



TECHNOGENY: THE GENIUS LEARNING UNIT

Stasys Paulauskas

Strategic Self-Management Institute

Abstract

Fragmented knowledge, the lack of adequate synthetic learning units, its forms and content, the contradiction of the Education faces humans to nowadays existential problems, like global challenges of climate change, pandemics, wars, poverty, international terrorism, migration, etc. In the article the author presents more than 40 years of sociogenic innovation on the author science Technogeny, dedicated to construction of virtual models of the origin and development of learning and self-improvement seeking to gain necessary for success practice skills and arts. Grounding on the Virtualics, as virtual modelling metatheory and World development spiral virtual models, it gives opportunity to apply virtual approach to the Learning phenomenon and its transition qualities from the Past through Nowadays and towards the Future. Anthropogenic analysis of gaming as a learning procedure enabled to define the action programme of an animal or human as the natural learning unit, which is also a practical Natural knowledge unit. Composed learning virtual model evidently confirmed transition of the form of learning from the Education to Self-Improvement through Education contradiction resonance sinusoid. The learning form transits three qualitative leaps of a virtual trichotomy: autocratic face-to-face education, democratic blended learning, and virtual liberal Self-Improvement. The content of learning is transiting from Metaphysics (academic scholastics) to Virtualics (Smart Innovation). Matrixes of learning form and content fixed clear trends from an Old to the New qualities of the learning. Genius learning unit and virtual Self-Improvement tools innovations and application for forty years of international pedagogic innovations enabled to confirm the right path to the future of learning towards virtual Smart Innovation. COVID-19 pandemic gave additional confirmation of this learning development direction.

KEY WORDS: technogeny; natural learning unit; gaming; education contradiction; natural knowledge unit; Genius learning unit.

Introduction

The main problem. More as forty years of sociogenic research and international programming on innovations give right to state, that the Humanity nowadays faces to global existential problems, mainly related to fragmented knowledge, aged understanding of the sense, links and origins of human it-self, its being, relations with environment and paths to the Future. This is the problem of lack of adequate knowledge of these challenges' synthetic knowledge, its forms, content, and contradictions. Seems, that Humanity don't want to know the truth about it-self. Because modelling of the World is still on a verbal level of metaphysical scholastics, which is grounded on ancient dogmas and uncertain economic, political, religion and variety of other disconnected from practice world outlooks. Moreover, such aged outlooks are stored and defended by high intellectual groups and institutions of science, education, and legal authorities. Isn't any secret that schools, and universities nowadays become work organisations of teachers and professors, for whom main learning actors – schoolboys and students frequently still mean for employed staff wellbeing. This phenomenon is called the Education *contradiction pendulum*. Because education must be dedicated to the success of society and its members, but not for educators at first.

In each country problems of education are discussed permanently, a lot of monographs, new educological concepts and practical initiatives are applying into the

practice of education. The most frequent authors of such innovations are educators and authorities, who can't think out of the box at their own interest. Fortunately, progress is above such not perspective practical interests. The problem of education is deciding through natural transition from past to new forms and content of learning.

Virtualics, as virtual modelling metatheory and World development spiral virtual models give opportunity to apply virtual approach to the Learning phenomenon and its transition qualities from the Past through Nowadays and towards the Future (Paulauskas S. (2017) Virtualics: Where did the Dialectic? / Management - Journal of Management. Lithuania business university of applied sciences, ISSN 1648-7974. Klaipeda, Lithuania. 2017, № 2(31). -P.105-109). The *Technogeny* constructs virtual models of an origin and development of learning and self-improvement seeking to gain necessary for success practice skills and abilities.

Main subject of this article is the origin, development laws and its realisation mechanisms of the Learning with help of dichotomic, trichotomic and complex virtual models.

Main aim of the article is to present the technogeny as science in essence, origin, development laws and its realisation mechanisms of the Learning with help of virtual models.

Main tasks are:

1. To present the Technogeny as science in essence, origin and development of Self-Improvement.
2. To share discovered the Learning forms transition.

3. To show recognised the Learning content innovation.
4. To present the Genius programme as synthetic applications of learning innovation.

The Technogeny as science on the origin and the development of the Learning

The Technogeny (*techne* – skills, arts; *genie* – origin, development, genesis; *ancient Greek*) is the new science, created by Stasys Paulauskas, dedicated to construction of virtual models of the origin and development of learning and self-improvement seeking to gain necessary for success practice skills and abilities.

Permanent learning and Self-Improvement are genomic unavoidable abilities of each live organism. *Anthropogenic* self-regulation cycle evidently shows, how seeking to cover an actualised demand live organism is modelling and implementing own action, which after is assessing in matter of economy – lowest expenses of time and energy for cover a demand (Paulauskas S. (2020) Anthropogeny: HUMAN QUALITY VIRTUAL LEAP/Management - Journal of Management. Lithuania business university of applied sciences, ISSN 1648-7974. Klaipeda, Lithuania. 2020, № 1(36). -P.61-66.). Applied action programme with success' indexes is placed into memory for next time to take from here the most efficient programmes. Moreover, genomes have the special ability to simulate action programmes in a brain without implementing it in real practice. This ability is *gaming*, which enables mentally accumulating and enriching personal libraries of action programmes. It's very important to know that when we sleep, a genome-like accurate librarian takes all newly created and applied action programmes and places them into certain places of the memory, classifies it each moment according to new criteria and convenience to find it's easier and quicker. Our learning programmes are like video games with signs of all human senses: vision, hearing, touch, smell, and taste. So, why after waking up in the morning, everything is clearer in our minds.

So, each realised action helps to gain improved action programmes, which has a sense of *learning* and *self-improvement*. In animals' world learning has a sense of copying and imitating by juniors' actions of adults. Its parents don't imagine that they are doing some special education programmes for the benefit of juniors. Education is a normal constituent of natural family relation. In human family verbal communication enables significantly increased efficiency of transferring of success programmes to younger generation in much shorter time, thanks to the *teaching* - verbal analysis and modelling of action programmes. Education and teaching become specialized human activity dedicated to transfer accumulated by previous generation experience to younger generations.

However, not seeing special technical means humans teach juniors – transferring experience to the younger generation one third of their life span – 25 years. The main reason for such a waste of time is lost understanding of the sense of learning. A human action programme is the *Natural Learning unit (NLU)*. NLU is a complex procedure on covering actualised demand and fixing it. However, specialised activities of science and education for analysis purpose divided and fragmented such learning units and forgot to collect it again for its synthesis in higher quality of practical use. So, growing exponentially mountains of fragmented knowledge worse opportunities for quick find of LU for practical needs. Big libraries, encyclopaedias, computers, big data bases, Google engines, etc. are developing to navigate in this ocean of fragmented knowledge. Therefore, attempts to transfer such knowledge disorder into the brains of juniors meets so big resistance.

Understanding the sense and practical purpose of the learning unit helps to collect fragmented knowledge into the *Natural Knowledge unit (NKU)* – universal element of the Knowledge, like the atom is the unit of physical World. Humans are nearing a significant choice between two general knowledge concepts: chaotic and unified. Chaotic fragmentedness towards infinity knowledge leads to nowhere. The progress leads to efficient activity towards defining and concentration into Knowledge learning and applying into human practice. According to Virtualics World development spiral, Anthropogenic quality leap synthesis of knowledge units leads to discovering and construction of artificial learning units, what has sense or creation of artificial intelligence. The smart quality of learning and self-improvement mean arrangement of humanity's self-management according to the genomics of a single human.

Going this way, the Genius learning programme was synthesised, and it's implemented for more than thirty years. The genius knowledge subject is Innovation. Each human like any other live organism is an innovator who creates and implements new action programmes on exceeding the time. So, innovation is the *craft of Genius*, *who gains success by exceeding the time*. We can do this for a shorter or longer future and can be less or more successful. So, let's become Geniuses, thanks to the synthesis of the Knowledge unit.

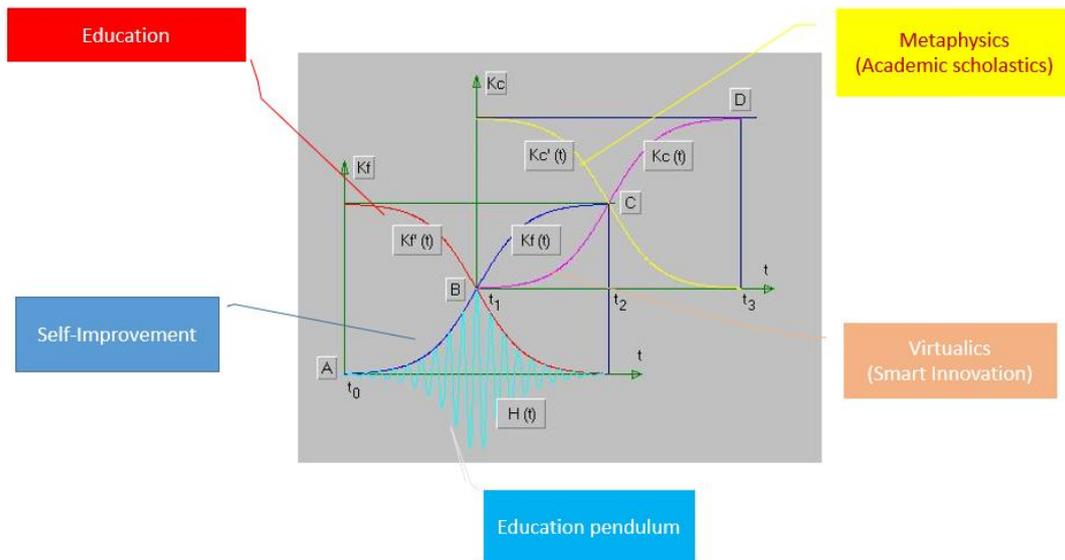


Fig. 1 Virtual model of Self-Improvement transition (Paulauskas, 1995)

Virtual model of Self-Improvement qualitative transition consists of dichotomies of the *form $K_f(t)$, the content $K_c(t)$ and contradiction between them $H(t)$* (Figure 1). The form of Self-Improvement replaces *Education* quality and creates conditions for changing learning content from *Metaphysics* (academic scholastics) to *Virtualics* (Smart Innovation) through contradiction in the shape of resonance sinusoid. The

pendulum shows how is accelerating the fight between New and Old until culmination point B, after which New wins this competition and contradiction slightly disappears.

Transition of Old education quality to New one means *innovation of education* – creation and implementation of new forms and content (Figure 2).

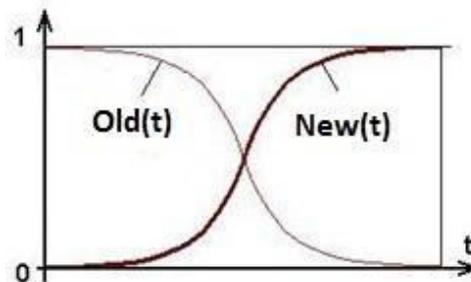


Fig. 2 Learning innovation dichotomic virtual model (Paulauskas, 1995)

It's important to understand that innovation of Self-Improvement is a natural permanently running process, which is going without targeted impact of humans. Humans have three choices or scenarios, how to deal with innovation trends: a) not follow them; b) follow and c) exceed the time.

The Learning form innovation

A learning form transits from education to Self-Improvement passing three qualitative steps of social relations: *A(t) autocratic face-to-face education, B(t) democratic blended learning and C(t) virtual liberal Self-Improvement* (Fig. 3).

Long-time Autocratic school with domination of a teacher and communal school was the main alone form of Education. Nowadays the democratic quality of Blended learning dominates, thanks to the opportunity to use some digitised PC and Internet tools in the learning process. The Future of education belongs to Virtual Self-Improvement, what significantly will change communal education. Giant push towards virtual Self-Improvement made COVID-19 virus.

Education transition quality is changing from group education to Individual Self-Education, which enables to avoid interests of educators versus interests of schoolboys. (Table 1).

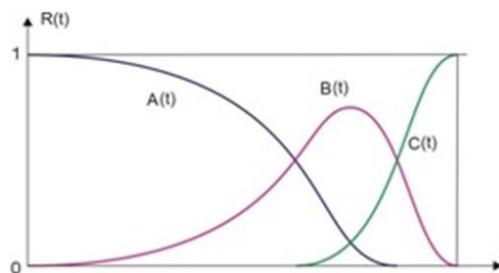


Fig. 3 The learning form quality transition trichotomic virtual model (Paulauskas, 1995).

Education tools in the shape of writable and verbal knowledge is replaced by virtual self-education tools (PC, Internet, etc.). Big expensive buildings are replaced by virtual surroundings at home, which enable reduced

learning costs and assure personally oriented education. Designated teachers are replaced by chosen mentors according to individual needs and opportunities of a Self-Improving person.

Table 1. Learning form transition (Paulauskas, 2012)

Quality	Old	New	Earnings
Education quality	Group education	Individual virtual self-education	Avoiding impact of interest of pedagogues
Education tools	Verbal and writable knowledge	Virtual self-education tools (PC, internet)	Quickness, efficiency, personally oriented
Buildings	Big expensive buildings	Virtual surroundings	Cheap, personally oriented
Educator	Designate teacher	Chosen mentor	According to individual needs and possibilities
Organisation	State education	Private business	More rapid improvement
Market	Education institutions	Consumers	Responsible business
State education system	Non sustainable education	Sustainable self-education	More efficient self-improvement
Order	Management	Self-Management	More initiative
Politics	Autocracy (partocracy)	Direct democracy	More rapid development

Communal State education is replaced by private business service, enabling assure quickness of education according to individual abilities and opportunities. Communal education market is replaced by the consumer market, where market competition and social responsibility mechanisms accelerate creation of virtual self-improvement tools and mentor’s quality improvement. Success of education form innovation also depends from modernisation of social relations in a community from Management to Self-Management and transition to digital direct democracy.

The Learning content innovation

Self-Improvement content is changing through innovation dichotomies with help of digitalisation needs and opportunities. If old education content is focused on analysis of learning subjects, needs of creation more efficient action programmes require finalise gnostic

process by synthesis of such programmes. World view is changing from a metaphysical sphere of things to a virtual world development spiral, enabling foreseeing the future. Formal abstract logic is replaced by virtual logics, enabling virtualized mental images.

Ethics is transiting from loyalty to social responsibility, what increases personal freedom and longer life span opportunities. Nowadays human’s race form is changing from speech to virtual images with the help of PC and Internet, which enables accelerated communication processes. Obligatory work is replaced by free creative activity towards freedom and longer life span of people (Campbell, 2007). Social relations transferring from Management to Self-Management, giving more initiative to a person. Technologic activities develop from belief to knowing and safety of the overall life cycle in matters of responsibility and controllability. The Economic paradigm is changing from economics to

sustainable development, what enables more quick development.

Table 2. Learning form transition (Paulauskas, 2012)

Quality	Old	New	Earnings
Cognition	Analysis	Synthesis	More efficient action programmes
World outlook	Sphere of things, element - atom	Development spiral, "universum" - leap	Opportunity to model past and future
Methodology	Scholastics (what is)	Virtualics (how to change)	Possibility to use knowledge in practice
Logics	Formal	Virtual modelling	Possibility to virtualise mental images
Ethics	Loyalty	Responsibility	Personality freedom, longer life span
Homo sapiens sapiens form	Speech	Virtual images	More quick communication
Homo sapiens sapiens content	Obligatory work	Free creative activity	Personality freedom, longer life span
Sociology	Management	Self-management	More of initiative
Technology	Belief	Knowing	More responsibility
Paradigm	Economics	Sustainable development	More quick development
Business	Production/service	Sustainable innovation	Freedom and responsibility

Understanding of business quality is changing from production and service to sustainable innovation, giving to humans more freedom and responsibility.

The synthesis of the Genius Learning Unit

The synthesis of the advanced form and content of the Learning enabled it to recognise the highest Learning unit as a success-oriented Genius programme of an Innovator. Nobody can repeat any action programme. Each next action needs an updated sequence of movements in new time, changed surroundings and renewed actors. So, each human programme is an innovation, which needs to be created and implemented. The Practical Knowledge unit is an Innovation programme. Consequently, the Learning unit is an Innovation programme. Simply, the smartness thing is to learn programming of innovations, which could be applied in different fields of human activities.

Innovator is *a Genius* – a human, who exceeds a time trough creation and implementation of novelties. Majority are short-term geniuses, able shortly exceed a time (Zhang & et., 2020). But exists persons, who exceed the time for tents and hundreds of years, who we named as Geniuses. As more you exceed the time and your colleagues as more you are a Genius. The Genius learning programme is constructing forty years and it consists of 3 virtual learning tools: a) Psychological Self-Improvement on innovation iGenius (2015); b) Virtual Self-improvement portal with subject of Virtualics as the Innovation metatheory (1995) and c) Practical programme of innovation iMillioner (2007).

Such Genius programmes and virtual tools belong to the highest synthetic level of virtual Self-Improvement. They were checked and discovered great results during bachelor and master's degree studies in Klaipeda University, Lithuanian Business University of applied sciences, International Erasmus+ studies. Virtual Self-Improvement was applied in 4 Leonardo da Vinci projects, dedicated for working out innovative learning programmes on Renewable and wind energy in 2006-2015 years. In 2019-2021 years, Strategic Self-management Institute initiated and is leading the international consortium on implementation of Erasmus+ programme strategic project Smart hospitality, where the Genius programme is applying for the tourism service SMEs sector.

The learning programme and virtual Self-Assessment tool iSAT were created to help tourism sector innovation. COVID-19 pandemic played a significant role in pushing learning quality towards virtual Self-Improvement in all countries and fields of education, by isolating schoolboys and students at home, which will be the best place for virtual Self-Improvement soon. The Genius programme will become a sweet cherry on the cake of smart Self-Improvement of humans and Artificial intelligence for smart machines and robots.

Conclusions

For forty years knowledge innovation was proven the hypothesis, that fragmented knowledge, the lack of adequate synthetic learning units, its forms and content, the contradiction of the Education faces humans to nowadays existential problems, like global challenges of climate change, pandemics, wars, poverty, international terrorism, migration, etc.

Created by Stasys Paulauskas science of Technogeny, dedicated to construction of virtual models of the origin and development of learning and self-improvement seeking to gain necessary for success practice skills and abilities. Grounding on the Virtualics, as virtual modelling metatheory and World development spiral virtual models, give opportunity to apply virtual approach to the Learning phenomenon and its transition qualities from the Past through Nowadays and towards the Future.

Anthropogenic analysis of gaming as a learning procedure enabled to define the action programme of an animal or human as the Natural Learning unit, which is also the practical Natural Knowledge unit. Composed learning virtual model evidently confirmed transition of the form of learning from the Education to Self-Improvement thought Education contradiction resonance sinusoid.

A learning form transits from education to Self-Improvement passing three qualitative steps of social relations: autocratic face-to-face education, democratic blended learning, and virtual liberal Self-Improvement.

The content of learning is transiting from Metaphysical scholastics to virtual Smart Innovation. Matrixes of learning form and content fixed clear trends from old to new qualities of the learning.

Genius learning unit and virtual Self-Improvement tools innovations and application for thirty years international pedagogic innovations enabled to confirm the right path to the future of learning towards virtual Self-Improvement. COVID-19 pandemic gave additional confirmation of this learning development direction.

The article gives certain knowledge for constructive update of the traditional Education to virtual Self-Improvement and accelerates creation of Artificial intelligence systems on the ground of the Natural Learning unit.

References

- Anderson, E. M., & Shannon, A. L. (1988). Toward a conceptualization of mentoring. *Journal of Teacher Education*, 39(1), 38-42.
- Bofarull Ivan. (2022) The future of learning in a post-Covid-19 world.
- Börje Holmberg (2005). The Evolution, Principles and Practices of Distance Education. Bis, -P 171. Blended learning.
- Campbell, R. J., Robinson, W., Neelands, J., Hewston, R., & Mazzoli, L. (2007). Personalised learning: Ambiguities in theory and practice. *British Journal of Educational Studies*, 55(2), 135-154. <https://doi.org/10.1111/j.1467-8527.2007.00370.x> [Taylor & Francis Online], [Web of Science ®]
- Cathy, Li, Farah, Lalani. (2020). The COVID-19 pandemic has changed education forever. This is how. *World economic forum*.
- Chan, J. (2020). Roam's superpower for knowledge synthesis: Incremental formalization.
- Elective home education. Guidelines for local authorities" (PDF). (2018) *gov.uk*. Section 1.2. p. 3. Archived from the original (PDF) on 2018-05-22. Retrieved 2018-10-11. Home schooling (2020)
- INTERNATIONAL LEARNING UNIT (ILU) (2020) "The new outcomes-based standard for the 21 centuries" LERN P.O.
- John LaRosa. (2021). \$10.4 Billion Self-Improvement Market Pivots to Virtual Delivery During the Pandemic. *Market research.com*.
- Juan Biurrun, David Vélaz Ciaurriz, Idoia Arteta Gorritz, Jesús Hernández, Aleksandras Paulauskas, Raimundas Paulauskas, Stasys Paulauskas, Alfredo Sierra, Mariusz Trojanski, Amaya Pierola Zabalza, Kazai Zsolt. (2011) *Advanced Education Tool on Renewable Energy Sources Management/ADVANCED LEARNING TECHNOLOGIES ALTA '2011 CONFERENCE PROCEEDINGS*. ISSN 2029-8331. Kaunas: Aleksandras Stulginskis university. 2011. - P.74-81.
- Lileikienė, A., Paulauskas, S. (2004) The opportunities of the college Self-Management structure improvement /West Lithuania business college: Scientific works „Management“. Nr. 2(3). 2004.
- Liukinevičienė, L., Mažeikienė, N., Paulauskas S. (2017). The investigation of institutional attitudes to improvement of informational abilities in North Lithuania education institutions. *Youth scientists work*. 2007, Nr. 5(16). Siauliai: Siauliai university publishing house. -P. 76-89.
- Paulauskas, S. (1995). Some problems of school reform/Management. *Time. Problems-95*. Materials of international scientific conference. Kaunas: Management and language college. 1995, p. 76-85.
- Paulauskas, S. (1999). *Self-Management Dialectics. Theory, methodology models*, *Monograph*. Klaipeda University. Klaipeda.
- Roser M., Nagdy M. (2014). *Projections of Future Education. Projections of Future Education - Our World in Data. The Analysis of Knowledge. Stanford Encyclopaedia of Philosophy*. Retrieved 13 June 2020.
- The competence of knowledge management in the North Lithuania region. (2006) *Scientific work/ Strategic Self-Management Institute*. Head of the project – S. Paulauskas. Klaipeda - Siauliai: PI Siauliai university publishing house. UDK 658:001. 89(474. 5)Ži55. 2006, p. 218.
- Vegas, Emiliana. (2022). Education technology post-COVID-19: A missed opportunity? *Brookings*.
- Zhang, L., Basham, J. D., & Yang, S. (2020). Understanding the implementation of personalized learning: A research synthesis. *Educational Research Review*, 31, 100339. <https://doi.org/10.1016/j.edurev.2020.100339> [Crossref], [Web of Science ®]

RECEIVED: 15 October, 2021

ACCEPTED: 20 June, 2022

Stasys Paulauskas, Doctor of Philosophy (applied sociology), professor, establisher, and head of Public Institution Strategic Self-Management Institute (from 1991). Author and innovator of methodological systems Virtualics, Anthropogeny, Sociogeny, Technogeny, Strategic Self-Management, Responsible Energy, Sustainable Innovation, Circular Economy 3.0, Blue growth index, which are applied to fields of education, maritime, ITC, energy, business, culture, etc. through large scientific research and innovations and participation in international programmes of UNDP GEF, Leonardo da Vinci, Erasmus+, Interreg IIIa, South Baltic and Baltic Sea region. Main specialisation is the introduction of Strategic Self-Management in different levels of social organisations. Baltijos pr. 123-61 LT-93224 Klaipeda, Lithuania; +370 65539295.