

# MULTIPLATFORM EDUCATIONAL PROGRAMS: NOVEL TOOLS FOR SKILL DEVELOPMENT AND COMPETENCE ENRICHMENT

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## 1. ABSTRACT

Interactive societies have changed the way we communicate and so necessarily the way we should organize and manage educational programs. A multiplatform approach is needed to fully utilize teaching facilities and the creative power of participants. A host of considerations and examples are presented in order that skill development and competence enrichment can reach a higher level as a result of our efforts.

## 2. INTERACTIVE SOCIETY

Since the proliferation of the smart phone there has been social debate about the evils of interactive society. [1] One can argue that the cell phone should immediately be integrated into educational program, but one can immediately find counterarguments highlighting lack of funding, and poverty. Neither of these stances is completely valid as new educational platforms are in their experimental phase, proposed by pioneering instructors, institutions and organizations.

Often seen in history, new inventions are never implemented immediately in their final form. A total rejection of the new platform is also unjustifiable as smart phones are a part of everyday life. Education will not impose purchasing a

phone on those who cannot afford it, merely suggests novel ways of applying them. [2]

Smart phones provide services lacked in many schools such as a camera, compass or even scientific calculator.<sup>1</sup> Besides they include Wikipedia, speedometer and skill development games.<sup>2</sup> [3] A college course called Smart Phones in Teaching Mathematics is available in Hungarian.<sup>3</sup>

A Digital Education Conference has been organised by ELTE since 2012. A great number of contributors have realized application options. Technological progress has not been fully adopted. Recent lectures have not covered a multiplatform approach.

Major themes of the conference have been: video interviews in education, digital physics (films, PC games), using webcam, sound card, game controller, digital boards, experimental mobile tools, in class, IT tools for comprehension development, mobile apps ([Redmenta](#))<sup>4</sup>, motivation in a new environment, students, as content/application developers<sup>5</sup>, media consciousness, individual learning paths, new teacher roles.<sup>6</sup>

## 3. THE MIND MATRIX

The multiplatform approach concerns how the brain works. Brain Sell is a model to describe decision making is a purchase or similar process. [4] The model concerns 5+10 channels and/or forms of communication:

<sup>1</sup> <http://kobak.org/okostelefonok-az-oktatasban/>

<sup>2</sup> [http://www.eltereader.hu/media/2014/04/Digitalis\\_pedagogus\\_konferencia\\_READER.pdf](http://www.eltereader.hu/media/2014/04/Digitalis_pedagogus_konferencia_READER.pdf)

<sup>3</sup> <http://vs.hu/magazin/osszes/az-okostelefon-meg-tanoran-sem-tomegpusztito-eszkoz-0503#!s6>

<sup>4</sup> [http://digitalispedagogus.hu/2013/?page\\_id=289](http://digitalispedagogus.hu/2013/?page_id=289)

<sup>5</sup> <http://www.eltereader.hu/kiadvanyok/digitalis-pedagogus-konferencia-konferenciakotet/>

<sup>6</sup> <http://digitalispedagogus.hu/konferenciakotet-2/>

NOTE: All links referred here and later on were last accessed March 21, 2016

| Primary Sensation | Left Hemisphere | Right Hemisphere |
|-------------------|-----------------|------------------|
| Sound             | Numbers         | Images           |
| Sight             | Words           | Fantasy          |
| Smell             | Logic           | Color            |
| Taste             | Lists           | Rhythm           |
| Touch             | Detail          | Space            |

Table 1.  
The full Mind Matrix<sup>7</sup>

In his seminal presentation<sup>8</sup> of a similar model, Simon Sinek presents the Why question as a major motivation differentiator in decision making. [5]

Both models are straight forward and telling about the fastest way to the center of decision making, the brain. They suggest using the right hemisphere and emotions vs. frontal communication to the left hemisphere of the What and How question.

#### 4. FRONTAL TO PROJECT TO DIFFERENTIAL

The relative inefficiency of frontal education forms is clearly derived from the conclusions above. What is the compelling reason to act and transform one's thinking if only part of the brain is stimulated? Rather, we need to talk to the other side and communicate dynamic images in time and space.

One such successful case<sup>9</sup> relies on the following attributes in education: mixed age groups, student projects, teacher groups, independence, creativity, less lexical material. The inherent success factor in such models is the establishment of a lifelike environment for learning.

#### 5. M-LEARNING

UNESCO defines Mobile Learning<sup>10</sup> as follows: *“Mobile learning involves the use of mobile technology, either alone or in combination with other information and communication technology (ICT), to enable learning anytime and anywhere. Learning can unfold in a variety of ways: people can use mobile devices to access educational resources, connect with others, or create content, both inside and outside classrooms. Mobile learning also encompasses efforts to support broad educational goals such as the effective administration of school systems and improved communication between schools and families.”*

A major building block of the multiplatform approach is using the smart phone in education. [Geomatech](#) is a recent example from early 2014. Developed in Austria and deployed in Hungary, this has been the first major and widespread interactive education method and tool<sup>11</sup>. Based on the smart phone, it makes learning science more exciting than ever. The immediate purpose of developers is to make math students successful.<sup>12</sup>

Further mobile applications for school are summarized in a comprehensive study presented at Networkshop 2014.<sup>13</sup> A similar study for teaching History using mobile apps promotes the use of smart phones in History classes.<sup>14</sup> A general summary on the possible use of the internet is available too.<sup>15</sup> [7]

#### 6. MULTIPLATFORM VS. UNIPLATFORM

At this development stage there is a proliferation of publication in this field but many authors stick with the PC and the Internet as a platform. Most authors do not look beyond and will not recognize multiplatform education for which IT is only a tool. This suggests it is important to initiate the introduction of MEP in education but also the training of teachers is vital. This involves not

<sup>7</sup> <https://books.google.hu/books?id=7VM35BofSMAC&pg=PA14&dq=israel+sales+mind+matrix&hl=hu&sa=X&ved=0ahUKEwi8rdbMkqfJAhXBfA8KHW3ID4YQ6AEIHjAA#v=onepage&q=israel%20sales%20mind%20matrix&f=false>

<sup>8</sup> [https://www.ted.com/talks/simon\\_sinek\\_how\\_great\\_leaders\\_inspire\\_action?language=hu](https://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action?language=hu)

<sup>9</sup> <https://www.youtube.com/watch?v=8skEPakxWVs>

<sup>10</sup> <http://www.unesco.org/new/en/unesco/themes/icts/m4ed/>

<sup>11</sup> <http://tananyag.geomatech.hu/>

<sup>12</sup> [http://hvg.hu/kultura/20150430\\_okoseszkozok\\_az\\_iskolaba\\_igy\\_meg\\_a\\_matek](http://hvg.hu/kultura/20150430_okoseszkozok_az_iskolaba_igy_meg_a_matek)

<sup>13</sup> <http://nws.niif.hu/ncd2014/docs/aen/082.htm>

<sup>14</sup> <http://www.tte.hu/media/pdf/eloamobilokkal.pdf>

<sup>15</sup> <http://vmtkd.edu.rs/fex.file:tapiska-dol/TAPISKA%20DOL.doc>

only knowledge transfer but also a change in attitude. This multiplatform approach will not survive if only used in the class. Teachers must be aware and use them day-by-day.

## 7. DIGITAL EDUCATION

In Britain, the University of Edinburgh realized that learning, teaching and training are profoundly affected by the challenges of the digital age. In 2011 they published a Manifesto for Teaching Online. Its 2016 update<sup>16</sup> lists the following 20 statements:

*“Online can be the privileged mode. Distance is a positive principle, not a deficit. Place is differently, not less, important online.*

*Text has been troubled: many modes matter in representing academic knowledge.*

*We should attend to the materialities of digital education. The social isn't the whole story.*

*Openness is neither neutral nor natural: it creates and depends on closures.*

*Can we stop talking about digital natives?*

*Digital education reshapes its subjects. The possibility of the 'online version' is overstated.*

*There are many ways to get it right online. 'Best practice' neglects context.*

*Distance is temporal, affective, political: not simply spatial.*

*Aesthetics matter: interface design shapes learning.*

*Massiveness is more than learning at scale: it also brings complexity and diversity.*

*Online teaching need not be complicit with the instrumentalisation of education.*

*A digital assignment can live on. It can be iterative, public, risky, and multi-voiced.*

*Remixing digital content redefines authorship.*

*Contact works in multiple ways. Face-time is over-valued.*

*Online teaching should not be downgraded into 'facilitation'.*

*Assessment is an act of interpretation, not just measurement.*

*Algorithms and analytics re-code education: pay attention!*

*A routine of plagiarism detection structures-in distrust.*

*Online courses are prone to cultures of surveillance. Visibility is a pedagogical and ethical issue.*

*Automation need not impoverish education: we welcome our new robot colleagues.*

*Don't succumb to campus envy: we are the campus.”*

Digital education in Hungary is also a top-down project that integrates and coordinates effort to renew higher education as well.<sup>17</sup> It is worth noting that centrally planned development is guidance is necessary but individual institutional initiatives are just as relevant in public and higher education as well. There is an explicit need for such progress as emphasized by feedback from recipient of such renewed programs.<sup>18</sup>

Lacking a multiplatform approach, a good summary on the relationship between schools and the internet is available as well.<sup>19</sup> A very recent article describes Facebook as an educational marketing tool to be used for more extensive campaigns.<sup>20</sup>

## 8. SOCIAL NETWORKS

Social networks provide a solid basis for the development of Multiplatform Educational Programs. Thus, social networks can play a major role in programs for language learning.<sup>21</sup> More and more educators realize that beyond the internet as a general platform certain software applications are immensely useful for certain special educational programs. These applications are: social media, chat programs, instant messaging applications, forum, blog, wiki, picture and video<sup>22</sup> sharing sites, dating sites, language exchange sites. There drawbacks that are also discussed in the article.

<sup>16</sup> <https://onlineteachingmanifesto.wordpress.com/the-text/>

<sup>17</sup> <http://ivsz.hu/hirek/podiumbeszelgetes-az-oktatas-digitalis-megujitasarol/>

<sup>18</sup> <https://dea.lib.unideb.hu/dea/handle/2437/740>

<sup>19</sup> [http://www.kre.hu/ebook/dmdocuments/oktatasi\\_segedanyag/chap\\_16.html](http://www.kre.hu/ebook/dmdocuments/oktatasi_segedanyag/chap_16.html)

<sup>20</sup> [http://kozossegekialandozasok.hu/2016/01/07/facebook-2016-a-kis-gomboc-nem-all-meg/?utm\\_source=Facebook&utm\\_medium=cikk&utm\\_campaign=fbtippek-fboldal](http://kozossegekialandozasok.hu/2016/01/07/facebook-2016-a-kis-gomboc-nem-all-meg/?utm_source=Facebook&utm_medium=cikk&utm_campaign=fbtippek-fboldal)

<sup>21</sup> <http://www.oktatas-informatika.hu/2013/03/t-nagy-laszlo-a-kozossegi-halozatok-szerepe-a-nyelvtanulasban/>

<sup>22</sup> <https://www.youtube.com/watch?v=eCbzODEUDek>

Social media maintain social networks in a progressive manner.<sup>23</sup> “Social media is defined as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content. Furthermore, social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content.” Thus social media form the spine of the interactive society by allowing nearly unlimited access to social networks.

**9. STIMULATING CREATIVITY**

The Synectics [7] model originally developed by Gordon in 1961 describes the creativity to be developed in an educational, industrial or organisational setting. The Synectics theory holds the following hypotheses:

1. *Creative efficiency can be markedly increased if we understand the psychological process by which they operate.*
2. *In creative process the emotional component is more important than the intellectual, the irrational more important than the rational.*
3. *It is these emotional, irrational elements which can and must be understood in order to increase the probability of success in a problem-solving situation.*

The Design Synectics [8] model, which is based on Gordon’s work, lists 23 triggers for creativity<sup>24</sup> (Table 2).

Such powerful synectics processes as the search for similar (feels like, looks like, sounds like), opposite, and synthesis in creative thinking are opportunities for next generation education platforms.

**10. SUMMARY**

In the wake of the interactive society educators must rethink the status quo in order to create Multiplatform Education Programs to reach out for new generations. The Brain Sell model and Synectics provide proven models for such enhancement, be it centrally planned or individually initiated. Classrooms need be transformed from frontal to project to differential environments both in the physical sense both in digital education using social networks and m-learning tools.

The 23 Design Synectic Triggers

|             |              |              |
|-------------|--------------|--------------|
| Subtract    | Change Scale | Prevaricate  |
| Repeat      | Substitute   | Analogize    |
| Combine     | Fragment     | Hybridize    |
| Add         | Isolate      | Metamorphose |
| Transfer    | Distort      | Symbolize    |
| Empathize   | Disguise     | Mythologize  |
| Animate     | Contradict   | Fantasize    |
| Superimpose | Parody       |              |

Table 2.  
Design Synectics<sup>25</sup>

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<sup>23</sup> [https://en.wikipedia.org/wiki/Social\\_media](https://en.wikipedia.org/wiki/Social_media)

<sup>24</sup> <https://prezi.com/6woxb8zpbw8-/design-synectics/>

<sup>25</sup> <http://www.slideshare.net/jazzliang/2011-spring>