners. (Lindblom-Ylänne et al. 2001; Lonka 1997)

By using the VARK Model and questionnaire the learners learning style or preferences can be determined. This can then assist both the learner and educator in identifying individual student preferences in the manner in which information is presented and absorbed. The educator should also be aware of the significant difference in learning style and preferences between males and females; see left right dominated learners (**Neurolinguistic male/female theory)** p14. As such, it is the responsibility of the educator and the learner to be aware of learning style preferences to improve learning.

As educators, we need to consider and recognize how to reach all learners by understanding how to present information in many forms. Learners can be helped more effectively, both in class and out, if educators and learners are aware of their learning style and preferences before attempting to teach or learn a new skill.

As a learner, it is vital to be self-aware of learning preferences in order to adjust study techniques to best fit each individual, even when the information and instruction provided does not match the preferred style.

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SKILLS

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Link Consulting Sas (IT)
Associazione Formazione 80 (IT)
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