Cultivating Twelve Human Senses and Human Skills. 
The Legacy of Educational Visionary Jan Amos Komensky. 
12 Senses in Rudolf Steiner’s Wisdom about being Human.

When we observe how education has developed throughout history, there are a few instances we can mention. We can especially look to two personalities who dealt with deeper principles of pedagogy in European tradition. Personalities who concentrated on deeper understanding of human beings and explored the human senses.

And because we are creators of environments for children, I will give you a few examples on how we can adjust these environments by looking at what has inspired these pedagogists. We will look at the knowledge of Jan Amos Komensky’s concept of 12 senses and later at the developed concept of 12 human senses from Rudolf Steiner.

The teacher and thinker Jan Amos Komensky (also known as John Amos Comenius) lived between 1592 and 1670. It was at a time when it was not common for all children to go to school. Komensky tried to work with kings in various European countries. He gave them principles of how to educate their kingdoms.

Which human sensory qualities were important to Jan Amos Komensky? What did he believe in? Why did he care? Jan Amos Komensky explored the human psyche, focusing on how we learn and how we can develop our temperament towards excellence. Which human senses were important to Jan Amos Komensky? What for him was the fundamental question?

Komensky was continuously interested in how to develop our sense of truth. His concept of truth is based on three pillars. The first pillar is a sensorial recognition of the immediate, describing what is actual within reality. The second pillar is the built intelligence from past experiences. The final pillar is trust in others.

The first pillar of truth is the immediate sensorial learning of the concrete world around us. Truth comes from describing the details that surround us. Truth is in all things, and later it manifests in our minds. Truthfulness, the fact of being true, means to practically relate to things and objects with detailed descriptions and storytelling. This pillar can be implemented into play and daily life with children.

The second pillar in Komensky's concept of truth is that the mind can repeatedly distinguish reason from experience. And later, through repetition, our opinions are created. What we have experienced repeatedly, we trust in it. As a child, we initially decide our opinions from the experiences that a guide-
The adult provides a sequence of information and later, from these lessons, the child makes their own judgment. As an example, let's plant and care about a tree or flower with children. This is an activity which repeats itself over time. Gradually, the child acquires experiences from the continual activity. This activity helps to find the truth of creation in the environment later in life. The child gradually realizes that the plants and/or animals need care repeatedly. This is true from their experience. This is why it’s so important to create environments for children where they repeatedly care. In museums there could be for example gardens and places with plants, flowers and animals. The most important aspect in this case is the completely concrete repeated activity. The child learns the truth about nature from the order of nature. For example, from such a process they will have learned that plants and animals need water…

The third pillar of J. A. Komensky’s truth is based on faith and the confidence of trusting in others. Faith and trust in other people gradually rises. For instance, faith is made and broken according to how people fulfill their promises. Faith is dependent on when and how other people help us. Trust grows and is gradually built as adults ask for their promises. With Komensky, the concept of truth is also based on faith (belief) in God. This concept defines that believing in higher spiritual powers is helpful to us. Jan Amos Komensky was an educated priest. Therefore, the divine concept of truth was very important for him. In his approach to education, he recommended that from an early age children should listen to religious stories. Thus, faith in God is gradually built in children. It also helps to create faith in other people, and ultimately helps to believe in oneself when they become adults.

In the case of Jan Amos Komensky, we can recall other principles of his pedagogical research: the development of sensory perception, the experience from learning, the dramatization of learned matter, the path to humility and the education for the realization of human virtues.

The development of sensory cognition is researched by Komenský in his early work "Lanua Linguarum Reserata" (Doors of Languages are Open). This textbook is a conversation of language, supplemented with illustrations. He chose a pedagogical concept for the book so that the concepts could complemented with paintings. It helps to clarify the meaning of learned terms. In this work we can explore Komensky’s typical compositional theme - that faith in Truth grows from connections with God. The textbook begins with the creation of the world. Then, the content of the textbook describes in detail the four main natural Kingdoms. Further, Komensky describes all fields of human activity. Ultimately, the content expands to the perspective for the future salvation of all mankind. It's a description going through all spheres of life. The final topic in the work is the return of man to the divine world. All of Komenský’s other works are similar in theme and composition. These concepts were repeated throughout his life, showing how deeply confident he was with his faith. Continually, Komensky placed emphasis that children should regularly meet with religious stories. Truths in pedagogy help build storytelling from early childhood. In order for children to remember their learning better, Jan Amos Komensky recommended they recreate learned material with their own words. A higher learning experience is dramatization. When a story’s content is dramatically studied and played, it becomes alive. The story is remembered better because it goes deeper into memory. Another of Komensky’s ideas is education for humility and education for the realization of human virtues. Komensky recommends that teachers and parents should perform stories, fairy tales, legends and narratives with sacred religious themes. In this sense, with adults, Komensky appeals to our desire to set an example with our manners.

With Komensky’s work we see his interest in the complex naming and describing of man as a being. His concept is that man is a wise being who is able to learn and later develop his abilities from his own experiences. Komensky thought that the concept of man is also about the knowledge of twelve senses.

Komensky divides human sensory perception into three basic categories: five external senses, four inner senses and three most internal senses.

In his concept the five external senses are Touch, Taste, Smell, Hearing and Sight. The four inner senses of Komensky's concept are Attention, Imagination, Rationality and Memory. The three highest senses Komensky calls the most inward, are Light of Thinking/Common Sense, Motion of Will and Conscience, meaning the ability to act.
In his writings, a graphical record was found, which attributes these senses in terms of numbers and meanings to the sizes of the sides of the so-called Pythagorean Triangle. The short side is divided into three parts. The long side for four parts. And the longest side is 5 parts. The sum of the lengths is twelve. In this triangle, the two shorter sides make a 90° right angle. The shortest three part side represents the Komensky concept of the three innermost senses. The long side with four parts represents the four inner senses. The longest side containing five parts expresses the five external senses. The fact that Komensky assigns the number of senses to each side of the Pythagorean Triangle expresses his belief in universal, divine principles. The geometry of the Pythagorean Triangle represents universal principles. In his example, he symbolically depicts universal cosmic connections. The Pythagorean triangle is subject to certain concrete and unchanging principles. It is the order in the world of divine ideas. On the principle of the lengths of the sides of this triangle, he wants to show the context, the unity, and the holistic principle of being man. Man, as a divine being, is created in a particular order. Just as the sum of the second power of the shorter sides of triangle is the same as the second power of the longer side. The result is unity. It symbolically shows that within his concept of the twelve senses, divided into 3, 4 and 5, there lives in a certain unity and context of the whole.
Interest, research and exploration of human senses has lasted. In the past, other scholars and educators have also dealt with this topic. Many educators from the 18th, 19th and 20th centuries wanted to change the way of materialistic lifestyles. They became increasingly aware of other options. That's why they tried to deepen their knowledge of humanity and to deepen their pedagogy. This created a shift which is in a sense a continuation of Komensky's thoughts. Between 1900 and 1925 Dr. Rudolf Steiner (1861-1925) introduced his concept, today known as the so-called Waldorf Education.

Rudolf Steiner typically explored and described in detail human qualities. In his pedagogical concept he dealt with temperament and also defined human senses deeper. Following not only Komensky, but also the Hippokrat Principles of Temperaments and Empedocles Elements.

From the point of view of man, Rudolf Steiner develops in great detail the wisdom of the twelve senses. He divides the twelve senses also into three groups. He talks about the physical senses, the senses of the Mental (Soul of Man) and the senses of the Spirit of Man.
The physical body senses of Steiner’s concept are Touch, Sense of Life, Sense of Movement, and Sense of Balance. These are the senses that connect us with our body.

In his conception, we can see that each of the senses are not only physical in nature but also on a psychic level. Sensational knowing not only serves the person to keep them healthy and alive, but also develops their virtues and helps them to find their right path in life. Thus, the concept of twelve senses can be used not only in pedagogy but also as a tool in decision-making and behavior in various life situations. Let's take a look at the following examples:

Touch

With touch we realize the boundaries of the environment and ourselves. Touching with matter, we experience boundaries that define the space in which we live. By recognizing borders of our body we experience ourselves in the world. We have been separated from the infinite “World” on our paths to individuality. For example, if we hold a stone, we marvel at the beauty in the world. With the sense of touch, we experience our body and reconnect with the Cosmos. How we behave in new environments will be discovered when we enter a completely unknown area where there is darkness. We can add earplugs to our ears. You can experience cognition without memories … and with pure emotional Touch. The other side of Touch is mental, it can be a gracious touch and caress. A touch full of love and understanding. It can also be embrace and compassion. Or a funny ticking. So we see aspects of the touch.

Sense of Life

This sense tells us how we are feeling right now. How healthy we are. Thanks to the Sense of Life, we have control over what is happening in our body. Pain or hunger draws us to notice the fact that we are with nature. Through life’s sense we keep ourselves alive, but we also learn to control our instincts. The Sense of Living helps us create compassion and cultural qualities on the mental plane. For example, if we are hungry, we are able to share food with another person through our will. The common experience of pain is healthy for us, both physical pain and mental pain. We learn to overcome difficulties from such experiences.

Sense of Movement

With our super-sensonic will we are already in the place where we want to be, in our thoughts. Before we pick up a cup of tea, we realized it in the mind just before it happens. This is the physical side of the Sense of Movement. The Sense of Movement is connected with will and destination. From a mental and spiritual point of view, it is a sense that guides us through life and shapes our destiny. If we learn to observe the events that "come" to us, we go our life in the right direction.

Sense of Balance (Equilibrium)

On a physical level, balance is the ability to go upright and balanced. At the mental level, this sense reflects the moral weight of human qualities. In order to find a balance in our lives, we constantly determine our standpoints. An equilibrium position is a prerequisite for balanced movement in life. From our clear point of view, we have a distinct expression. Our souls and our own self are formed through our decisions. What is hidden in this sense is deeply human. It is our ability to re-evaluate our opinions and associate with other people.

Those were physical Senses. Thanks to them we are connected with our body.
Rudolf Steiner mentioned four other senses. They are on the level of our Soul. These senses form our feelings and influence our mental health. They are Smell, Taste, Sight, and Sense of Warmth. These are the senses that connect us the world with our mood and feelings. We experience them through their own properties. Through these senses we perceive the character and moods of reality:

Smell Sense

Scents and smells subdue us. They are feelings we can not avoid, because we breathe. When we smell, for a moment we forget ourselves. Smells can overwhelm. Through smell, we are able to distinguish the nice from the unpleasant. When smells are fresh, we feel well. Whatever smells bad, is unpleasant or somehow not good. The Smell Sense is the basis of distinction and human morality. When one cultivates this ability, he has a sense of what is morally acceptable. It is a way for instincts of conscious thinking to inform what we do and how we behave.

Taste

For Taste, we have to connect with the substance. Taste is always dependent on what we decide to taste. With Taste we judge for ourselves the Taste experiences we encounter. Taste is related to the ability of a person to accept only as much as it can withstand. It always takes some time. Both in the sense of eating food and in the sense of mental enjoyment which comes to us. The real sensation from Taste is whether something is healthy or unhealthy. Taste is not only physical eating, but also mental digestion. We choose what we hear. Through cultivated language, culture comes and enriches us.

Sight (Vision)

The most basic mental movement takes place in the eyes. With Sight we see colors and they affect our mood. The mood of the environment interferes with the psyche. From a very long-term point of view, they interfere with the character of the environment in the field of human health. Sight also contains equilibrium properties. Try closing your eyes and crossing a beam! But, Sight also takes something from us. We know that we can practice our other senses in blind situations. Vision is also related to man's ability to control his passions and instincts. The brighter the eye is, the more we perceive it as a calm and virginal. With sight and eyes we experience a part of the soul of the other person.

Sense of Warmth

Heat has a physical and mental side. For example, on an material level we feel surface temperatures of various materials differently. We perceive mental warmth as a maternal embrace. Or if we give (sacrifice) something from ourselves. Heat has a dynamic element and leads to movement. We all know how metal tracks stretch and expand with the heat of the hot sun. Likewise, joy, heat and mental warmth lead to dancing and the desire to move. Heat has the ability to regenerate and heal.

Those four were the Senses of the Mental level. They connect the body and mind with our feelings. These senses help us to actively participate with our virtues.
The next four senses are the most Inner Senses, they connect with our most spiritual self. They create a balance of understand of our social life and can help create our destiny if we learn them.

Hearing

If we want to really hear something - we have to strain. And we also must be silent and actively listening if we want to hear ... The beautiful tones of musical instruments penetrate our soul. The second person's speech comes to us. By being consciously silent, we cultivate the qualities of social sentiment (empathy), we learn to listen to others.

The Sense for Speech

This is the Sense in which we recognize the human language from the sounds of nature and animals. Thanks to this Sense we also understand the content of Speech. So we can understand the meaning of words and the meaning of Speech. Thanks to this, we can discern language from music and other sounds. Speech and typical words express content, notions, and also mood. People and ethnic groups can express their mood. Through perception and speech, we understand something superior to all other senses. What helps people develop their sense of words is the cultivation of speech, the study of national language, culture, and folklore.

Sense of Knowing Other People's Thoughts (Thinking)

This sense is more widespread than Sense of Speech. With this sense we understand the words and intentions of others. What other people say, we empathize with. If we want to, we can understand one another, and understand others thoughts. If we consciously step back and put our minds at rest, the thoughts of other people come easily to us. It is a conceptual meaning.

A Sense of Self in Others (Ego Sence)

It is a very high human sense to be able to perceive other people as individuals. How and what we perceive is essential and personal from each other. If we find it, it is inspirational to us. Developing this sense helps us make decisions with whom we want to be with in some stages of life. Or with who we decide could really be our friend or partner. We recognize with this sense if the self of others is serious and sincere. If one really means what they say. If their thoughts as a person are true to themselves.

There are certain concrete relationships between the twelve sensory organs. Rudolf Steiner wanted to point out that all twelve senses have relationships. Our senses together create a unity with our psyche and should not be separated from each other. As an example, using Touch we realize our physical environment. Using the Sense of Life we experience our current state. We use the Sense of Movement in the body to live. With the Sense of Balance, we go into the world with our will.

So we see the spread of human qualities in which wisdom from the twelve senses informs. Jan Amos Komensky and Rudolf Steiner wished to have a deeper understanding of man. And with this knowledge they wished to promote our characteristics. The concept of the twelve senses is an inspirational tool for us to enrich the creation of experiences and educational environments for children.

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You can see more about twelve senses here: http://www.arc.cz/web/en/portfolio-item/2010-the-sensorium-of-the-twelve-senses/

¹) Rudolf Steiner lecture from 12th of August 1916 you can find at http://wn.rsarchive.org/GA/GA0170/19160812p01.html
²) Rudolf Steiner lecture from 22nd of July 1921 you can find at http://www.rsarchive.org/GA/index.php?ga=GA0206

One of books about twelve sensces: Albert Soesman, Twelve Sences, ISBN-10: 1869890221
Sensorium, learning object to explore 12 senses, author Oldrich Hozman and Jiri Wald (2012, Prague)
Workshops with children to explore their senses. Clay modelling with closed eyes. Guided by artists Eva Vejrazkova, Prague.