The Importance of Early & Special Needs Education – a Chance for Technology

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Main

If you talk to teachers nowadays and ask them how they perceive their students, they will – most likely – tell you that the level of children's development has decreased. That the number of students and the diversification of the class makes the teaching process very hard, almost impossible. Also the number of children with disorders seems to be growing and there are more and more children classified as having Special Needs. The recent discussion over the Ofsted (Office for Standards in Education) major review of special educational needs and disability arrangements revealed that there is a big problem not only with the classification but also with the definition of Special Needs. But there is one common voice coming out of all that commotion: Special Needs NEED special attention.

So what seems to be wrong?

We are educating our children too late or not adequately and sufficiently enough. Children have an amazing potential and the earlier we start the bigger the potential. But I am not talking about teaching children to read and write when they are 2 years old. Quite the opposite – I am talking about an overall enhancement of all the developmental skills, adjusted to the pace of individual path of a particular child. The way eduSensus has been prepared.

The software – recently adapted to English speaking market - has been in use in Poland for almost 10 years and has been appraised by therapists, teachers and parents.

Originally developed for specialists' market of therapists, the product has proven to be an irreplaceable tool for early education and special needs' prevention.

Because **Special Needs can be – in many cases – prevented if we start the education process early enough**:

Children learn by watching, listening, babbling, imitating, analyzing, playing, repeating, trying and interacting with the world and manipulating it. They should be allowed to follow that path in their own pace but they should also be guided properly and provided with necessary tools. The child is ready to accumulate, associate and transform the inputs it receives from the world but it is also ready and prepared to receive help from adults. And the adults are naturally equipped to give that help. It's just that recently they do not have enough time or resources and so maybe this is the reason for the recent decline.

If the child's development is not stimulated then they may never have an opportunity to fully develop their potential. The adults need to guide the play, lead the path. A child left to their own devices will develop certain skills but they will not develop all areas and skills required later on in the next stage for example. Certain skills like hearing sensitivity, music, speech, motor coordination and audio coordination can be shaped in one way only – through hundreds of repetitions. Making all the areas of development attractive for a child and remembering about all of them is the base for a thorough and comprehensive development.

Learning through play needs to be coordinated, stimulated and guided.

Why do so many kids have problems at schools nowadays? Because some areas of their development have not been stimulated, have been neglected. The child was left to their own devices or there was not enough motor stimulation or simply because parents did not have time to read to a child on regular basis.

When we have certain knowledge we can ensure to do it right. Almost 20 years of experience has given Young Digital Planet the necessary knowledge. The secret lies in individualizing the educational process. One teacher cannot possibly teach each child separately when the class size exceeds 4-5 students. Unless…

Unless the teacher is provided with necessary tools. Tools that will allow a better recreation of reality. Multimedia and technology provide us a chance to bring the real world onto a student's desk. Alive and buzzing just as it would be if it was actually happening. And what's most important – that technology will allow the students to interact with that reality, not just watch it. Books are still and world around us is not. Movies get closer to reality but they can only be watched which – as it turns out – puts our brain cells in a "sleep mode". And there is also another issue – the trust. Children need to believe in what they are taught. Just like they believe in the power of Google… Since computers and mobile devices is what they are surrounded with, that is what needs to be the carrier of the education as well. Guided by thoughtful but technologically savvy teachers. Internet seems to be an unquestioned source of truth so getting better filters will definitely be a task to deal with in the near future.

Digital materials especially should not be copied from the traditional materials. What we need to understand is that the whole concept should change. We should treat the new learning environments as tabula rasa and start from the beginning. People are naturally predisposed to learn by imitation, watch others and repeat the behavior, learn by doing. Our brain is also very good in creating patterns, seeing the big picture and this is what should be taken into account while preparing the materials for learning.

The natural environment especially when enriched provides enough stimulation but only when children are guided, not left alone to their own devices. Children love to learn and adults are naturally predisposed to provide that guidance but the lack of time, standardization and factory-like schools prevent us from doing so.

First of all the natural development of human beings and the natural attribute of every child is to act and be like a scientist, with a great drive for learning. But not any learning. Humans have successfully educated themselves throughout millennia and this process should not be discarded. Humans are predisposed to learning. But all aspects of our intelligence need to be nourished. Traditional school system with standardized tests favours crystallized intelligence. This combined with the modern age of fast information retrieval leads to a disaster.

The immediate access to immense amounts of information combined with standardized approach and an overload of information influences the choices made by young people and how they learn nowadays, losing the ability for divergent thinking and the sense of what is relevant or reliable and what is not.

But the way education is designed nowadays seems to be directed in the wrong way. Children receive tons of verbal instructions that are not connected to reality or the world around them. They cannot really connect the given (not absorbed) knowledge to anything significant, to anything at all. It seems useless and unattractive. And it should not be a surprise really. Nobody gets notes before sitting at the piano and at least watching it being played. Children used to learn different professions by watching adults at work, then apprenticing at a master. Nobody listens to an instruction how to ride a bike or play tennis, before actually getting a bike, watching it ride, sitting on it or holding a tennis racket. With more complex professions like piloting a plane we have simulations. Again: learning by doing, instructions at the actual activities.

People used to collaborate, solve problems together, discuss and learn from peers and their experience. Now the information is pushed not pulled. Interactivity, game-based learning and mobile learning give a chance to change that.

So why do we learn the school subjects the way we do?

Language is just a living, natural form of communication, math is the way of thinking and science is about the world around us. Why aren't we just interacting with it in a meaningful way? There are so many natural, everyday actions that involve all of these 'subjects'. Learning this way provides meaning and usefulness. Provides context. And context brings engagement and motivation. Brings attention. But we need to start early not to discourage the children from learning. Once they develop a concept that education means something boring, hard, disconnected and useless, it will be very hard to change it.

An interest in the subject is one of the key elements. But the interest often comes from relevance. If one sees results, sense in learning something, personal gain or fulfilling the need that can later on be used in practice, then the interest is boosted. Fun brings engagement and involvement. Fun is what drives people to do almost anything. And fun boosts curiosity and retention. But even fun needs to be individualized. The learning should therefore be personalized and flexible.

The technology makes it all possible. A modern mobile device is – in its construction – a scientific instrument. It has a built-in camera, voice recording, calculator, converters, location sensor, data retriever, etc. with additional applications it can easily serve as mobile laboratory. And science is what shapes the world. Understanding its rules may solve the problem of navigating through irrelevant or even misshaped and false information.

We have realized early on that Early Prevention is of utmost importance. The education of children between 0 and 6 years old lays down the basis for their future development. And by education I mean a fun but wise play. Learning that's engaging and does not kills the natural curiosity of children.

It is even more important now – since the civilization changed the way we interact with the world. The visual images are replacing all the other communication. And **a child needs to interact with the world, not watch it**. The need for reading is declining, the need for any kind of effort is diminishing, everything is at a hand's reach and the children are getting used to instant gratification. Even the need to walk and meet other people seems to be disappearing in some families. And there seems to be shortage of time as well. The parents' engagement has decreased and that has impacted the emotional development, which in turn impacts the memory and the ability to learn in general.

We can change that: **every minute spent with a child on wise play is the best invested time of your life**.

Designing eduSensus we wanted to cover all the areas of child development to make sure nothing is missing. The education process is fun and provides endless chance for repetition. The impact of the product goes well beyond the computer world as it contains hundreds of printable materials, videos with physical exercises to be followed, musical activities to be performed, recitation and even sign language to stimulate all areas of the brain. It is a different approach to education, one that takes the individuality of each child into account.

eduSensus started at first as a therapy product for speech and language pathology only later to develop into a complex and comprehensive product used for therapy of various intellectual and motoric impairments, for early prevention as well as for the enhancement of early development and even for learning languages. The unique methodology and innovative learning environment together with attractive content and design created an engaging world for children to enjoy and benefit from that was familiar enough to feel natural and non-invasive. All of sudden children wanted to participate in therapy sessions, they wanted to learn, they no longer felt like they were forced to do it.

Now it is being used in 556 therapy clinics all over the country, in multiple child care centers. It is the leading therapy product in Poland.

It seems that the secret lies in the approach: we adjusted to the world of the children, thinking about the way they develop naturally (without teachers' interference so to say), what triggers their interest and what doesn't. Then we listened to their feedback and we tried to adjust. But most importantly we - by wanting to be innovative and modern – offered the children the world they know best: interactive and digital. Children do not know the world without computers. For them it is not an innovation, it's simply the reality they know how to interact with.

But it did not all happen through meticulous planning. Quite the opposite: it started with hunches and feelings and impressions and was based on intuition. However that approach was only possible thanks to the fact that the people on whose hunches and intuition we relied on, were true experts, dealing with children on everyday bases and – what's probably most important – taking the children's interest seriously and willing to change the approach when a different need was communicated.

Innovation in education lies in the approach to learning, the technology will help us achieve it.

It will help us deliver the content in the way that will change the attitude to learning and – as a result - its efficiency.

Fast pace learning, new learning environments, new generation of digital natives, an overload of information and an ongoing crisis in education systems are forcing a creation of innovative forms of teaching, content included. Just using technology and computers does not motivate digital natives anymore.

By shaping the content and products for Early and Special Needs Education, we set up new standards and established new trends, setting up solid grounds for future development of our products. How creating content for young learners shaped our understanding of learning content creation which combined with existing research and surveys and the feedback from our users, set up guidelines to all future developments.