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EDUCATION FOR THE FUTURE

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Abstract: *Education for the future responds to a current urge of rethinking education at the level of education systems in Europe and worldwide, taking into consideration the fact that they no longer meet the expectations of a rapidly evolving generation that transcends by intelligence and pragmatism what school offers them today. The education for the future must be dynamic, able to react quickly to the swift pace of change in everyday life. Thus, it is imperative to move from standardization to adaptation. The education for the future must be consistent with the individuality of each child. This requires a selective education meant* ***to re-evaluate all the values****. In this sense, in the school of the future the teacher cannot be replaced even by the most powerful computer in the world, because the teacher is the only one who can discover and stimulate the creative potential of children and young people respectively. The professions of the future must not be primarily dependent on advanced (top) technology development, but on exploring the creativity of each child in one area or another. Education through and for humans can be a new type of education that should take into account all aspects of the human being.*

Keywords: *education for the future, education creativity, child, youngster, teacher, educational system.*

The idea of this article is not new. *Education in the future* was the topic of the international conference held on April 20, 2013, which I initiated and organized as a Dean of the *Faculty of Education Sciences* at the *Dimitre Cantemir Christian University*, a structure I set up with the clear purpose of

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forming a new type of educator, generically called *Euromentor*[1], able to meet the demands of education for the future. Even if I had to abandon the coordination of the Faculty and of the *Educational Management Master's Degree*, for objective reasons, the experience gained in the field of education, both as a teacher and an educational manager, and the permanent preoccupations as an educator will always lead me to analyze and discuss issues of the future destiny of education both in Romania and in the world. The meeting with Prof. Jukka, the author of the Finnish educational reform concept, whom I invited as a visiting professor at the faculty that I coordinated, was a significant moment in my paideutic approach, implicitly in that of the university. Prof. Jukka honored us by attending our courses with students, conferences, and also by publishing articles in the academic publications COGITO and EUROMENTOR, being part of their scientific board.[2] This is also the meaning of the current article we have written together in order to try somehow to continue developing a collaboration that began in 2012 and that could provide, through our ideas and experience, important milestones for rethinking education in the future.

The increasing the complexity of the modern and contemporary civilization, the demands for active and responsible participation of all the members of the human race in the "new world" have generated wider and more focused concerns, dedicated to the analysis of the objective and subjective boundaries of contemporary education as well as to the prospects of its evolution. Under these circumstances, it is easy to understand the preoccupation, almost generalized worldwide, to reform education, to develop and tune it with the configuration of the current state of development and with the trends of the future evolution of human society and civilization. The present and future development of education will increasingly be marked by a complex set of evolutions that are already recorded in all the fundamental components of contemporary societies and civilization. The most profound one is that of the entry of the contemporary society into the era of knowledge and transformation of economic and social systems from systems based on traditional factors of production and work into systems based on knowledge and computerization, with all the implications of this evolution for the entire

[1] Gabriela Pohoață, *A School for the Future,* EUROMENTOR (Studies on Education), vol. IV, no.2/June 2013, p.7-12.

[2] www.cogito.ucdc.ro&www.euromentor.ucdc.ro

economic, social, political, cultural and spiritual life at present and and in the future.

Rethinking, resizing and changing the educational paradigms is already an important task, along with a closer correlation of economic, social, scholar and cultural policies at society level. The redistribution of educational functions and of education itself towards all educational social organizations and institutions and the radical reconsideration of the relationships between formal, non-formal and informal learning will aim to increase their complementarity and efficiency along with the "lifelong" learning. It is obvious that the foundations of the knowledge society - the human capacity to create and use efficiently and intelligently the knowledge, skills and behaviors acquired during childhood and adolescence cannot last for the whole lifespan.

Thus, even a brief introduction to the challenges the policy makers and educators are facing right now makes it clear to everyone that the future of education should try to comprehend both the opportunities and demands of unknown and ever-changing territories where both individuals and societies will have to work and comply with in the future. It goes without saying that in one way or another the responsibility of education systems is to prepare students for professions that do not even exist at the moment. This is the reason why national and international policy makers have tried to come up with reports and strategies, which could outline and promote the 21st century curriculum and learning skills. When studying the reports in question one may easily notice a dramatic change in thinking during the course of recent decades, when comparing how some of the key international players in the world have established the most important themes of learning. As early as 1960s, UNESCO introduced *life-long learning* as a fresh concept and guiding principle for restructuring and developing education.

Research on the education for the future

In the school of the future, the teacher will no longer be a mere knowledge transmitter of knowledge, but his main mission will be guiding the student along his own learning process. The curriculum will practically include more than the academic content. The Internet will be the main source of knowledge, even more than school, and English will be strengthened as a global language of education. Education will be more expensive and will last for life. These are the findings of 645

international experts interviewed within a study carried out by WISE (World Innovation Summit for Education) on the future of education.

Here's what the education experts say about the school of 2030:

• Schools will become interactive environments where technology innovations and curriculum will transform the role of teachers.

• 93% of participants are in favor of schools that put into practice innovative and creative teaching methods.

• Experts predict that schools will become learning networks with the help of online technology and resources that will encourage learning from student to student, focusing on collaborative learning.

• 43% of participants are convinced that online platforms will become the main sources of information, while only 29% of participants believe that school will remain the main source of knowledge.

• 75% of experts are convinced that interpersonal skills will become the most appreciated qualities

• 83% of experts believe that from the content point of view, education will become individualized, reflecting the needs of each student.

• The role of the teaching staff will change, as they will become guides for children, downsizing the teachers' task of transmitting information.

• The participants in the survey agree, however, that physical presence and human interaction will remain essential for **education in the future**.

The results of the survey were released before the **2014 WISE Summit** held in Doha, Qatar between 4-6 November 2014. **The Summit was attended by 1500 members** of the WISE community to discuss the topic "*Imagine - Create - Learn: Creativity at the Heart of Education.* The survey – including, among others, the linguist Noam Chomsky, the former Australian Julia Gillard and Professor Sugata Mitra - shows that 'schools will turn into networks' where students will interact with each other and the teacher, reaching a 'collaborative learning'.

El Mundo daily[3] interviewed several Spanish experts about the issues addressed by this survey, tailored to the Spanish reality. Changes

[3] *Asi sera la escuela en 2030*, www.elmundo.es/espana/2014/10/21.html

regarding timetable, student relations, new subjects, homework were also addressed.

Teachers, in the opinion of seven subjects out of ten, will have the role of guiding the student on his own path of knowledge. There will be more counselors than knowledge transmitters. Until recently, they were the only source of information available, but the Internet took over everything, and students can find much of what is explained in the classroom on the internet. According to the opinion expressed by 43% of the subjects, online content will be the main source of knowledge in 2030, surpassing school (29%), students' environment (13%) or cultural institutions (3%).

'The teachers' role will be even more relevant. They will have to show their students that they have to be critical of information, that not everything they find on the internet is correct, that they have to select and go to the most reliable sources', says Ismael Sanz, the director of a national institute of evaluation (Instituto Nacional de Evaluación Educativa), subordinated to the Ministry of Education of Spain. Ismael Sanz believes that "flipped classroom" type methodologies will be reinforced. "This system will allow part of the work to be done at home and each student will follow his own pace."

Students will change their profile over the next 30 years. There will be "a student with far more possibilities of access to knowledge sources, with a more universal and less local mentality, an indisputable protagonist of learning", as defined by Núria Miró, Principal of the Montserrat College in Barcelona and one of the 15,000 experts participating in WISE. According to the opinion expressed by 83% of those consulted, the curriculum will have more personalized content per student. This will have consequences in the hierarchical relationship with the teacher. It obviously "erases" the line of separation between those who teach and those who are taught, argues Núria Miró.

César García, a professor at Central Washington University, believes that students will be "more demanding." 'Teachers will have to explain a lot better how they give the marks.The Spanish experts claim that the border between college and home will be erased and learning will not be limited to a few hours and a few concrete places. 'Email and other communication tools are expanding a lot today. We, teachers, already have many conversations with our students at 20:00. I don't know if the situation of having courses from 10:00 to 11.50 will still continue, "García says.

According to Professor Antonio Cabrales, 'almost everything will mean homework'. The schedule will be freer and there will be more individual tasks. "It is necessary to raise the pupils' need to continue documenting, informing themselves, sharing their knowledge and to awaken their taste for research," Nuria Miró appreciates

All these will affect the personal relationships between students. According to César García, "the gang" concept is over and children will be more solitary than before." "Twenty years ago, kids used to spend more time on the street, without much supervision. Now their social life is more limited, they stay in longer, connect online and have their agenda. Their parents take them to chess session at 17:00, to English lesson at 18:00... That's why I think social relationships will be increasing in the school of the future.

Curriculum is another aspect addressed by this survey. According to the opinion expressed by 76% of the subjects, the personal or practical skills will be more appreciated than academic knowledge. The so-called soft skills - such as the ability to speak in public, to work in a team, to adapt to unforeseen situations - are increasingly important in the professional environment, but Spanish experts consider that they cannot replace good academic training. 'It is said that this is the best trained generation, but Spanish students do not know what baroque is and have never read Cervantes' work. If we want to form technocrats, they will first have the skills and their knowledge will be reduced, "says Felipe de Vicente, president of the ANCABA (Asociación Nacional de Catedráticos de Instituto).

Francisco López Rupérez, chair of a body in which sectors are directly linked to the sphere of education (Consejo Escolar del Estado), believes that, at the time of the assessment, although professional certifications are becoming more valuable on the labor market, they will not replace academic titles, in particular those issued by prestigious universities'.

Learning will take place throughout the entire lifespan and will not be limited to compulsory training and university, estimates 90% of the subjects. This does not mean that education will be free. On the contrary: 70% believe that public administration will cease to be the main source of funding. However, '*public education has a key role in equal opportunities. I do not understand how it could disappear*, "says Ismael Sanz.

WISE's opinion poll does not refer to classrooms, but their design will change a lot in the next few years, according to Spanish experts advised by El Mundo. 'Architecture also educates,' recalls Núria Miró. César

García believes that an informatics laboratory full of computers is no longer 'meaningful', but it is necessary to arrange a convenient space with plenty of tablet sockets and good Wi-Fi should be set up. Large databases - Big Data - will be very useful tools, according to most of those interviewed in WISE survey. However, it is "absolutely necessary" for the new generations to learn at school to interpret and use these data, Miró recalls. Some Spanish experts have estimated that new materials will emerge to understand all these, such as programming and web design.

There will be a global language in education, English, estimate 46% of the interviewees. At the same time, 35% believe that their native or national language will continue being in use, and 19% think that pupils will learn in their regional language. Francisco López Rupérez argues that the mother tongue 'will continue to play a relevant role as a learning vehicle' in an increasingly multilingual school context. "I very much doubt that it would become generalized," argues Antonio Cabrales, who considers that a "world elite" with sufficient English language knowledge will possibly exist, but for a family with a low level of education, the costs will be high.

The need for a new type of education

Ever since the beginning of this millennium, lifelong learning has been harnessed to serve economic means and growth in the European stage and beyond. The aim of educational "demand" aim was thought to be an investment like any other. In many countries all over the world, as Benerjee and Duflo (2011) sees it, this approach has motivated parents to pay for their children to have an education in private schools. This is because that choice is regarded as an investment that will guarantee better earnings for their heirs.

Right now there is an ever-increasing need to create visions and content for curriculum, which could help educators to teach students flexible competences useful for their entire careers. These should be competences with which the students will be able to navigate safely in a future working life, still unknown. The challenge to develop effectively schools that should respond to constant changes and reforms of the world need sensible emergent strategies designed by the respective countries. In other words, the basis of the national education systems ought to be built in realistic visions and goals, which may be turned into pedagogical practices, supporting the learning of flexible and useful competences. These kind of principles have been behind some of the latest international reports and projects like "Strategic Framework – Education & Training

2020" by European Commission (2013), "Future of Education and Skills: Education 2030" (Summary of Lisbon May 2017 OECD 2030 Learning Framework Meeting).

However, there are advocates who approach teaching and the future competences needed from a very different view. Instead of trying to reform education systems and their curricula, a transform trend in education is the best if not the only way to prepare the students with competencies needed for the coming decades. For instance Sir Ken Robinson (2015) [4] has this to say:

"Education doesn't happen in the committee rooms of legislatures or in the rhetoric of politicians. It is what goes between learners and teachers in actual schools." (Robinson 2015, xvii)

Then he goes on and argues in the following way: *"The conventional curriculum is based on separate subjects, which are thought to be self-evidently important. That's one of the problems. The proper starting point is to ask what students should know and be able to do as a result of their education. This question has led to various attempts to reframe the curriculum in terms of competences. I think this is a good idea.* (Ibid. 135)

According to Robinson (2015) the aim of each important competence that schools should facilitate should help students to succeed in their lives. Those are skills of citizenship, which have to be carefully learned and practiced. His list of the core competences is:

Curiosity Creativity Criticism Communication Collaboration Compassion Composure Citizenship

Sahlberg's thinking goes along with that of Robinson. He argues in this way:

"Unless teachers are educated and trained in different ways, the quality of schooling is not likely to get any better.[5]

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[4] Sir Ken Robinson, Feb. 2015, *Revolutionizing Education from the Ground Up.* Sir Ken's new book Creative Schools: The Grassroots Revolution That's Transforming Education is scheduled to released April 21, 2015 and is available for preorder now.

[5] Pasi Sahlberg, *Hard Questions Global Educational Change. Policies, Practices and The Future of Education* (2016) Pasi Sahlberg is a Finnish educator, author and scholar. He has worked as a schoolteacher, teacher educator, researcher and policy advisor in Finland and has studied education systems and reforms around the world. In his long career in education he has served the World Bank in Washington, DC, the European Commission in Torino, Italy, and the OECD as education specialist. He currently advises several governments about education policies and reforms. He is author of best-seller book "Finnish Lessons 2.0: What can the world learn from educational change in Finland" and

Sahlberg thinks that communities have to come up with schools where not only students but also teachers are learning. In modern times the rapid change means that teachers have to keep up with the pace by having enough possibilities for in-service training, peer coaching and other means of learning. Both Robinson and Sahlberg agree that the focus of schooling should be on students' needs and learning, not in the results of international test rankings. It is unfortunate that the value of statistics through international assessments (e.g. PISA) or test based national big data is in the centre of educational discussions. Whereas it should be now a perfect time to realize the importance of so called small data, which is at its best supporting the learning of individual students. It is also dealing with the teaching and experiences of individual teachers and searching opinions of principals and parents. This approach tries to turn the trend from big data to small data. In other words neither business methods nor market forces can improve education or develop the learning of students.

Sahlberg wants to find humanity in the acquired data. He reveals his commitment to small data in this statement:

> *"It is becoming evident that big data won't be able to fix education systems. Decision makers need to gain better understanding of what good teaching is and how it leads to better learning in schools. This is where information about details, relationships, and narratives in schools becomes important…. Education systems in many parts of the world today are becoming 'governed by numbers' that originate from various kind of studies, surveys, inspections, and standardized measurements about systems performance. To properly understand what makes students learn well or why some students struggle with learning, we also need small data that teachers and principals collect using different means in their school day."*[6]

The serious downside of relying on statistics and excessive analysis – big data - is only that the world easily deteriorates. The process may end up bringing about a phenomenon called 'paralysis-through-analysis'. The

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has published numerous academic and professional articles and book chapters about education. He has served Finnish Government and the University of Helsinki in several senior and leadership positions, more recently as a former Director General at the Finland's Ministry of Education and Culture. He was a visiting Professor of Practice at Harvard University from 2014 to 2016 and currently teaches and speaks around the world about education, innovation and the future of schooling. He is a chair of the Global Education Advisory Board for the Open Society Foundations and member of the Board of Directors of the University of Oulu.

[6] *Ibidem.*

majority of people in Europe are committed to quality education for the new generations. The hope is that education will reach all individuals; girls and boys. It is also obvious that individuals have different talents, advantages, handicaps, problems, interests, aspirations and so on. All people are different and unique. Therefore, the different teaching methods, learning materials and technologies have to be tailored to individual differences. All this is possible once it is clear that education and schools are meant for students to learn. The fact is that big data as such does not help any student to learn. Small data does because it is about contextual origin and may also deal with concrete situations and individual students. This means that in the future the development of learning and teaching should be increasingly founded upon a case-by-case and context-by-context approach. In the midst of test-based, standardized and efficiency centred view of education policies there are some slight indications that somewhere in the horizon there looms a more humanistic approach to education.[7] In the midst of test-based, standardized and efficiency centred view of education policies there are some slight indications that somewhere in the horizon there looms a more humanistic approach to education. This is an education trend, which hopefully turns the core attention back to the basics, which is quality learning and teaching of each individual student. "Education through and for the human beings can be a new type of education that takes into account all its aspects."[8] "In our current society, characterized by economic, political and cultural mobility, the new educational order can be conceived by the joint effort of the theoretical pedagogical movement and educational praxis".[9] We need an open education, based on children's personal choices and inclinations, that is, a personalized education. Education for the future must be dynamic, capable of keeping up with the fast pace of change in everyday life. Children are in a natural process of

[7] Jukka Kangaslathi, *Investment in Education, Investment in the Future. The Finnish model and its applicability in Romania,* Bucharest, Lumina Evangheliei Publishing House, 2012. This book was launched on the 13th November 2012, within DCCU, by means of the Faculty of Educational Sciences, the event being coordinated by the Dean of the Faculty, Prof. PhD. Gabriela Pohoață. The book launch was attended by Prof. PhD. Jukka Kangaslathi, Ulla Vaisto, the ambassador of Finland in Bucharest, the Rector of DCCU, Prof. PhD. Corina Dumitrescu.

[8] G. Pohoață, *Towards a New Philosophy of Education*, Euromentor, vol.I, no.1/2010, p.7.

[9] Idem, *Considerations on Axiological Education in Globalization*, in Euromentor, vol. IV, no.2/2013, p.28.

exploration and self-discovery, today they want something, tomorrow they want something else and it is only natural for them to look for their purpose in life. For learners to wish to learn, information should not be transmitted standardized but tailored for each pupil, taking into account his / her abilities and skills. This is the essence of one of the most interesting theories that deserves the attention of teachers and trainers: The Theory of Multiple Intelligences, developed by Professor Howard Gardner of Harvard University.[10]. Intelligence, as a result of some processes of accumulating, analyzing, combining, comparing information, and the way in which we use it in context in order to overcome some problems, can actually be structured into several types of intelligence. The 8 types outlined by Howard Gardner are: linguistic intelligence, logical-mathematical intelligence, musical intelligence, spatial intelligence, naturalistic intelligence, bodily-kinesthetic intelligence, intrapersonal and interpersonal intelligence. In fact, Howard Gardner tells us that each of us responds better to certain stimuli, and learning is made easier by taking into account the intelligences we have been endowed with. People have two or three predominantly intelligent types, and their discovery can facilitate lifelong learning. The differences between us can be capitalized and education for the future can move from standardization to adaptation.

The children who are in the first grade today will start their professional careers in 2030s. In 2070s they will be reaching their retirement age. In the meantime they will play a key role in the development and wellbeing of their societies. How is it possible to

[10] didactica.genesis.ro/*teoria-inteligențelor-multiple-pentru-altfel-abordare-învățării:* Learning theories have been influenced by the preoccupations concerning the concept of intelligence, thus becoming more comprehensive. Among the modern psychological theories of intelligence that have remarkable educational applications we find the *Theory of Multiple Intelligences*, developed by Howard Gardner as a modern perspective in addressing differentiated training strategies. Following an extensive research, Dr. Howard Gardner, professor of cognitive sciences, education and psychology at Harvard University and of neurology at the Massachusetts Medical School in the US, concluded that there is not only one type of intelligence, but there are several. He has used his study of adults and children to find out more about the way in which people learn. Dr. Gardner realized that they seemed to learn and demonstrate their intelligence in a variety of ways. He also noticed that different parts of the brain seemed to be related to various ways of demonstrating one's intelligence. He proposed a theory to explain the wide range of abilities he notices. Thus, he named his idea, the Theory of Multiple Intelligences.

educate and teach these children to learn those kinds of skills and competences, which will serve them during their span of life? What are the skills and competences which are needed during all the coming decades? For educators these are among the many critical questions to be asked today when planning the aims, goals and processes of learning, teaching, curricula and national educational systems. The fact is that it is impossible to predict what the world will look like in the 2020s, not to mention during the 2070s. It is also beyond man's comprehension to understand what are the professions which will disappear during the coming decades and which kind of jobs will replace them. Globalization calls for **a new philosophy of education**, **rethinking education** in relation to a complex axiological reference, an inter and trans-disciplinary approach to content, a primacy of humanistic values that give man lofty aspirations, elevation and moral eminence.

REFERENCES

Asi sera la escuela en 2030,
www.elmundo.es/espana/2014/10/21.html

Gardner, Haward, *Theory of Multiple Intelligences* in
didactica.genesis.ro/*teoria-inteligențelor-multiple-pentru-altfel-abordare-învățării.*

Kangaslathi, Jukka, (2012), *Investment in Education, Investment in the Future. The Finnish model and its applicability in Romania,* Bucharest, Lumina Evangheliei Publishing House.

Pohoață, Gabriela, *A School for the Future, 2013,* Euromentor (Studies on Education), vol. IV, no.2.

Pohoață, Gabriela, (2013), *Considerations on Axiological Education in Globalization*, in Euromentor, vol. IV/2.

Pohoață, Gabriela, (2010), *Towards a New Philosophy of Education*, Euromentor, vol. I, no.1.

Robinson, Ken, (2015), *Revolutionizing Education from the Ground Up;* Sir Ken's new book Creative Schools: The Grassroots Revolution That's Transforming Education is scheduled to released April 21, 2015.

LANGUAGE BIOPROGRAMME HYPOTHESIS: EMERGENCE OF PIDGINS AND CREOLES AND THE EVOLUTION OF LANGUAGE

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Abstract: *The phenomena of pidgin and creole languages have turned out to be significant fertile grounds for research and speculation on the constitution, evolution, and acquisition of language. The purpose of this paper is to examine Derek Bickerton's Language Bioprogramme Hypothesis specifically in the context of the debate between nativist and non-nativist theories on the emergence of language.*

Keywords: *Bickerton, Chomsky, Creoles, Language Acquisition, Language Bioprogramme Hypothesis, Linguistic Innateness, Non-Nativism, Pidgins.*

Noam Chomsky and Jerry Fodor are generally recognized as the contemporary preeminent standard-bearers of nativist doctrine of language origin and acquisition adducing arguments – both of *a posteriori* and *a priori* – primarily with the negative intent that if one goes along with the standard non-nativist assumptions about the mind, then language acquisition should not be possible. Therefore, one should reject these assumptions. But, the arguments are strongly suggestive of a positive position as well. If the problem is that children faced with the language acquisition task simply do not have enough information to choose reliably the correct grammar for their language on the basis of the data they are presented with, it would seem that the obvious solution is to give them some more information! Similarly, if the problem is that children faced with too many alternative hypotheses, and thus cannot

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reliably settle on the right one, the solution is to restrict somehow the range of hypotheses from which they are forced to select!

Nativists, generally, take one or both of these strategies, and either suppose that children have more knowledge about language than non-nativists allow from the start, or that the hypotheses they are willing to entertain are strongly constrained in virtue of the structure of the language acquisition mechanism or the principles governing it. Moreover, the *natural* suggestion, given the above, seem to be that we should suppose as much information as possible to be built in to the language acquisition mechanism, compatible with the observed diversity amongst natural languages. "The Problem" of nativism then becomes the problem of determining how children acquire languages despite the fact that one cannot just build them in completely, since natural languages vary. The solution then is to build knowledge of what is common to all natural languages in to the language acquisition mechanism in some form or other, and then to constrain the allowable variation beyond this as tightly as possible – given the observed variation among natural languages – through further innate knowledge and constraints on entertainable hypotheses.

This also conveniently connects to another consideration which has seemingly turned out to be a thorn in the flesh of nativists: namely, how to reconcile *nativism* with *evolution*. Steven Pinker crystallises the problem thus:

… a uniquely human language instinct seems to be incompatible with the modern Darwinian theory of evolution, in which complex biological systems arise by the gradual accumulation over generations of random genetic mutations that enhance reproductive success. Either there is no specific human language instinct or it must have evolved by other means[1].

Yet, as a nativist himself, Pinker is optimistic that one does not have to make such a choice, and despite a lack of an evolutionary account of language 'the principal explanation is the same as for any other complex instinct or organ: Darwinian natural selection.'[2]

It is at this juncture that the phenomena of pidgin and creole languages in terms of their emergence and evolution become interesting

[1] Pinker, 'Evolutionary Biology and the Evolution of Language', *in The Inheritance and Innateness of Grammars*, ed. by M. Gopnik, Oxford: Oxford University Press, 1997, p. 182.

[2] ibid.

and relevant as they may provide further data and insights from the *natural* course of human history on the nature of language and its acquisition in the debate between nativists and non-nativists. The important idea in the specific argument for linguistic nativism from the emergence and evolution of pidgin and creole languages is that by manipulating the conditions of language acquisition, one can learn about the nature of the process and find out what children bring to language acquisition. Indeed, children exposed to pidgin "languages" provide cases of just the sort of experiment that, for example, Nelson Goodman envisaged and demanded if the hypothesis about the innateness of language is going to be subject to empirical testing and verifiability. (Goodman, 1971) Unfortunately, in most of the recent pidgin language settings, the initial unplanned experiment took place through the unconscionable act of slavery in the course of modern human history.

In broad outline, the argument for language innateness from the emergence and evolution of pidgin and creole languages runs thus: a *pidgin* is a makeshift amalgam of several natural languages used for communication among different groups of speakers where no single language is dominant. Pidgins are not standardised and lack many features of standard natural languages. In fact, different speakers speak rather different versions of the pidgin. It turns out that like the deaf isolates exposed only to their parents' primitive sign system,[3] children exposed only to pidgins reject them in favour of new languages of their own creation, *viz*. a *creole*. The creole which children create is far richer and more systematic than the pidgin on which it is "based" and is uniform across the community. Creoles are real natural languages which can then be passed on to the next generation of speakers intact like other natural languages. Interestingly, this transformation from pidgin to creole seems to take place in a single generation, since the children exposed to this non-natural language do not learn that language, but instead invent their own far richer and more systematic language based on it. And, the contention is that this phenomenon remains inexplicable unless one appeals to some sort of linguistic nativism for an adequate explanation.

The most prominent proponent of the view that creoles are special or atypical cases is Derek Bickerton who has been arguing for some time that a common set of features of a number of creoles, which basically had no

[3] For further details on the case of deaf isolates in the context of linguistic nativism, see Jafari, 2015.

concrete contact with one another, reflects an innate, biological programme for language: thus, the *Language Bioprogramme Hypothesis*. Indeed, Robert Eklund goes so far as describing Bickerton's hypothesis as one 'of the more fascinating and far-going hypotheses put forth within the field of linguistics the last couple of decades'. (Eklund, 1996, p.2)

Briefly, Bickerton's argument is that the features of creole languages were not present in the highly variable second language versions of the *superstrate*, *i.e*. the colonisers' language, to which in plantation societies they were exposed, and that they were thus obliged to fall back on their "bioprogramme". In each case of creole genesis, there was no fully developed pre-existing pidgin containing the features observable in the creole, and these features did not come from various *substrate* languages, *i.e*. languages of the colonised and slaves, as no one of them contains all the characteristics. Moreover, the mixing of features from several languages is unlikely as a satisfactory explanation.

In detail, Bickerton starts by noting that creoles are derived from pidgins and defines the two sets of languages thus:

A pidgin is an auxiliary language that arises when speakers of several mutually unintelligible languages are in close contact; by definition, it has no native speakers. A creole comes into existence when children acquire a pidgin as their native language … (Bickerton, 1984, p. 173)

Then, he observes that

It has long been recognized by creolists that creoles somehow "expand" and render more complex the pidgin grammar that preceded them (Hall 1966), but until recently there was no clear picture of what constituted this expansion, and no indication as to how the expansion was achieved. (Bickerton, 1984, p. 173)

In response to this explanatory deficiency, Bickerton proffers his tripartite hypothesis as follows:

1. The innovative aspects of creole grammar are inventions on the part of the first generation of children who have a pidgin as their linguistic input, rather than features transmitted from pre-existing languages.
2. Such inventions show a degree of similarity, across wide variations in linguistic background, that is too great to be attributed to chance.
3. The most cogent explanation of this similarity is that it derives from the structure of a species-specific programme for language,

> genetically coded and expressed, in ways still largely mysterious, in the structures and modes of operation of the human brain. (Bickerton, 1984)

It is, however, important to note that Bickerton portrays the hypothesis against a larger canvass than just the case of creole languages. In the first delineation of the hypothesis in his *Roots of Language*, he ambitiously presents the issue of creoles against the backdrop of three questions: namely,

1) How did creole languages originate?
2) How do children acquire language?
3) How did human language originate? (Bickerton, 1981, p. xi)

In doing so, Bickerton attempts to point out that answers to the first and second questions are prerequisites for answering the third one, while traditionally there has been a tendency to treat the three fields encompassed by the above questions as unrelated. Yet, in order to provide answers to each of them, one needs to look into the other fields to obtain sufficient knowledge.

In the process of marshalling evidence for his hypothesis, Bickerton suggests a twofold modification to the traditional definition of a creole: *viz.* a creole (i) must be created out of a pidgin that had not existed for more than a generation, and (ii) arose in a population where no more than 20% spoke the dominant colonial language and the remaining 80% spoke several other languages. The restriction is justified on the grounds that:

By limiting our research area in this way, it becomes possible to concentrate on those situations in which the human linguistic capacity is stretched to the uttermost. (Bickerton, 1981, p. 4)

The underlying rationale here is that children growing up in such a community face a situation very different from that of the normal child, since '*every existing theory of acquisition is based on the presupposition that there is always and everywhere an adequate language to be acquired*.' (Bickerton, 1981, p. 5; original emphasis)

Bickerton follows up his reasoning by indicating that in certain slave communities, there existed no fully-fledged language, but only, rather primitive pidgins for the child to be exposed to. Thus, the child was not exposed to a language the way most children are, and therefore had to *create* its own language. This, in turn, reveals what the basis of human language may look like. This means that is one can identify creoles that

arose in communities, adhering to the foregoing modified definition, and compare structural and other properties of these creoles, one may gain a better understanding of human language apparatus in general and, by the same extension, of the origins of language.

Bickerton, then, claims that there is at least one such creole: namely, Hawaiian Creole English (HCE) that arose out of Hawaiian Pidgin English (HPE) in a very short time – less than a generation according to him. Much of Bickerton's argumentation is predictably predicted on the observations of these two languages, and by comparing them, he had drawn conclusions as to the creativeness of the human language apparatus.

In this particular case, Bickerton surmises that *creolisation* – the process that turns a pidgin into a creole – occurred around 1910 and at the very latest 1920. It is claimed that there were considerable differences among the HPE speakers depending upon the time of arrival at Hawaii, and also depending upon what first-language they had; for instance, they could be speaking Japanese, Filipino or another language. Considering basic word order, for example, Japanese speakers varied between 30 to 60 percent of "SOV" sentences, whereas Filipinos exhibited between 15 and 50 percent of "VS" sentences where "S" was a full noun rather than a pronoun. This, as well as other similar observations, leads Bickerton to conclude that: a child in Hawaii who sought to learn basic word order by inductive processes alone would have ended up in a state of total bewilderment. (Bickerton, 1981, p. 12)

It should also be noted that the problem the HPE presents learners with is not only limited to the difficulty that there were no clear or consistent rules for learning it, but, more significantly, several features of natural languages were largely or completely missing from it. The importance of the latter lies in the fact that such a condition further clutters the channels of communication. Bickerton cites the following salient examples of missing features:

- consistent marking of tense, aspect and modality;
- relative clauses;
- movement rules;
- embedded complements; and,
- articles.

And, what is interesting in this context is that though HPE sentences frequently consist of nouns and verbs particularly stringed together, HCE, like all native languages, has the above features.

It is at this juncture that the all-important question of the genesis of these features in HCE in particular, and creoles in general, arises. One course of explanation is to attribute the presence of these properties in HCE to the first language of the children's parents. However, Bickerton rules this possibility out because

Whatever processes were involved, the erasure of group differences in that generation was complete. Even other locally-born persons cannot determine the ethnic background of an HCE speaker by his speech alone, although the same persons can readily identify that of an HPE speaker by listening to him for a few seconds. (Bickerton, 1981, p. 15)

This would imply that while HPE variants are influenced by the speakers' native languages, the same could not be said of HCE. This further entails that the grammatical complexification in HCE would have another source than the respective native languages of the parents to the children who first learned HPE as their first language which was subsequently turned into HCE.

To bolster his argument further, Bickerton looks at the differences between HPE and HCE in terms of the following features:

- movement rules;
- articles;
- verbal auxiliaries;
- *for-to* complementisation; and,
- relativisation and pronoun-copying.

Bickerton contends that a comparison between HPE and HCE in terms of the above features show that none of the differences in these fields can be explained by looking at the substrate language, *i.e*. the native languages of the slaves, as HCE forms often do not adhere to any of the existing native languages of HPE speakers. Specifically, his remarks on, for example, articles, specificity, and sentential complements are respectively:

HCE speakers, however, follow neither the under-generalization of the Japanese speaker nor the over-generalization of the Filipino speaker. (Bickerton, 1981, p.23)

We must conclude, as with word order, that the zero marking of nonspecifics was an HCE "invention," and one firmly rooted enough to override counterevidence from other languages known to its speaker. (Bickerton, 1981, p. 26)

In this area … HCE has made two distinct innovations, one semantic, one syntactic. The syntactic innovation consisted of taking *fo* and *go*, a preposition and an imperative marker, respectively, and using them to introduce embedded sentences, which were themselves an innovation. … the semantic innovation – distinguishing realized from unrealised complements – was completely without precedent in HPE, in English, or in any of the substrate languages. (Bickerton, 1981, p.33)

The question still remains as to the origin of these innovative aspects of HCE. Logically speaking, the phenomena could be handled in terms of two rival explanations: it could be hypothesised that they are produced either by a *general problem-solving device* or by the operation of *innate faculties genetically programmed*.[4] But, how could one adjudicate between them? As Bickerton points out, one way of adjudicating between the alternatives is to work out each account's predictions about the general nature of creoles and assess them on that basis. Accordingly,

If some general problem-solving device were at work, we would not expect that in every different circumstance it would reach the same set of conclusions. … However, if all creoles could be shown to exhibit an identity far beyond the scope of chance, this would constitute strong evidence that some genetic program common to all members of the species was decisively shaping the result. (Bickerton, 1981, p. 42)

[4] Richard Cromer, however, objects that there is a further sub- or cross-distinction here that has eluded Bickerton thus leading him to a false bifurcation in the set of explanatory alternatives. He points out that in the child-language literature there are two separate hypotheses that are often treated together as if they were identical. The first is that children treat language as a structured system, and the second, and quite separate, is that the observed structures arise because of language-specific innate programmes. Cromer argues that, *contra* Bickerton, 'evidence for treating language structurally need not necessarily imply any specifically linguistic innate processes, but would be compatible merely with a device to treat distinctive classes of input (including classes of nonlinguistic input) in a structured fashion.' (Cromer, 1984, p. 193) This leads him to conclude that after all language could still be an outcome of a general and ongoing cognitive processing. In response, Bickerton remarks that the advocates of general-problem solving approach 'betrayed no realization of the possibility that cognition itself might turn out to consist of a series of narrow, task-specific modules akin to that, or those, devoted exclusively to language.' (Bickerton, 1984, p. 216)

On this basis, Bickerton embarks upon a comparative study of some unrelated creole languages, where by a process of elimination Bickerton opts for the latter possibility. However, as Bickerton himself admits, there are a number of methodological pitfalls in this exercise that should be borne in mind. Some of their more illustrative cases are like:

- Creoles, unlike many non-creoles, lack comprehensive descriptive grammars, and that, even if they are described in grammars, the grammars stop where the syntax gets interesting.
- Creoles have been given grammatical descriptions that have turned out to be flawed and misleading as the result of incorrect data or wrong analyses.
- Creoles are not *ab ovo* creations. They are not only the results of their preceding pidgins but are also influenced by both substrate and superstrate languages which render the interpretation of data rather precarious.
- Creoles, like all other languages irrespective of ancestry, are subject to *internal change* as a result of which it becomes difficult to form sensible estimates and predictions about their grammatical characteristics.
- Creoles could undergo a type of contact-induced change called *decreolisation* whereby a creole renews or maintains contact with its superstrate language. This presents creolists with additional obstacles in their attempts to decide the origin or basis of a given feature.

Notwithstanding these methodological limitations and 'an inexhaustible source of alibis', Bickerton sets forth to compare an array of different creoles in an attempt to establish their linguistic similarities. (Bickerton, 1981, pp. 51-72; 1984, pp. 174-182) The following is a brief summary of Bickerton's findings.

Movement Rules

Bickerton points out that focused constituents are moved to sentence-initial position in HCE, where he subsequently attempts to evince that the same phenomenon is true of all other creoles. Against the background that natural, non-creole languages exhibit a wide variety of focusing means, none of which occur in creoles, Bickerton takes this as a support for his hypothesis that there must be some innateness at work in the process of creolisation.

Articles

In the case of articles, Bickerton states that there is a well-nigh complete correspondence between HCE and all other creoles. All creoles apparently have the same set of articles: a definite article for presupposed-specific "NPs"; an indefinite article for asserted-specific "NPs"; and, zero for non-specific "NPs". Again, this occurs irrespective of what article system the superstrate or substrate languages had.

Tense-Modality-Aspect (TMA) Systems

It is claimed that most creoles express tense, modality and aspect with three preverbal free morphemes, and if they co-occur, they occur in the TMA order. In addition, the literal meaning of the particles is the very same in several creoles: the tense particle indicates anterior; the modality particle expresses irrealis; and, the aspect marker expresses non-punctual.

Realised and Unrealised Complements

All data available to Bickerton show 'an identical structure to that of HCE, *i.e.*, complementizers which are selected by the semantics of the embedded S.' (Bickerton, 1981, p. 59) However, he is cautious in his claim due to the lack of sufficient data.

Relativisation and Subject-Copying

In the case of relativisation, there are some differences between HCE and other creoles, since, unlike HCE, most creoles have relative pronouns. The dissimilarity is explained away in terms of the fact that HCE has not had the time to obtain them. Bickerton tries to marshal support for this explanation by pointing out that among the creoles which possess relative pronouns there exist conservative dialects in which these are deletable in subject position. On subject-copying, despite conceding substantial differences between HCE and other creoles, Bickerton states that there are at least two other creoles that resemble HCE in this respect.

Negation

It is claimed that creoles generally negate nondefinite subjects, nondefinite "VPs" and verbs in negative sentences. HCE exhibits, albeit weakly, some general tendencies in that direction.

Existential and Possessive

The majority of creoles are observed to use the same lexical item to denote existential and possessives, and HCE fully follows this pattern. Also, Bickerton remarks that this in never the case in the corresponding superstrate languages.

Copula

In creoles, adjectives act as surface verbs and as such they do not require copulas. The pattern seems to be repeated across practically all creoles.

Adjectives as Verbs

It is noted that in several creoles the adjectives form a subcategory of stative verbs, whereupon Bickerton comments that this 'resemblance between creoles so widely separated in location and origin is quite striking. Moreover, I know of no creole where an alternative analysis of adjectives would be required.' (Bickerton, 1981, p. 69)

Questions

All creoles have the same syntactic structure in questions as in statements, and if question-particles are used, they are always located at the end of the sentence and are optional.

Question Words

If a question corresponds to a WH-question in English, the WH-word is placed before the declarative form of the sentence. The question words are most often directly borrowed from the superstrate language, but the general pattern is so clear that Bickerton predicts that if that were not the case, the creole would develop a similar set of forms.

Passive Equivalents

Interestingly, such constructions are extremely rare in creoles, and those that exist are either marginal to the language or relatively recent superstrate adoptions, or both. Creoles seem to model themselves on a pattern described as "rampant lexical diathesis".

On the bases of the above cases,[5] Bickerton sums up the discussion as follows:

The degree of identity is quite remarkable when we consider that HCE shares none of the substratum languages of the other creoles – expect that a superstrate language for some creoles was a substrate language in HCE, i.e., Portuguese![6]… The only thing HCE seems to have in common with other creoles (apart from the similar social conditions that gave birth to them) is that all have European superstrates … (Bickerton, 1981, pp. 72-73)

By emphasising the similarities between creoles and ruling out explanations couched in terms of substrate languages, Bickerton further notes that some of the *typical* creole features also cannot be found in the superstrate languages either. Indeed, 'the more we strip creoles of their more recent developments, the more we factor out superficial and accidental features, the greater are the similarities that reveal themselves.' (Bickerton, 1981, p. 132) In pursuit of a more adequate explanation, Bickerton thus feels compelled to hypothesise an innate language bioprogramme.

It may be recalled that in Bickerton's view there are three interconnected questions where an answer to the first should provide an answer to second and they jointly should furnish an account for the third question. They were: (1) How did creole languages originate?; (2) How do children acquire language?; and, (3) How did human language originate? Now, having outlined his account of the genesis of creole languages, he proposes to answer the second question on that basis. Accordingly, Bickerton hypothesises that features *close* to the bioprogramme, *viz. typical* creole characteristics, should be easier for children to acquire.

To substantiate his claim, Bickerton sets to collect evidence from child acquisition studies in terms of what features children tend to over-

[5] In his somewhat celebrated 1984 target article in the *Behavioral and Brain Sciences,* Bickerton heavily manoeuvres on *verb serialisation* – a typologically universally marked feature in the Jakobsonian sense – as another linguistic feature common to creoles. (Eklund, 1996)

[6] This is an allusion to an account about the origin of creoles known as the *Monogenesis Hypothesis*. The hypothesis held sway from the birth of creolistics as a field in the 1950's until the mid-1970's and attributed the similarities among Creoles to their all having a common historical origin in a Portuguese-based pidgin spread around the world by Portuguese traders during their heyday in the fifteenth and sixteenth centuries. It maintained that this pidgin was relexified with words from English, French, Spanish or Dutch as it came into contact with these languages. (Footnote added)

generalise, under-generalise, find easy to learn and experience difficulty in acquiring. With a few exceptions, he states that the findings of most researches on acquisition go towards vindicating his *Language Bioprogramme Hypothesis*. According to Bickerton, there are four main areas where acquisition and creoles appear to dovetail. They are:

(I) the distinction between *specific* and *non-specific*, proven by the universality amongst creoles of zero *versus* indefinite articles, and the errorless acquisition in English;

(II) the distinction between *state* and *process*, where creoles exhibit skewed verbal systems and distribution of nonpunctual, juxtaposed to the errorless acquisition of English "*-ing*" forms, and errorful acquisition of Turkish "*-dI*" and "*-mIs*" forms;

(III) the distinction between *punctual* and *non-punctual*, where the latter exhibit universal marking in creoles,[7] compared to errorless acquisition of past tenses in French and Italian; and,

(IV) the distinction between *causativ*e and *non-causative*, where "NiV/NVNi" alteration in creoles is compared to errorless acquisition of causative marking in Turkish and Kaluli.

Intrigued by Bickerton's claims about the parallelism between the acquisition of ordinary and creole languages by children, Gary Cziko conducted two independent studies on the acquisition evaluation of the bioprogramme hypothesis. (Cziko, 1986 & 1989) In both works, Cziko gathers a comprehensive assemblage of papers addressing one of the features of the bioprogramme, and examines whether they support or cast doubt upon the early acquisition of that feature by children. The first review treats the specific/non-specific distinction in articles, and the second one follows with a study of the state/process and punctual/non-punctual dichotomies in verbs. Overall, Cziko finds that the works consulted indeed support the notion that children were particularly sensitive to these features during acquisition.[8] He states that in some, if

[7] In his 'Beyond Roots: The Five-Year Test', Bickerton, however, retracts his claim that the distinction between punctual and non-punctual is one of the earliest and most fundamental forms of predicate modification. (Bickerton, 1986)

[8] Valerie Youssef, however, does not share Cziko's circumspect enthusiasm and believes that the idea of a bioprogramme of language 'requires the most meticulous investigation of both the origins of Creole languages and language-acquisition phenomena.' (Youssef, 1990, p. 234) She thinks that 'contrary to Bickerton's claim language acquisition does not occur in a linguistic vacuum.' (Youssef, 1988, p. 457)

not many, cases, they made mistakes interpretable as resulting from the analysis of languages according to the universal grammar despite that feature's absence from the target language. However, with a note of caution and reservation, Cziko concludes that:

There is no doubt a great deal more to child language acquisition than that which is potentially explainable by the LBH. Nonetheless, this hypothesis has been found to be of considerable value in interpreting the findings of the studies of child article acquisition reviewed here; and it promises to be useful as well in discovering other universal features of child language acquisition. (Cziko, 1986, p. 897)

The natural progression of the discussion as set out by Bickerton would require one now to consider the third question, *i.e.* "How did human language originate?", in terms of the answers provided for the foregoing first and second questions. In a nutshell, Bickerton proposes that the bioprogramme represents, at least, the syntactical component of the "protolanguage" as the source in early hominids of the more complex languages which emerged later.[9] However, due to the shortage of space and the highly speculative nature of most suggestions, including Bickerton's, about the origin of language, I would like to skip the issue except by raising the obvious question: if Bickerton is right in his claim that the "first language" looked very much like bioprogramme-oriented creoles, why is there so much complexity and variation among modern languages?[10]

Hitherto, in this chapter, I have been primarily concerned with the exposition of the *Language Bioprogramme Hypothesis*, but what about its evaluation? Like all other hypotheses, Bickerton's has not gone unscathed and, in some ways, has had more than its fair share of criticisms. The critical reactions could be classified, in line with the theme of this work, into two broad categories: namely, nativist and non-nativist disputations.

Interestingly, Bickerton himself has been responsible for raising the wrath of his fellow-nativists, in particular the Chomskyan coteries.[11] To

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[9] Mary Black and Glenn Gilbert offer a conveniently concise overview of Bickerton's phylogenesis hypothesis in their contribution, 'A Reexamination of Bickerton's Phylogenesis Hypothesis', to a *festschrift* in honour of Bickerton entitled *Development and Structures of Creole Languages*. (Black & Gilbert, 1991)

[10] It should, however, be said that in his most recent works, like *Language and Species*, *Language and Human Behavior*, and in collaboration with William Calvin in *Lingua Ex Machina*, Bickerton makes a concerted effort to respond to some of these and similar concerns. (Bickerton, 1990 & 1995; Calvin & Bickerton, 2000)

[11] They include commentators like Robert Berwick, Norbert Hornstein, Lyle Jenkins, David Lightfoot, Alec Marantz, John Marshall, John McCarthy, Pieter Muysken, and

set the scene, it should be remembered that both *Bickerton's Language Bioprogramme Hypothesis* and Chomsky's *Universal Grammar* are theories which attempt to account for the similarities among languages and the rapidity of their acquisition through the proposal that humans are born with preset linguistic settings. A question that arises, then, is exactly how Bickerton considers his hypothesis to relate to that of Chomsky.

Although language bioprogramme was initially conceived as providing a window onto universal grammar, in actuality Bickerton considers the Chomskyan conception inaccurate and expects that his hypothesis will consist of a different configuration altogether. However, at the outset, it should be said that there is a genuine problem of exegesis and interpretation when it comes to ascertaining the details of Bickerton's position. Chronologically speaking, this dates back to 1988 – the year in which Bickerton published a reformulated representation of his bioprogramme in order to accommodate the *lexically-driven* formulation of grammar proposed by Hagit Borer. (Bickerton, 1988 a & b; Borer, 1983) Yet, there remains to date for Bickerton to offer an explicit account of the details of the new conception; this starkly contrasts with the relatively clear exposition of his earlier *syntax-based* conception.

Nonetheless, the clearest explication of the relationship between Bickerton's and Chomsky's hypotheses can be found in Bickerton's 1984 article, 'The Language Bioprogram Hypothesis'. (Bickerton, 1984, pp. 187-188 & 217-218) Therein, it is contended that Chomskyan conception and Bickertonian bioprogramme intersect in terms of certain immutable principles such as 'subjacency [and] the three principles of binding theory'. (Bickerton, 1984, p. 217) Yet, their contrast is constituted by the universal grammar's addition of unset parameters which are set by input, where the bioprogramme's blueprint replaces them with preset "constraints" which can only be relaxed in the face of contradictory evidence. Bickerton believes that the varying core grammars manifested by language stem from the relaxation of those constraints. On this delineation, the bioprogramme would then comprise of three components:

(i) the immutable principles;
(ii) the mutable constraints; and,
(iii) the knowledge that the constraints can be relaxed on the basis of input.

Ellen Woolford. (Berwick, 1986; Hornstein, 1984; Jenkins, 1984; Lightfoot, 1984 &1989; Marantz, 1984; Marshall, 1984; McCarthy, 1986; Muysken, 1984; Woolford 1984)

The twofold implication of this tripartite characterisation is that the bioprogramme settings are contained within a language's core grammar, and the remainder of the core consists of the results of the relaxation of some of those settings which accrue over time as the result of historical change. That is, the core grammar of a language is acquired through the "unlearning" of some of the given rules. (Bickerton, 1985, p. 9) Thus, the child's task under the Chomskyan conception is to learn which parameters to activate, whereas, in the Bickertonian belief, the child learns how to deactivate certain inherited constraints which, without input, would presumably be expressed unaltered.

Bickerton, then, contends that this conception has various advantages over Chomskyan construction. They are as follows:

- It yields empirical evidence of unmarked settings in the form of creoles. The Chomskyan formulation accounts for the variation among core grammars by proposing that they represent different combinations of varying parameter settings, but this makes it difficult, and possibly inevitably arbitrary, to assign unmarked status to any particular setting.
- It affords an account of not only the conventional acquisition model but also for a situation in which children receive defective input, presumably something similar to the one resulting in creolisation.
- It furnishes an explanation for systematic errors in acquisition, given that the bioprogramme predicts that children, in the course of learning a language, will produce creole-like structures as a reflection of the bioprogramme. This is patently on the presumption that the Chomskyan model is not capable of providing such predictions.

However, as noted earlier, a change takes place in Bickerton's conception in 1988 in which the above third tier of his theory is omitted. That is, the notion that the core is created through the relaxation of rules is left out. In the current conception, all grammars are founded upon the same invariant syntax, and the variation in core grammars results solely from variations in the properties of the lexical material inserted into that syntax. What is yet significant to stress is that, unlike the core syntax formulation, this conception does not appear to account for why creoles seem "simpler" in their structure than regular languages. Possibly, the issue of simplicity may have been the reason for why Bickerton originally

conceived of there being unmarked parameters within this lexicon, and, thus, the lines of demarcation of creoles should have been drawn where their lexical items all had unmarked parameter settings. (Bickerton, 1988a, p. 274)

But, Bickerton, subsequently jettisoned markedness and stipulated that the simplicity of creole structure results from their lexical items – items that have been forfeited of their features as speakers acquired increasingly diluted reflexes of the target language. (Bickerton, 1988b, 302) This means that lexical properties fall along no hierarchy of markedness in themselves. In other words, creole lexical items simply have very few properties at all. But, in this frame of reference, it becomes problematic what exactly the bioprogramme signifies. To wrap up the discussion so far, John McWhorter describes the dilemma thus:

Under the current conception, the syntax of regular languages and the syntax of creole languages are the same. Previously, the degree to which the core grammar's rules had been relaxed distinguished the manifestation of an invariant syntax, but with this relaxation notion apparently discarded, we can assume that the syntaxes are the same. All variation results from the lexicon. However, if Bickerton is now proposing that what distinguishes creoles is their denuded lexicons, then it would seem that the "bioprogram" is simply the sum of these denuded lexical items. (McWhorter, 1993, p. 11)

As to the non-nativists' objections to Bickerton, Chris Corne collects them concisely into three classes:

Some of these [studies] have shown indubitable cases of substratal influence …; some studies have shown that the claimed common features either are not held in common in some cases, or are present in the superstrate in others; yet other studies have shown that the hypothesis does not predict certain languages, such as Tayo. (Corne, 1999, p. 219)

Corne himself, however, is of the opinion that most practitioners of creolistics – including both Bickerton and his non-nativist critics – have been mesmerised by four wrong assumptions: namely,

(1) there exists a class of creole languages definable in linguistic terms;
(2) the nature of creoles is determined by the relative numbers of imported non-superstrate speakers and their locally born offspring;
(3) cases of the emergence of a creole involving people from Africa or their descendants constitute a model for all creoles; and,

(4) the superstrate language, regardless of whether its speakers are using xenolectal forms of their language or not, is neutral with respect to the final result. (Corne, 1999)

Nonetheless, another critical creolist of the non-nativist persuasion begrudgingly concedes that even if few 'creolists subscribe wholeheartedly to the LBH' the hypothesis has indubitably sparked a great deal of innovative work in the field … What is curious is that a hypothesis held in such general skepticism nevertheless persists in driving or at the very least orienting so large a proportion of the work done in creole studies. (McWhorter, 1993, p. 9)

REFERENCES

Berwick, R., (1986), 'Grammar Growth and Parameter Setting: Computation and Creoles', *Behavioral and Brain Sciences*, 9: 562-563.

Bickerton, D., (1981), *Roots of Language*, Ann Arbor: Karoma Publishers.

Bickerton, D., (1984), 'The Language Bioprogram Hypothesis', *Behavioral and Brain Sciences*, 7: 173-221.

Bickerton, D., (1985) 'Preface to the Japanese Edition of Roots', *Carrier Pidgin*, 13: 6-9.

Bickerton, D., (1986), 'Beyond Roots: The Five-Year Test', *Journal of Pidgin and Creole Languages*, 1: 225-232.

Bickerton, D., (1988a), 'Creole Languages and the Bioprogram', in *Linguistics: The Cambridge Survey*, Volume II, ed. by F.J. Newmeyer, Cambridge: Cambridge University Press.

Bickerton, D., (1988b), 'A Dialog concerning the Linguistic Status of Creole Languages', in *Linguistics: The Cambridge Survey*, Volume II, ed. by F.J. Newmeyer, Cambridge: Cambridge University Press.

Bickerton, D., (1990), *Language and Species*, Chicago: University of Chicago Press.

Bickerton, D., (1995), *Language and Human Behavior*, Seattle: University of Washington Press.

Black, M.C. & G.G. Gilbert, (1991), 'A Reexamination of Bickerton's Phylogenesis Hypothesis', in *Development and Structures of Creole Languages*, ed. by F. Byrne and T. Huebner, Amsterdam: John Benjamins.

Borer, H. (1983) *Parametric Syntax*, Dordrecht: Foris.

Calvin, W.H. & D. Bickerton, (2000), *Lingua Ex Machina: Reconciling Darwin and Chomsky with the Human Brain*, Cambridge (Massachusetts): MIT Press.

Corne, C., (1999), *From French to Creole*, London: University of Westminster Press.

Cromer, R.F., (1984), 'Language Acquisition: Genetically Enclosed Instructions or a Set of Processing Mechanisms?', *Behavioral and Brain Sciences*, 7:192-193.

Cziko, G.A., (1986), 'Testing the Language Bioprogram Hypothesis: A Review of Children's Acquisition of Articles', *Language*, 62: 878-898.

Cziko, G.A., (1989), 'A Review of State-Process and Punctual-Nonpunctual Distinctions in Children's Acquisition of Verbs', *First Language*, 9: 1-31.

Eklund, R., (1996), 'Derek Bickerton's Bioprogram: A Proposal and Its Critics', *The Creolist Archives: Papers On-line*, www.ling.su.se/Creole/Archive/Eklund-1.html.

Goodman, N., (1971), *Problems and Projects*, Indianapolis: Bobbs-Merrill.

Hornstein, N., (1984), 'Grades of Nativism', *Behavioral and Brain Sciences*, 7: 195-196.

Jafari, N., (2015), 'Atypical Learners and Extraordinary Circumstances in Language Acquisition', *Euromentor Journal*, VI(4): 18-29.

Jenkins, L., (1984), 'Pidgins, Creoles, and Universal Grammar', *Behavioral and Brain Sciences*, 7: 196-197.

Lightfoot, D., (1984), 'The Relative Richness of Triggers and the Bioprogram', *Behavioral and Brain Sciences,* 7: 198-199.

Lightfoot, D., (1989), 'The Child's Trigger Experience: Degree-0 Learnability', *Behavioral and Brain Sciences,* 12: 321-375.

Marantz, A., (1984), 'Creolization: Special Evidence for Innateness?', *Behavioral and Brain Sciences,* 7: 199-200.

Marshall, J.C., (1984), 'Pidgins Are Everywhere', *Behavioral and Brain Sciences,* 7: 201.

McCarthy, J.J., (1986), 'Bickerton's Creole Cooking: Where Is the Beef?' *Behavioral and Brain Sciences,* 9: 563.

McWhorter, J.H., (1993), *Towards a New Model of Genesis: Competing Processes in the Birth of Saramaccan Creole*, Ph.D. Thesis, Stanford University.

Muysken, P., (1984), 'Do Creoles Give Insight into the Human Language Faculty?' *Behavioral and Brain Sciences,* 7: 203-204.

Pinker, S., (1997), 'Evolutionary Biology and the Evolution of Language', *in The Inheritance and Innateness of Grammars*, ed. by M. Gopnik, Oxford: Oxford University Press.

Woolford, E., (1984), 'Why Creoles Won't Reveal the Properties of Universal Grammar', *Behavioral and Brain Sciences,* 7: 211-212.

Youssef, V., (1988), 'The Language Bioprogram Hypothesis Revisited', *Journal of Child Language*, 15: 451-458.

Youssef, V., (1990), 'On the Confirmation of Bioprograms', *Journal of Child Language*, 17: 233-235.

HOW TO BOOST SUSTAINABLE DEVELOPMENT IN HIGHER EDUCATION?

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Abstract: *The targets of sustainable development are enormous and partly abstract. Higher education organizations in many countries have adopted many of the sustainable development goals. The aim of present study is to produce innovations for strategic planning in the field of sustainable development in higher education organization. The study problem is: How to boost Sustainable Development in Higher Education?*

Higher education consists of Universities and Universities of Applied Sciences in Finland. All findings of sustainable development were registered and classified to three classes based on the targets of Finland´s government, which are Ecological sustainability, Economic sustainability and Social and cultural sustainability. Universities have succeeded more concretely to introduce global targets of sustainable development. The findings were partly multidimensional. The number of findings in both organizations is biggest in the target Social and cultural sustainability. There was no finding of the value of equality, especially the equality between genders

Keywords: *Sustainable development, Higher education, Strategy.*

1. Introduction

Education and research system proves that there is a great deal of untapped opportunities in sustainable development. Sustainable development goals should be embedded in the decision-making, action and routines of everyone in the world, including companies, households, governments and higher education organizations. Higher education organizations can commit to pursuing one or more strategic goals and publicly monitor their progress in doing so. Higher education organizations in many countries have already adopted many of the sustainable development goals set by the United Nations and are

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continuing to do so. The aim of present study is to produce innovations and practices for strategic thinking and planning in the field of sustainable development in higher education organization. The study problem in this article is How to boost Sustainable Development in Higher Education? Through what kinds of methods and tools higher education organizations can use to boost sustainable development in their strategy work?

2. Literature review

2.1. Sustainable development

The targets of sustainable development are enormous and partly abstract. Sustainable development was first addressed in the **United Nation**s' Brundtland Commission in 1987 known as the Brundtland report. The Commission's work began a process, which has continued interactively the development in states and municipalities. "Sustainable development is that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs." (Brundtland 1987)

UNESCO, United Nations´ Educational, Scientific and Cultural Organization set for sustainable development 17 goals to transform our world: No poverty, Zero hunger, Good health and well-being, Quality education, Gender equality, Clean water and sanitation, Affortable and clean energy, Decent work and economic growth, Industry, innovation and infrastructure, Reduced inequalities, Sustainable cities and communities, Responsible consumption and production, Climate action, Life below water, Life on land, Peace, justice and strong institutions and Partnerships for the goals. (UNESCO 2015)[1]

European Union has the following definition for sustainable development in Europe 2020 strategy adopted by the European Council in 2010. It puts forward three mutually reinforcing priorities to make Europe smarter, more sustainable and more inclusive place to live. The

[1] UNESCO (2015), *UNESCO and Sustainable Development Goals*. en unesco.org/sdgs

Europe 2020 strategy includes key priorities, headline targets and flagship initiatives. (Eurostat 2015)[2]

Finland´s government, Ministry of Environment has the following definition for sustainable development: Sustainable development is a global, continuous regionally and locally and controlled social change, the aim of which is to ensure that present and future generations have a good living environment. This also means that the environment, people and the economy are considered equally in the decision-making and action. The elements of sustainable developments are: Ecological sustainable, Ecological sustainability, Economic sustainability and Social and cultural sustainability.

Ecological sustainability

The basic condition for sustainable development is the preservation of biodiversity and the functioning of ecosystems, as well as the adjustment of economic and material activities of human being in the long term natural carrying capacity. In addition to national action, international cooperation will play a key role in ecological sustainability. Vital for the ecological sustainability is the precautionary principle.

Economic sustainability

Economic sustainability is balanced in content and quality of growth, which is not based on long-term debt or disposal of reserves. A sustainable economy is a prerequisite for key functions of society. To the long-term-oriented economic policies to create favorable conditions for national well-being, and fostering increased. The economy on a sustainable basis also makes it easier to face the new challenges of the future, such as widening of an aging population, social security and health expenditure. A sustainable economy is the basis for social sustainability.

Social and cultural sustainability

The key issue of Social and cultural sustainability is to ensure the transition conditions of well-being from one generation to another. The continuing population growth, poverty, food and health, equality

[2] Eurostat, *Sustainable development in the European Union*. Monitoring report of the EU Sustainable Development Strategy, 2015.

between the sexes and the organization of education and training are the global challenges of social sustainability, which have significant impacts on the ecological and economic sustainability.

All these concepts of sustainable development show that the purposes are world-wide and enormous.

2.2. Higher education

Higher education organizations in this article consist of Universities in Finland, together 15 and Universities of Applied Sciences in Finland, together 23. The names of organizations are told in the chapter 3. Results.

2.3. Strategy

Strategy is important in higher education organization because the resources available to achieve these goals are usually limited. Strategy generally involves setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. A strategy describes how the ends (goals) will be achieved by the means (resources). The longer version of strategy includes the action plan for the implementation. (Lynch 2012)[3]

Finland´s government carried out in 2010 successfully a strong reformist agenda with universities and universities of applied sciences. The target was to strengthen the competitiveness of the country. First government decided New University Act and its promotion of institutional mergers. The total number of universities has reduced. One element in the international competition for a university is to have sufficiently large size. The New University Act provided universities with independent legal status, changed their relationship with the government in several ways, affected university governance arrangements, the new strategy 2020, and altered the relationship between staff and their university employers. The keys to a reformed sector were a diversified funding base and an entrepreneurial culture.

After the reform of universities was completed Finnish government started to carry out the reform of universities of applied sciences. The elements of the reform of universities of applied sciences were: Cutting the number of admissions which is currently decided by the government; the agreement with the Ministry of Education and Culture; Mergers and

[3] Lynch, Richard, *Strategic management*. United Kingdom. Pearson Education Harlow, 2012.

cooperation; The licence for managing a university of applied sciences and the funding. All universities of applied sciences had to create a new Strategy 2020.

Methodology of research

This article is utilizing qualitative research. Qualitative methods examine the decision making, how, what, where and when the decisions are prepared and confirmed. The common method used to generate data in qualitative research is to reflect texts, documents, and other materials. To analyze qualitative data, the researcher seeks meaning from all of the data that is available. The data may be categorized and sorted into patterns (i.e., pattern or thematic analyses) as the primary basis for organizing and reporting the study findings.

All short strategies of higher education organizations published in www-pages were studied and analyzed carefully. All findings of sustainable development were registered. After the registration these findings were classified to three classes based on the targets of Finland´s government, which are Ecological sustainability, Economic sustainability and Social and cultural sustainability. Higher education funded by government is one of the most important factors in Finland´s policy of competiveness. The most interesting and simplified findings were classified to these three classes. The aim has been to hide at least one interesting and simplified finding of sustainable development from every strategy.

3. Results

3.1. The findings of universities

The findings are as follows classified in the three targets of sustainable development following the target of the Ministry of Environment.

3.1.1. Ecological sustainability

Lappeenranta University of Technology (www.lut.fi) Strategy 2020

The core of strategy has four global questions, which the University is looking for solutions: Can we allow everything to burn out? Do we leave the mankind to suffer tainted water? Will we allow our future to be buried under the waste? Will we allow the European world to regress soon be the backyard? The short answer is: We do, but we affect in a new

way, and we will show the way for a pioneering spirit. One research project: REFLEX - Recycling carbon in a flexible competitive energy system.

University of Oulu (www.oulu.fi) 2020

Two of Strategic goals: 1.Durability creates materials and systems. We promote the sustainable and responsible use of natural resources multidisciplinary approach, in which different areas expertise combined to create intelligent solutions. Our expertise extends from basic research in materials science the production and use of advanced materials, Bio-catalyst research, bio-economy and circular economy expertise, clean tech, and information and ICT. 2. Mon-related space systems and environmental change: We study how the sun affects the near-earth space and the atmospheric layers. Research is carried out in Oulu and Lapland Geophysical Observatory. This focus area also covers the changing environment for research in the Arctic and the boreal zone, for example, geology, ecology, and genetics fields.

Tampere University of Technology (www.tut.fi) 2020

Values are Courage, Responsibility and Sense of community: Tampere University of Technology boldly does open up new paths of technology research and education. We bear the responsibility for the future ethically sustainable operations for the benefit of the environment, the Finnish society, society and humanity. Direct and equal communal spirit does support our good learning outcomes. Mission: Tampere University of Technology does lead in the world the target of research and technological development, as well as is a strong industry-partner. We train experts sought by society. Vision: We improve through research and education human and environmental well-being. We develop technology for Finland's industrial competitiveness. One practical example in technology: Pulp-based clothing is not static build, but absorbs moisture, so compared with synthetic fibers, it is pleasant on the skin. In addition, it is soft, warm and shelving. In addition to clothing, it is also suitable for wiping and hygiene products.

3.1.2. Economic sustainability

University of Vaasa (www.uva.fi) Strategy 2020

University of Vaasa's strategic focus areas are leadership and change, energy and sustainable development, as well as the financial and

economic decision-making. The focus areas are interdisciplinary themes in teaching and research. The study we are caught in time, and we produce high-quality scientific information on new topics, which are of benefit to society and the business community.

3.1.3. Social and cultural sustainability

Aalto University (www.aalto.fi) Strategy 2020

Mission: Future factors: Science and Art in conjunction with the technology and economy. Building a sustainable competitive advantage in areas of border cooperation to identify and solve complex challenges, as well as the training of visionary future experts.

University of Helsinki (www.helsinki.fi) 2020

Strategic targets: Research infrastructures support the University's profile and provide an attractive environment for researchers. The accessibility and use of infrastructures will be enhanced. University will improve online access to research infrastructures and centralize the coordination of infrastructures.

Hanken School of Economics (www.hanken.fi) 2020

Strategic target: Research, Internationalization, corporate connections and corporate social responsibility are incorporated in each sub-strategy.

University of Eastern Finland (www.uef.fi) Strategy 2020

Values: Values of freedom of science, teaching and learning, openness and courage, as well as accountability and effectiveness. We utilize the entire university community expertise. Our operations are guided by the principles of ethics and sustainable development. Vision: We are an internationally recognized research university that seeks interdisciplinary solutions to global problems.

University of Lapland (www.ulapland.fi) 2025

The university strategic focus areas are: Sustainable development, Justice, The Northern wellness, Education and Work, Responsible Tourism and Culture-oriented service design.

University of Jyväskylä (www.jyu.fi) 2020

One of the core field specifications is Basic natural phenomena and mathematical thinking: The Accelerator Laboratory and the

multidisciplinary Nanoscience Center are unique research environments in Finland. Their research represents internationally high-level research on the basic natural phenomena of physics, chemistry and biosciences at the University.

University of Tampere (www.uta.fi) 2020

By 2020, the University will have a strengthened profile as an international research university and be a significant generator of new, world-changing knowledge. This goal will be facilitated by the new university in Tampere, a merger of the city's three higher education institutions. The new university will be an innovative hub of education and research, and the University of Tampere's contribution will include its strong research profile in health and society.

University of Turku (www.utu.fi) 2020

Values: Ethicality, Criticality, Creativity, Openness, Community. Combining factors: Internationalization, Effective science, Responsibility and Cooperation and interaction.

Åbo Akademi University (www.abo.fi) 2020

Strategic goals: The strategy has been developed in collaboration with the students and staff. It is the living document to be used, customized and further developed. An active and open communication between all levels and units is a prerequisite to all who study or work at the academy. All should be involved in the strategy's implementation. The strategy highlights four key themes: Cross-border work, Profiling of operations, Learning in focus and Well-being of staff and students.

University of the Arts Helsinki (www.uniarts.fi) 2020

Values: Skill, Courage and Community. We appreciate all operations perseverance and critical thinking. We strive to high quality and know-how. We encourage courage, art and making science. We dare to try and to create a new way of thinking, the expression and activity. We appreciate the freedom of the arts. We act responsibly world. We build others caring, joy-producing and energizing operating culture. We see the individuality, differences and the diversity of resources.

National Defence University (www.mpkk.fi) No year

Mission: Our core activity is the training and the increase in the Defence Forces and Border Guard officers. We promote the safety of the nation's total military scientific research and expertise.

3.2. The findings of universities of applied sciences

The findings are as follows classified in the three targets of sustainable development following the target of the Ministry of Environment.

3.2.1. Ecological sustainability

Arcada University of Applied Sciences (www.arcada.fi) Strategy 2020

Vision: Innovative thinking for the sustainable development of society.

Lahti University of Applied Sciences (www.lamk.fi) Strategy 2020

Values: Searching together with joy. Learning experiences are insightful. Valuable work. Competence and success.

The environmental perspective is told in the special report of Corporate Social Responsibility: Environmental responsibility and sustainable development are part of the training, professional skills and working day campuses. RDI activities contribute to students, staff and the whole area of environmental expertise and thoughtful way of life sustainable development. The environmental impact of the operation will be monitored, measured, and aimed at reducing accordance with the principle of continuous improvement.

Lapland University of Applied Sciences (www.lapinamk.fi) 2020

Vision: The expertise in the arctic circumstances. This expertise is a comprehensive management and utilization of arctic conditions. Promoting the use of natural resources intelligently. Strategic goal: Arctic Cooperation and the Northern border expertise.

Novia University of Applied Sciences (www.novia.fi) No year

Profile: Novia is a Swedish school with good anchorage in the regions of Ostrobothnia and Southwest Finland. School participates in the development of regional industry and work and promotes sustainable development. The University has an active collaboration in the Nordic region, especially in its focus areas.

Satakunta University of Applied Sciences (www.samk.fi) 2022

We profile industrial higher education organization. We focus on regeneration, skills and labor export capacity.

South-Eastern Finland University of Applied Sciences (www.xamk.fi) 2030.

Xamk is university of sustainable well-being and technology. All activities take responsibility for social, economic, cultural and ecological sustainability. Sustainable well-being will confirm the vitality and happiness in our area of operation. Sustainable technologies are giving birth to innovation, creating new business opportunities and solve problems. Sustainable well-being will confirm the vitality and happiness in our area of operation.

3.2.2. Economic sustainability

Haaga-Helia University of Applied Sciences (www.haaga-helia.fi) No year

Value: We renew and serve the business community by responsibility, acting together and economically sustainable.

Seinäjoki University of Applied Sciences (www.seamk.fi) 2020

Values: Entrepreneurial spirit. Our attitude and way to work are entrepreneurial. In operation arises in the everyday courage, creativity, innovation, productivity and curiosity. We act responsibly in cooperation with businesses and industry, education and collaboration through RDI projects.

Vaasa University of Applied Sciences (www.vamk.fi) No year

Strategic goals: In the energy sector, technical know-how, especially for electricity production, use and transfer of technologies, as well as the energy industry information technology. Export of industrial business know-how, especially in international trade and logistics practices. Social and essential basic knowledge of health and the promotion of health and well-being of the population.

3.2.3. Social and cultural sustainability

Centria University of Applied Science (www.centria.fi) Strategy 2020

Value s is Responsibility: We acknowledge responsibility for the well-being of our region, Education and skills development. We appreciate the honest, both ethically and economically sustainable activity.

Diaconia University of Applied Sciences **(**Diak**) (www.diak.fi)** 2020

Values: The guiding values of Christian charity, social justice, open interaction as well as high-quality and efficient operation. University´s aim to train the service of the Church and society of skilled professionals and experts, as well as take part in the training fields of regional, national and international development. Diak is actively working to promote social harmony and health of the population as well as to strengthen the foundation of civilization.

Humak University of Applied Sciences (www.humak.fi) 2020

Values: We respect each other. We have open mind. We will success together. We will have reform and renew courageously. Vision: Humak is an international, social higher education organization, which is developing fair and community based in Finland.

Häme university of Applied Sciences (www.hamk.fi) 2020

Values: A bold reform. We have the ability and the courage to see the future opportunities and the ability to make quick decisions, where the risks compared to the benefits and resources are managed. Human growth: Respect of others, tolerance and appreciation of knowledge are important principles in all activities.

Jyväskylä University of Applied Sciences **(**www.jamk.fi) 2020

Values are trust, creativity and responsibility. Each member of the university community operates in accordance with these values. In addition to general ethical principles that guide the activities and complementary field specific Ethical Guidelines.

Kajaani University of Applied Sciences (www.kamk.fi) 2024

Service promises: Students: "We are changing the impression of world by learning outcomes." Staff: "We support the implementation of the world-wide reform."

Karelia University of Applied Sciences (www.karelia.fi) 2020

Values. Responsibility: We act responsibly and promoting sustainable development. We evaluate and develop the operations of our organization continuously.

Laurea University of Applied Sciences (www.laurea.fi) 2020

Strategic objective: Use of natural resources. Respect for the environment and act responsibly. Promote actions economically, socially and ecologically. Sustainable development.

Metropolia University of Applied Sciences (www.metropolia.fi) 2020

Value: Sense of community, which is our strength. Strategic goal: Immigrants' education and integration is an important goal. Metropolia will continue responsibility for higher education in this area.

Oulu University of Applied Sciences (www.oamk.fi) 2020

Energy efficient construction for northern conditions. Strategic goal: We are aware of ecological, economic, socio-cultural responsibility. We are committed to the sustainable development of our policy to respect and promote the principles of sustainable development systematically in all our operations. Sustainable development teams implement practical acts.

Police University College (www.polamk.fi) 2020

Values: Justice, Professional skills, Courtesy and Employee well-being.

Saimaa University of Applied Sciences (www.saimia.fi) 2020

The focus is based on the needs of our stakeholders, our own strengths and opportunities posed by the operating environment to combine expertise from different fields. The focus areas are: 1. From innovation to business. 2. The growth and internationalization of SMEs and 3. Customer oriented social and health-care services.

Savonia University of Applied Sciences (www.savonia.fi) 2020

The network of values: Safety of water production. Responsibility of food production. Applied healthcare technology and Renewing the machinery and energy industry.

Tampere University of Applied Sciences (www.tamk.fi) 2020

Values: Sense of community. Respect for the individual and for diversity. Sustainable development. Measurement of skills and entrepreneurs. Strategic goal: In 2014 was launched Tampere3 process including TAMK, University of Tampere and Tampere University of technology. The aim of the process is to create the most important foundation-based university community.

Turku University of Applied Sciences (www.turkuamk.fi) 2025

We create our region by providing expertise and success in the Excellence in Action. The mission emphasizes the production and use for the benefit of our community with professional conclusion of an international level of excellence. Our operations will enable the development of each of our students, our partners and our staff members in their respective fields of the future and in a globalized environment. Excellence is also reflected in our region to deliver innovations and

development of entrepreneurship. **Åland** University of Applied Sciences (www.ha.ax) no strategy

4. Conclusion and recommendations

The targets of sustainable development are enormous and partly abstract. Higher education organizations have included targets in part to their strategies. In the degree and study program level higher education organizations have contents and courses of sustainable development. According to Penttilä (2012)[4] the environment issues had relatively weak position in business education at Finnish Universities of Applied Sciences. The most important driver was not strategic, but the initiatives of individual teachers.

Universities have succeeded more concretely to introduce global targets of sustainable development. The findings were partly difficult to classify only to one class because the content of findings were oft multidimensional. The number of findings in both organizations is biggest in the target **Social and cultural sustainability.** There was no finding of the value of equality, especially the equality between genders. As recommendation the Ministry of Education and Culture could require in the next updating of the strategies the targets of sustainable development.

REFERENCES

Eurostat, (2015), *Sustainable development in the European Union*. Monitoring report of the EU Sustainable Development Strategy.

Lynch, Richard (2012), *Strategic management*. United Kingdom. Pearson Education Harlow.

Penttilä, T., (2012), *Environmental Issues in Business Education Curricula at Finnish Universities of Applied Sciences*. Towards a Research reports from Turku University of Applied Sciences 35.

The Ministry of Environment, (2015), *Sustainable Development*.

UNESCO, (2015), *UNESCO and Sustainable Development Goals*. en unesco.org/sdgs

[4] Penttilä, T., *Environmental Issues in Business Education Curricula at Finnish Universities of Applied Sciences*. Towards a Research reports from Turku University of Applied Sciences 35, 2012.

World Commission on Environment and Development, WCEP, (1987), *The Brundtland Commission of Environment and Development*. United Kingdom. Oxford University Press.

www-pages read March 25th, 2017.

THE MORE THEY CHANGE, THE MORE THEY STAY THE SAME: JAPANESE MILLENNIALS AND THEIR ATTITUDES TOWARD WORK AND FAMILY

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Abstract: *Japanese Millennials display many of the positive and negative stereotypes attributed to this complex generation, like creativity, versatility, information literacy, self-centeredness, commodity, and lack of adventure spirit. This generation, also known as "satori (enlightened) generation", also comes across as an inward-looking, insecure cohort, who has little interest in the things that had been held in esteem until they were born: prestige, career, marriage and family. The present paper reflects on the particularities of this generation, and on the difficult task of negotiating between old values, which they can no longer accept, and the insecurities of a future that they are not prepared to wrestle with.*

Keywords: *Japanese millennials, Satori generation, work, family.*

1. Millennials: who are they?

> *"Climb the mountain so you can see the world, not so the world can see you".*
>
> *(David McCullough Jr., Wellesley High Commencement Speech, 2012)*

They are known as "the me me me generation". Time Magazine describes them as a "narcissistic", "fame-obsessed", "entitled", immature lot, who would rather live with their parents than with a spouse (Stein, 2013; Howe and Strauss, 2000). At the other end of the specter, this generation is seen as special, sheltered, confident, conventional, team-oriented, achieving, and pressured (DeBard, 2004; Howe and Strauss, 2003; Twenge, 2006). While these attributes may appear stereotypical and applicable to any generation, many schools and businesses are beginning to take them into consideration when dealing with this generation that

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does not appear to resemble anything else before it (DeBard, 2004; Howe and Strauss, 2000; Lancaster and Stillman, 2002; Zemke, Reines and Filipczak, 2000).

Millennial generation's birth year is a subject of controversy, with the lower limit estimated around 1977 (Zicuhr, 2010; Kelan, 2012; Martin, 2005), and the higher going up to the year 2002 (Kersten, 2002). Some authors go as far as declaring the birth in 1995 of a post-Millennial generation, Generation Z.[1] Other authors situate the Millennial generation after Baby Boomers, calling them the "Baby Boom Echo" generation (Foot and Stoffman, 1998). As Table 1 indicates, Millennials are at present between 36 and 23 years old. The youngest of them have just graduated college and are ready to enter employment. The oldest have been working for more than a decade. They represent an important workforce as baby boomers (born between 1944-1964), one of the most populous cohorts, are retiring (Ng and McGinnis Johnson, 2015).

Table 1. Western generations timeline (Adapted from A. A. Berger, *Cultural Perspective on Millennials*, 2018, p. 6; Strauss and Howe, 1991)

Generation	Dates born	Historical Milestones	Period characteristics
Traditionalist (Silent) generation	1922-1943	WW2, Korean War, The Great Depression	"The fortunate ones" Rising affluence Lowest crime rate Lowest unemployment rate
Baby boomers	1944-1964	"Superpower America" Vietnam War Kennedy assassination Woodstock	Hippies/Yuppies Rebellious Rising crime/death rate Sexual revolution
Generation X (Thirteenth generation)	1965-1980	Challenger explosion	Economic decline Birth control High parental divorce rates Lower education achievement
Millennials	1981-1994	Columbine shootings	Lowest child-to-parent ratio Protective of children (cocooning) "No child left behind"

[1] A.A. Berger (2018). *Cultural Perspectives on Millennials*, Palgrave MacMillan, 1-10.

Generation Z ("The Homeland Generation")	1995-

Research has shown that people in the same generation share similar personality traits, values, and attitudes, which were shaped up by the events in societies where they were born and grew up (Ng and McGinnis Johnson, 2015). Twenge's (2008) meta-analysis of Millennials suggests that all the changes observed in a generation are a result of evolution, rather than a cyclical occurrence, as parents pass the trends to their children, who take them to the next level.[2] U.S. Millennials grew up in prosperous family environments because their parents (Gen. X or Baby boomers) were better off than the generations before them (Osberg, 2003). Moreover, Millennials, women in particular, are more highly educated and have more career opportunities compared to the previous generations than previous generations (Leete, 2006; Ballantine, 1999).

Deal, Altman and Rogelberg (2010) point out that culture plays an important role in how we view generations and the relationships among them. Thus, they say, the delineation of post-war generations into Baby boomers, Generation X, and Millennials is not universal, but it is rather "context specific".[3] Generations are named differently in other cultures, and their timelines depend on different criteria. While western cultures agree upon the denomination of "Millennial" as the generation born on the threshold of a new millennium, the name does not hold any significance for other cultures which use other calendars, such as Chinese, Islamic, Jewish, and so on.[4] In addition, different cultures have distinct milestones that define their histories. For example, unlike the U.S., in Israel generations are identified by wars, and not by birth rates or important events.[5] Donnison points out that it would be "naïve to assume that a global generation can be defined and described based substantially on North American literature, research, and data."[6] Yi, Ribbens et al.

[2] J.M. Twenge, Generational differences in psychological traits and their impact on the workplace. *Journal of Managerial Psychology* 23(8), 2008, pp. 863-64.

[3] Deal, J.J., Altman, D.G., Rogelberg, S.G., Millennials at work: What we know and what we need to do (if anything), *Journal of Business and Psychology*, 2010, 25, 191-199. DOI 10.1007/s10869-010-9177-2.

[4] Ibid. p. 195.

[5] Ibid. p. 195.

[6] Donnison, S., Unpacking the millennials: A cautionary tale for teacher education.

(2015) note that in China "generations are labeled by birth decade."[7] Thus, there is one generation born during the Cultural Revolution (1961-1966), followed by the Social Reform generation (1971-1976), and the Millennials (1981-1986) (Yi et al., 2010). Most Chinese Millennials were born and grew up during the one-child policy period (1980-2013), and are perceived as entrepreneurial and energetic, essential in turning the country into a major world economic power (Wong, 2016), and as more individualistic in comparison to previous generations (Moore, 2005).

The birth and growth of Japanese postwar generations is closely linked to the ebbs and flows of the society (Table 2).

Table 2. Japanese generation timeline (Adapted from Wong, 2016, and Nihon Keizai Shimbun, 2016).

Generation	Dates born	Historical Milestones	Period characteristics
Baby boomers	1947-1949	Japan defeated in WW2 Reconstruction	Advent of "corporate warriors" – the force behind the Japanese miracle
***Shinjinrui* generation**	Late 1950s-1964	Students' revolts	"Japan as number one" First generation of media consumption (Idol/anime/manga culture) Imported brands boom
Bubble generation	1965-1969	"Bubble Economy"	High employment rates Creativity and young talent appreciated Change in attitude to work – objectification Increased women participation in workforce
Post-Bubble generation	1970-1984	Economic depression	2nd baby boom Economic recession,

Australian Journal of Teacher Education, 2007, 32(3), 1-13.
http://dx.doi.org/10.14221/ajte.2007v32n3.1. p. 8.

[7] Yi, X., Ribbens, B., Fu, L., Cheng, W., Variation in career and workplace attitudes by generation, gender, and culture differences in career perceptions in the United States and China. *Employee Relations*, 37(1), 66-82, https://doi.org/10.1108/ER-01-2014-0005 2015, p. 68.

("Lost generation")		(Post Bubble) Great Hanshin Earthquake Sarin Gas Attack	deregulation Massive layoffs, bankruptcies, unemployment "Career up" – career reorientation by learning new skills Change of corporate loyalty
***Yutori* (*Satori*) generation**	1987-2004	Deflation	Low birthrates Relaxed educational policy (yutori education) New attitudes to work Detachment from leaders/companies Social media advent; peer communities
Shinjinrui Jr.	2005-	Great Tohoku Earthquake	Lowest birthrates Conservative Frugal

Japanese baby boomers were born and came of age in a country that had suffered a bitter defeat in The Second World War. They embarked upon the grueling task of rebuilding the economy, and gave birth to Japan's core workplace culture and to a workforce of "predominantly regular male employees [which] relies on a culture of status, hierarchy, long hours, limited flexibility and corporate citizenship".[8] Along came the hedonistic economic "bubble", with "Japan as number one", when Japanese discovered the joys of spending, overseas travel and luxury brands. Then the bubble burst, giving way to company downsizings, eroding corporate culture and casting doubt about the very social texture of Japan Inc. Wives had to go back to work to supplement the income of their husbands, who found themselves laid off and struggling with job insecurity. After the "Lost Generation" came the "yutori/satori" cohort, who grew up in a stagnating economy marred by shrinking workforce, precarious employment with less job security but with added responsibilities and longer work hours.

[8] Macnaughtan, H., Abe's womenomics needs to include men too. *East Asia Forum* (January 2015). Accessed May 12, 2016 from http://www.eastasiaforum.org/2015/01/28/abes-womenomics-needs-to-include-men-too/

2. Millennials' attitudes regarding employment

As most developed countries are confronted with aging population and decreasing birthrates, the attention of employers is focused on the young generation, which is perceived as being different, not only in terms of personalities, but also in terms of their workplace values, attitudes and expectations (Ng and McGinnis Johnson, 2015; Lyons et al., 2014; Twenge, 2010).

From the viewpoint of attitudes regarding employment, Millennials are generally indifferent to ranks and promotions, not readily accepting authority but not quite rebellious, and more eager to fulfill the work tasks when they are given clear goals (Howe and Strauss, 2007). They are perceived as optimistic, positive, team players, risk-averse, favorable to material rewards, and aiming for a good life-work balance (Howe and Strauss, 2007; Ng and McGinnis Johnson, 2015). In addition, they were found to have a slightly higher work satisfaction compared to the previous generations (Kowske et al., 2010). On the other hand, Japanese Millennials, also known as the Yutori or Satori Generation or the "precariat" (a portmanteau created by merging "precarious" and "proletariat")[9], is seen as lacking ambition, being risk-averse and quite detached from the material aspects of life (Mie, 2014; Kelts, 2017). This generation also saw the emergence of the "herbivore man," a term coined by the author Maki Fukasawa in 2006 to describe "men who have no interest in getting married or finding a girlfriend."[10]

Unlike their more optimistic peers in the West, Japanese Millennials come across as a rather gloomy and morose lot. They seem to resist the "rigors and limitations of corporate work culture"[11], which translates into long working hours, regular after-work drinking parties (*nomunication*) with bosses and coworkers, unexpected transfers, and generally sacrificing one's life for the benefit of one's company. According to a Ministry of Health, Labor and Welfare document, about one third of university graduates leave their jobs within three years.[12] Lifelong

[9] https://en.oxforddictionaries.com/definition/precariat

[10] Wikipedia, https://en.wikipedia.org/wiki/Herbivore_men

[11] Osawa, M., and Kingston, J., Risk and consequences: The changing Japanese employment paradigm. In A. Allison and F. Baldwin (eds.). *Japan, The Precarious Future (Possible Futures)*. New York University Press, 2015, p. 68.

[12] MHLW., (2010). Document regarding job turnover of newly hired workers (Shinki gakusotusha no rishoku joukyou ni kansuru shiryou).
www.mhlw.go.jp/topics/2010/01/tp0127-2/24.html.

employment is out, job-hopping is in. In his book, *Happy Youth in the Country of Despair*, Noritoshi Furuichi claims that "young people no longer seek an identity in their work and don't aspire to the "empty affluence" of their parents."[13] Increasing numbers of university graduates realize the futility of committing to a job that guarantees little security and offers even less satisfaction. Many Millennials turn to part time, temporary, dispatch or contract employment, which lack the financial incentives of the full time positions, making it hard for them to consider the prospect of marriage or children. It comes as no surprise that Japanese Millennials report low life satisfaction (only 10 percent as compared to 20 percent global average), as well as a low sense of accomplishment in life (17 percent as compared to 41 percent global average) (IRIS, 2015). The results of a survey conducted by the Manpower Group in 2015 show that, while 70-80 percent of Millennials in China, Germany, India, Mexico, Switzerland, and US are confident or optimistic about their job prospects, Japan is at the bottom of the confidence chart, with only 30-39 percent (Manpower Group, 2016). A similar result is evident from another survey (IRIS, 2015), in which Japanese respondents are the least optimistic, with only 27 percent compared to the global average of 49 percent. 37 percent of Japanese Millennials expect to work until they die, as opposed to only 3 percent in Spain (Manpower Group, 2016).

3. Millennial women – the solution or the problem to Japan's demographic issue?

Twenge points out that the young generation tends to be more egalitarian regarding genres. Millennial women are "more agentic and assertive", and we can see "more female workers in more powerful positions" compared to the previous generations.[14] Nevertheless, Twenge cautions that, as more women will be actively involved in the workforce and occupy leadership positions, the employers will have to be more flexible in finding solutions to meet the needs of working mothers.[15]

From the viewpoint of participation in employment, Japanese women have been up against tradition, a male-dominated corporate culture, insufficient career opportunities, and lack of support from male spouse

[13] Ibid.

[14] Twenge, J.M., Generational differences in psychological traits and their impact on the workplace. *Journal of Managerial Psychology* 23(8), 2008, p. 864.

[15] Ibid. p. 873.

(Averianova and Nae, 2016). The clear-cut distinction between gender roles of men as sole breadwinners and women as caretakers and nurturers dates back from pre-Meiji times. Marriage and motherhood have been considered a woman's supreme expression of femininity and her purpose in life (Charlebois, 2014; Vogel and Vogel, 2013). The expression *otoko wa shigoto, onna wa katei* (the man should work, and the woman should take care of the house) is illustrative of this gender division.

During the years of economic boom, it was a norm for women to work until 20-24 years old, after which it was customary to renounce their jobs to dedicate themselves to childcare and family. Some of them returned as part time workers around the age of 45-49 years old, when their children were grown. Women's involvement in the workforce has generally been regarded as temporary, as its purpose was mainly to help them get married or supplement the family income.[16] Young working women were (and still are) treated as temporary "office flowers" (or *OL* – short for 'office ladies'), in charge of dumb and repetitive tasks such as making copies or serving tea, and who would be eventually replaced with younger ones after a few years (Ogasawara, 1998). Many young women used to regard employment merely as a stepping-stone towards marriage. Careers were out of the question, as they were often considered hazardous for marriage and motherhood (White et al., 1992). Family and children's education must take precedence over job or career (Rauch, 1992).

In recent years, however, Japanese society has been confronted with rapid aging and demographic decline. In 2017 the fertility rate hit rock bottom with 1.41 children/woman.[17] It has been estimated that the working age population would drop by over 30 percent by the year of 2060, from 127 million in 2013 to 87 million people in 2060.[18] Prime Minister Shinzo Abe introduced in 2012 an ambitious reform program for economic revitalization, the centerpiece of which is "womenomics", a plan aiming to increase female participation in the workforce. The term "womenomics" was coined back in 1999 by Kathy Matsui, a chief

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[16] Charlebois, J., The shifting gender landscape of Japanese society. In S. Toyosaki and S. Eguchi (eds.) *Intercultural Communication in Japan: Theorizing Homogenizing Discourse*. Routledge, 2017, p. 57.

[17] Japan birth rates in 2017. http://www.geoba.se/country.php?cc=JP

[18] Goldman Sachs, (2014). Womenomics 4.0: Time to walk the talk. Japan: Porfolio strategy research. May 30, 2014. Accessed July 18, 2017 from http://www.goldmansachs.com/our-thinking/outlook/womenomics4-folder/womenomics4-time-to-walk-the-talk.pdf, p. 4.

strategist at Goldman Sachs, who pointed out that the current lack of balance between men and women's participation in the workforce resembled "running a marathon with only one leg."[19] Matsui predicted that an equal participation of both genders in the labor would boost up the country's GDP by about 12.5 percent.[20]

Japan lags behind many countries in terms of men-women parity. The 2017 Gender Gap Report situates Japan on the 114th position out of 144 countries in terms of gender equality.[21] According to the report, although men and women enjoy equal opportunities to higher education and health care, there are substantial differences in workforce participation, earned income, and parliamentary and ministerial position occupancy (Fig. 1).

CATEGORY	FEMALE	MALE
Labor force participation %	**66.4**	85.0
Workers employed part-time %	**38.6**	13.4
Work (minutes per day)	**505.6**	**533.3**
Unpaid work per day (min.)	**59.2**	11.6
Estimated earned income (US$)	**28,724**	54,818
Legislators, senior officials & managers %	**12.4**	87.6
Professional & technical workers %	**39.5**	60.5
Tertiary education attainment (ages 25-54) %	**52.9**	**48.6**
Women in parliament %	**9.3**	90.7
Women in ministerial positions %	**15.8**	84.2

Figure 1. Gender gap in Japan (Source: The Global Gender Gap Report 2017)

As a matter of fact, 75 percent of college educated women drop out of employment for six months or more, which is twice the number of female college graduates in the U. S. (31 percent) and Germany (35 percent) (Osawa and Kingston, 2015; Hewlett, 2011). Moreover, referring to a study from the Center for Work-Life Policy, Hewlett notes that only 43 percent of the women who chose to quit their jobs manage to find a job similar to the one

[19] M. Osawa and J. Kingston, ibid. p. 63.
[20] Goldman Sachs, ibid. p. 5.
[21] Global Gender Gap Report 2017.
https://www.weforum.org/reports/the-global-gender-gap-report-2017

they left before giving birth (Hewlett, 2011; Osawa and Kingston, 2015). Most of them return as part time or temporary workers in jobs which offer inferior pay, no security and for which they are overqualified.

Recently, almost 70 percent of the Japanese women are involved in employment. Although women make up more than 30 percent of the part time workers, and the female participation in leadership roles is still quite low, most of the female college graduates enter full time employment (Fig. 2).

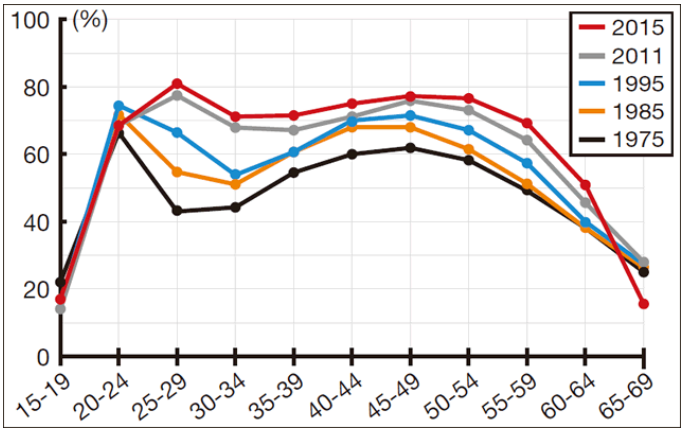

Figure 2. Trends in female employment between 1975-2015 (Source: Ministry of Internal Affairs and Communication)

Moreover, compared to the 1970s, a younger women postpone marriage and childbirth until later in their thirties. Mirza (2016) points out that this has become "increasingly common", and that many women tend to choose working full or part time for reasons such as "financial independence, to escape various familiar constraints, and to pursue personal goals."[22] This reflects the inward-looking image of the Japanese Millennials, who would rather pursue their own interests and hobbies rather than strive to fit the traditional gender roles. For women, working is no longer just a means to survive, but also a means of self-actualization (Mirza, 2016). Even when considering marriage, young women seem to be more interested in reciprocal compatibility and the degree to which prospective partners are willing to share the household and child rearing chores.[23]

[22] V. Mirza, Young women and social change in Japan: Family and marriage in a time of upheaval, *Japanese Studies*, DOI: 10.1080/10371397.2016.1143331, 2016, p. 2.

[23] L. Nakano and M. Wagatsuma, Mothers and their unmarried daughters: An intimate look at generational change. In Gordon Mathews and Bruce White (eds), *Japan's*

4. Millennial men – are they ready to take over from their wives?

Japanese men have been preponderantly absent from household and childcare duties (Ishii-Kuntz, 2003). Ishii-Kuntz found that Japanese men spend less time with their young children compared to men from Korea, Thailand, the United States, France, and Sweden.[24] One of the reasons is that Japanese men find it difficult to leave earlier than their coworkers to tend to their children.[25]

Do Millenial men have different attitudes regarding working spouses and sharing household duties with their prospective partners? Mirza (2016) points out that young men tend to have favorable views regarding the presence of women in companies. Our previous study also revealed that young men are willing to support their working spouses with household chores and parenting duties (Averianova and Nae, 2016). Nevertheless, even when men do help around the house, the role of the woman as a prime caregiver remains essential (Sunderland, 2000).

A 2012 attitude survey conducted by the Meiji Yasuda Institute for Life and Wellness among men aged between 20 and 64 years old revealed that 73 percent of the respondents were inclined to choose private life over contribution to society.[26] Out of these, men in their twenties and thirties who value private life made up for 56 percent of the respondents. Are working fathers indeed disposed to sacrifice their free time and hobbies to tend to their young? Charlebois begs to differ. He says that the term "kazoku saabisu" (family service, i.e. time spent by men with families on weekends and holidays), in vogue since 1970s, suggests rather a reluctant sacrifice of men's leisure time, and not a reciprocally understood participation to household chores and parenting.[27]

Several studies have stressed that, the more support men receive from their workplace, the more likely it is that they take parental leave (Ishii-Kuntz, 2006; Haas, Allard, and Hwang, 2002). At present, only 3

Changing Generations: Are Young People Creating a New Society? London: Routledge Curzon, 2004, p. 150.

[24] Ibid. p. 253.

[25] Ishii-Kuntz, M. (2003). Balancing fatherhood and work: Emergence of diverse masculinities in contemporary Japan. In J. Roberson and N. Suzuki (Eds.), *Men and Masculinities in Japan*. Routledge, 198-216.

[26] Meiji Yasuda Institute for Live and Wellness. (2012). Attitude survey regarding men's happiness.
http://www.myilw.co.jp/research/report/pdf/myilw_report_2012_01.pdf

[27] Charlebois, ibid. p. 60

percent of men take childcare leave. However, the emergence of the so-called *ikumen* trend, that is men who assist with childcare duties, is a proof that things are starting to change for the better. The word, combining the Japanese words *iku*, meaning "to nurture, to raise children" and the English *man*, was coined by the advertising agency Hakuhodo, and became a buzzword in 2010, when the then Minister of Health, Labor and Welfare, Akira Nagatsuma, declared he wanted to make the term "ikumen" trendy, by promoting more participation of men in childcare (Prunier, 2014; *Kotobank*, 2015). That the term was chosen to sound very similar to *ikemen* (meaning "cool, handsome man") is no coincidence, but it also reflects the intention of making child care for men sound more attractive and positive. Nevertheless, the progress is slow. Charlebois cautions that the *ikumen* phenomenon is "significant because it indicates that parenting is gendered feminine and involved fathers represent an anomaly."[28] In a similar vein, North points out that, "[f]or every Japanese husband who does the shopping, cleans the bath, cooks or takes his children to nursery school, there are nine who leave the household and care of children to their wives (or mothers)."[29]

Concluding remarks

Fascinating and not completely understood, Millennials are already making a difference in the world by imposing their views and workplace values. Mathews and White suggest that, to a certain extent, younger generations tend to recreate the world that created them, while constantly evaluating the adult world to see whether it is worth entering in.[30] Brought up in the relative prosperity of a conservative society which resists change and values "the good old ways", Japanese Millennials will inherit a world that is marred by serious economic and social problems, which they will be called upon to solve. Pampered and humored as children, they find themselves trapped between old-fashioned values they hate but have little power (or willpower) to rebel against, and a brand new world, which promises much but delivers little. They have two feasible choices: either sink or swim. They can either rebel against the old ways and go down with the rest of the precariat, or go with the flow and

[28] Ibid.

[29] S. North, Negotiating what's 'natural': persistent domestic gender role inequality in Japan. *Social Science Japan Journal*, 2009, 12(1), 23-44.

[30] Mathews, G. and White, B. (eds.), *Japan's Changing Generations: Are Young People Creating a New Society?* Routledge, 2004.

be miserable. As things stand at present, it seems that Japanese Millennials have chosen to float.

REFERENCES

Allison, A., and Baldwin, F. (eds.). (2015), Japan, The Precarious Future (Possible Futures). New York University Press.

Averianova, I. & Nae, N., (2016), Womenomics: How male undergraduates perceive female participation in the workforce. *NUCB Journal of Economics and Information Science,* 60(2), 1-17.

Ballantine, J.H., (1999), Getting involved in our children's education. *Childhood Education*, 75, 170–171.

Berger, A.A., (2018), *Cultural Perspectives on Millennials*, Palgrave MacMillan, 1-10.

Charlebois, J., (2014), *Japanese Femininities*. London: Routledge.

Charlebois, J., (2017), The shifting gender landscape of Japanese society. In S. Toyosaki and S. Eguchi (eds.) *Intercultural Communication in Japan: Theorizing Homogenizing Discourse*. Routledge, 55-69.

Deal, J.J., Altman, D.G., Rogelberg, S.G., (2010), Millennials at work: What we know and what we need to do (if anything), *Journal of Business and Psychology*, 25, 191-199. DOI 10.1007/s10869-010-9177-2.

Deloitte, (2017), The 2017 Deloitte millennial survey: Apprehensive millennials: seeking stability and opportunities in an uncertain world. Accessed November 24, 2017 from

https://www2.deloitte.com/global/en/pages/about-deloitte/articles/millennialsurvey.html

Donnison, S., (2007), Unpacking the millennials: A cautionary tale for teacher education. *Australian Journal of Teacher Education*, 32(3), 1-13. http://dx.doi.org/10.14221/ajte.2007v32n3.1.

Goldman Sachs, (2014), *Womenomics 4.0: Time to walk the talk.* Japan: Porfolio strategy research. May 30, 2014. Accessed July 18, 2017 from

http://www.goldmansachs.com/our-thinking/outlook/womenomics4-folder/womenomics4-time-to-walk-the-talk.pdf.

Foot, D.K., and Stoffman, D., (1998), *Boom, Bust and Echo 2000: Profiting from the Demographic Shift in the New Millennium.* Toronto: Macfarlane, Walter & Ross.

Haas, L., Allard, K., & Hwang, P., (2002), The impact of organizational culture on men's use of parental leave in Sweden.

Community, Work & Family, 5, 319-342.

Hewlett, C., (2011), Getting Japanese women back on track. *Harvard Business Review*. November 14, 2011.

Howe, N., and Strauss, W., (2000), *Millennials Rising: The Next Great Generation*. New York: Vintage Books.

Howe, N., and Strauss, W., (2003), Millennials Go to College. Great Falls, Va.: American Association of Registrars and Admissions Officers and LifeCourse Associates.

Howe, N. and Strauss, W., (2007), The next 20 years: How customer and workforce attitudes will evolve. *Harvard Business Review* July-August 2007, 41-52. Accessed Nov. 20, 2017 from

http://download.2164.net/PDF-newsletters/next20years.pdf

IRIS Market Research Worldwide. (2015). 2015 IRIS Millennials Survey. Accessed November 20, 2017 from

http://irismillennials.com/articles/2015-survey/

Ishii-Kuntz, M., (2003), Balancing fatherhood and work: Emergence of diverse masculinities in contemporary Japan. In J. Roberson and N. Suzuki (Eds.), *Men and Masculinities in Japan*. Routledge, 198-216.

Ishii-Kuntz, M., (2006), Child caring fathers in Japan and the U.S.A. *Annual Report of the Institute for International Studies*, 9, 125-136.

Kelan, E., (2012), *Rising Stars: Developing Millennial Women as Leaders.* Palgrave MacMillan.

Kelts, R., (2017), The Satori generation. *Adbusters: Journal of the Mental Environment*. Accessed Nov. 20, 2017 from

http://www.adbusters.org/article/the-satori-generation/

Kerstein, D., (2002), Today's generations face new communication gaps. Accessed November 23, 2017, from

http://www.kcnawic.org/uploads/4/4/7/2/4472081/04-15-2014.pdf

Kowske, B., Rasch, R., & Wiley, J., (2010), Millennials' (lack of) attitude problem: An empirical examination of generational effects on work attitudes. *Journal of Business and Psychology*, 25, 265–279.

Kotobank. Ikumen, (2015), Accessed November 20, 2017 from https://kotobank.jp/word/%E3%82%A4%E3%82%AF%E3%83%A1%E3%83%B3-188869

Lancaster, L. C., and Stillman, D., (2002), *When Generations Collide: Who They Are. Why They Clash. How to Solve the Generational Puzzle at Work.* New York: Harper Business.

Leete, L., (2006), Work in the nonprofit sector. In W.W. Powell and R.

Steinberg (eds.), *The Non-profit Sector: A Research Handbook* (pp. 159–179). New Haven, CT: Yale University Press.

Leung, L., (2004), Net-generation attributes and seductive properties of the internet as predictors of online activities and internet addiction. *Cyber Psychology and Behavior*, 7(3), 333–348.

Lyons, S.T., Ng, E.S., and Schweitzer, L., (2014), Changing demographics and the shifting nature of careers implications for research and human resource development. *Human Resource Development Review*, 13(2), 181–206.

Lyons, S., and Kuron, L., (2014), Generational differences in the workplace: A review of the evidence and directions for future research. *Journal of Organizational Behavior*, 35(S1), S139–S157.

Macnaughtan, H., (2015), Abe's womenomics needs to include men too. East Asia Forum (January 2015). Accessed May 12, 2016 from http://www.eastasiaforum.org/2015/01/28/abes-womenomics-needs-to-include-men-too/

Manpower Group, (2016), Millennial Careers: 2020 Vision. Facts, Figures and Practical Advice from Workforce Expers. Accessed November 20, 2017 from

http://www.manpowergroup.com/wps/wcm/connect/660ebf65-144c-489e-975c-9f838294c237/MillennialsPaper1_2020Vision_lo.pdf?MOD=AJPERES.

Martin, C.A., (2005), From high maintenance to high productivity. What managers need to know about Generation Y. *Industrial and Commercial Training*, 37, 39–44.

Mathews, G. and White, B. (eds.) (2004), *Japan's Changing Generations: Are Young People Creating a New Society?* Routledge.

Meiji Yasuda Institute for Live and Wellness, (2012), Attitude survey regarding men's happiness (Dansei no shiawase ni kansuru ishiki chousa).

Retrieved October 20, 2015 from

http://www.myilw.co.jp/research/report/pdf/myilw_report_2012_01.pdf.

Mie, A., (2014), Generation Resignation youngster defy stereotypes. *The Japan Times* (online), February 20, 2014. Accessed November 24, 2017 from

https://www.japantimes.co.jp/news/2014/02/20/national/generation-resignation-youngsters-defy-stereotypes/

MHLW, (2010), Document regarding job turnover of newly hired

workers (Shinki gakusotusha no rishoku joukyou ni kansuru shiryou). www.mhlw.go.jp/topics/2010/01/tp0127-2/24.html.

Mirza, V., (2016), Young women and social change in Japan: Family and marriage in a time of upheaval, *Japanese Studies*, doi: 10.1080/10371397.2016.1143331

Moore, R., (2005), Generation Ku: Individualism and China's Millennial Youth. *Ethnology, 44*(4), 357-376. doi:10.2307/3774095.

Nakano, L., and Wagatsuma, M., (2004), Mothers and their unmarried daughters: An intimate look at generational change. In Gordon Mathews and Bruce White (eds), *Japan's Changing Generations: Are Young People Creating a New Society?* London: Routledge Curzon, 137–54.

Nihon Keizai Shimbun, (2016), Baby boomers, bubble, lost generation, yutori: Towards an understanding of the salaryman generational theory in a subtracting world. April 12, 2016. Online edition. Accessed November 23, 2017 from

https://www.nikkei.com/article/DGXMZO98989500Z20C16A3I10000/

Nishi, M., (2017), Japanese and American Millennials characteristics and consumption behaviors. *Btracks*. Accessed November 22, 2017 from http://blog.btrax.com/jp/2017/10/16/millennials-characteristics/

Ng, E.S.W. and McGinnis Johnson, J., (2015), Millennials: who are they, how are they different, and why should we care? In R.J. Burke, C. Cooper, and A-S. Antoniou (eds.) *The Multi-generational and Aging Workforce: Challenges and Opportunities*, Cheltenham, UK: Edward Elgar Publishing. doi: http://dx.doi.org/10.4337/9781783476589.00014

North, S., (2009), Negotiating what's 'natural': persistent domestic gender role inequality in Japan. *Social Science Japan Journal*, 12(1), 23-44.

Ogasawara, Y., (1998), *Office Ladies and Salaried Men: Power, Gender, and Work in Japanese Companies.* University of California Press.

Osawa, M., and Kingston, J., (2015), Risk and consequences: The changing Japanese employment paradigm. In A. Allison and F. Baldwin (eds.). *Japan, The Precarious Future (Possible Futures)*. New York University Press, 58-86.

Osberg, L., (2003), Long run trends in income inequality in the United States, UK, Sweden, Germany and Canada: A birth cohort view. *Eastern Economic Journal*, 29(1), 121–141.

Prunier, L., (2014), Japanese men take paternity leave in record numbers: 2.6% in 2011. Posted by Stephanie Nakajima in Japan Subculture Research Center. Accessed November 14, 2015 from http://www.japansubculture.com/ikumen-japanese-fathers-man-up-at-home/

Rauch, J., (1992), *The Outnation, A Search for the Soul of Japan*. Boston, MA: Harvard Business School Press.

Stein, J., (2013), Millennials: The me me me generation. *Times U.S.* May 21, 2013. Accessed November 20, 2017 from

http://time.com/247/millennials-the-me-me-me-generation/

Strauss, W. and Howe, N. (1991). *Generations: The History of America's Future, 1584 to 2069*. New York: Morrow.

Sunderland, J., (2000), Baby entertainer, bumbling assistant and line manager: Discourses of fatherhood in parentcraft texts. *Discourse & Society*, 11(2), 249-274.

Twenge, J.M., (2006), *Generation Me: Why Today's Young Americans Are More Confident, Assertive, Entitled – and More Miserable than Ever Before*. New York: Simon & Schuster.

Twenge, J.M., (2008), Generational differences in psychological traits and their impact on the workplace. *Journal of Managerial Psychology* 23(8) 862-877.

Twenge, J.M., (2010), A review of the empirical evidence on generational differences in work attitudes. *Journal of Business and Psychology*, 25(2), 201–210.

Twenge, J.M. and Campbell, S.M., (2012), Who are the millennials? Empirical evidence for generational differences in work values, attitudes and personality. In E. Ng, S. Lyons, and L. Schweitzer (eds.), *Managing the New Workforce: International Perspectives on the Millennial Generation* (pp.152– 180). Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.

Vogel, S. and Vogel, S., (2013), *The Japanese Family in Transition: From the Professional Housewife Ideal to the Dilemmas of Choice*. Rowman & Littlefield Pub. Inc.

White, B., Cox, C., and Cooper, C., (1992), *Women's Career Development. A Study of High Flyers.* Cambridge, MA: Blackwell Publishers.

Wong, K., (2016), Gen X? Millennials? A quick guide to Japan's generation cohorts, *Btrax*, Accessed November 23, 2017 from

http://blog.btrax.com/en/2016/09/28/gen-x-millennials-a-quick-guide-to-japans-generation-cohorts/

World Economic Forum, (2017), Global Gender Gap Report 2017. Accessed November 13, 2017, at https://www.weforum.org/reports/the-global-gender-gap-report-2017

Yi, X., Ribbens, B. and Morgan, C.N., (2010), Generational differences

in China: career implications, *Career Development International*, 15 (6), 601-620.

Yi, X., Ribbens, B., Fu, L., Cheng, W., (2015), Variation in career and workplace attitudes by generation, gender, and culture differences in career perceptions in the United States and China. *Employee Relations*, 37(1), 66-82, https://doi.org/10.1108/ER-01-2014-0005

Zemke, R., Raines, C., and Filipczak, R., (2000), *Generations at Work: Managing the Clash of Veterans, Boomers, Xers, and Nexters in Your Workplace.* New York: AMACOM.

Zicuhr, K., (2010), Generations 2010. Pew Internet and American Life Project. *Pew Research Center.* Accessed November 23, 2017 from http://www.pewinternet.org/files/old-media/Files/Reports/2010/PIP_Generations_and_Tech10.pdf

TEACHER TRAINING FOR MULTICULTURAL CLASSROOM TEACHING

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Abstract: *„**The purpose** of this study is to address the nature of school diversity in teacher education for teaching in multicultural classes.*

***Diversity in cultures** has become a prominent feature of the 21st century. The influence of this feature can be seen in the classroom environment where the teacher is a multicultural student. It I s therefore necessary to prepare potential teachers for a diverse / multicultural classroom teaching.*

***This paper investigates** the current initial teacher education curriculum (B. Ed) of teaching staff for teaching in the multicultural classroom. It is a documentary analysis of the B. Ed curriculum.*

***The results** showed that B. Ed's current pre-service training curriculum as such does not have multicultural classroom elements. A proposed course is designed to meet this gap in the B teacher training curriculum. Ed. Dat is the fact that more ethnic groups and more cultures live in Romania.*

***In conclusion**, the findings of the present study are useful for educators, teachers, curriculum developers and policy makers."*

Keywords: *multicultural, classroom, potential teachers, initial training, teacher training.*

Introduction

Diversity has become a prominent feature of the 21st century, and this feature has gained great significance thanks to the development of Information Communication Technologies (ICT) and scientific developments that have transformed the entire world into a global state. The effect of this feature can be seen in the classroom environment. At present, even in a class there may be cultural diversity. In such an environment it is necessary to train teachers in teaching in a multicultural class. In the current world scenario, there is a need to promote understanding of unity and multiculturalism among people in a country. Creating awareness and

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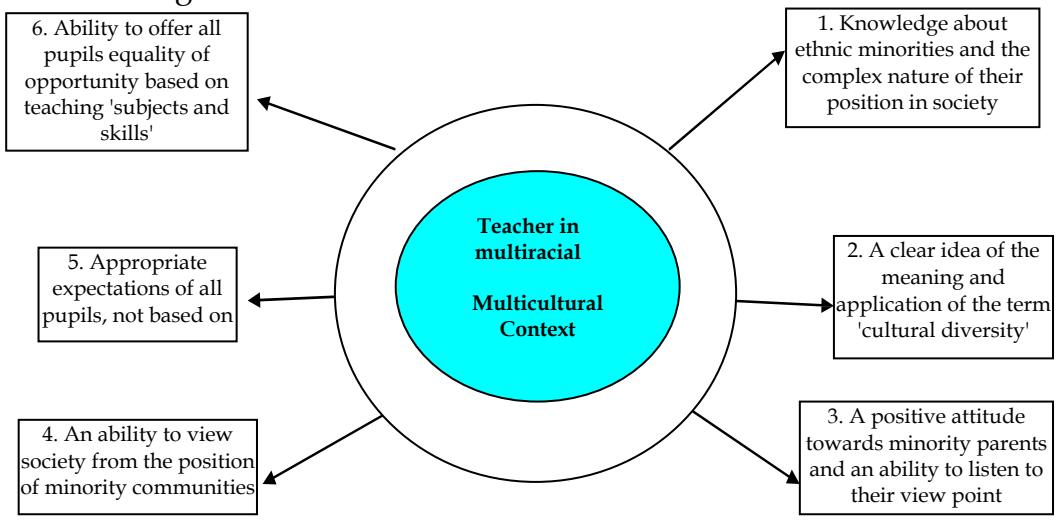
understanding about multicultural has become an essential part of the current education system. Diversity or multicultural education describes a training system that seeks to promote cultural pluralism and recognizes the differences between ethnicities and cultures.

It addresses the educational needs of a society that contains more than one set of traditions, which is a mixture of many cultures[1].

Differences can be found among pupils in a class, such as the difference between language, culture, race, religion, gender, learning styles, age, individual needs, background of social classes. The best practice for classroom teaching is to meet teacher training needs in recognizing students as unique individuals, respecting their cultural values and accepting them with their own identity. Specialists are of the opinion that when different groups of children through decentralization of the school are affiliated to school organizations, communication is complex because of relatively high cognitive and cultural differences, geographic distances, divergent interests and various interdependent relationships.

Henry (2003) deduced from his study that teachers engaging in cultural response - recognizing and appreciating the ethnic context of their students, create vibrant learning communities characterized by mutual respect and collaboration and passion for knowledge. "Today we prefer the salad bowl "metaphor to think of cultural pluralism, a situation where each ingredient is evaluated for itself, but it also links with them to do something different.



[1] Arends Richard, *Learning to Teach.* Mcgraw Hill New York, 2007, p. 61

Given that there is no universal construction of a multicultural course that is perfect for achieving all the goals for all students[2]. The best way to build a multicultural base for courses in all disciplines may be that of faculty in higher education institutions. Educators should critically reflect upon the understanding of multicultural education and their position among the diversity of the student community. The next responsibility that educators have to have is knowing their students. In a study by Allen (2000)[3], it is appreciated that "it is important for teachers to be educated about their pupils and their environments and to promote appreciation and respect for different cultures and religions" (p. 9).

Nagy, (2000) explains that diversity does not separate cultures by saying "we" and "them" when we talk about different ethnic groups or different cultural groups. The faculty focused on multiculturalism should include an openness to all students.

"Creative teaching strategies can help the learning process become less threatening and productive than traditional reading approaches" (Locke & Kiselica, 1999, p. 85). The use of different multicultural teaching techniques is useful for students in all learning styles.

Updating the curriculum by integrating ethnic, sexual and multicultural perspectives can be beneficial in defining the class as a multicultural learning environment (Benns-Suter, 1993).

The teacher should have the following information and training to deal with the various pupils in the classroom with a cultural diversity:

(Adapted from Banks 1981, in Tomlinson 1984: 49)

In this context, the teacher needs to know the different ethnic minorities and have an open mind and a pleasant behavior. The Council for the National Academic Awards (CNAA) in England has highlighted the qualities that the education courses offered in teacher training programs need to develop for the trainees. These are:

1. Be prepared to prepare all pupils for life in a multicultural society;
2. To be able to teach in the multiethnic classroom;
3. To know the problems of intercultural relations[4]

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[2] Henry, S.E., *Facing moral problems in teaching multiculturalism: Using pragmatism as a problem- solving tool.* Lewisburg, PA: Bucknell University. (ERIC Document Reproduction Service No. ED478108), 2003, p. 126

[3] Allen, J.D., *Teaching about multicultural and diversity issues from a humanistic perspective,* 2000, *PP. 179-182*

[4] Aurora, R. & Duncan, C., *Editorial*, In Multicultural Education: Towards Good Practice, (Eds) Aurora, R and Duncan, C., Rout ledge & Kegan Paul, London, Boston and Henley, 1986, p. 114

Teachers and researchers need to promote practices and principles for teaching and treating multicultural classes with various teaching groups.

Learning processes should not only lead students to understand and accumulate certain information, facts and data about certain knowledge and skills; it is therefore essential that teachers be prepared with a practical aspect of student learning obstacles, as recommended by Gagliardi (1994)[5], to be emotional, religious, cultural, logical and conceptual.

The teacher education curriculum must contain material related to the different aspects of the disadvantaged groups of society. There must be a methodology on teaching methods at different groups in a given classroom environment and conflict-handling of different student groups. As Bennett (1995) states, "Living the cultural differences is to encourage negative prejudices and stereotypes, and it is human nature to see those who are different as inferior." Banks (1991a) note the importance of integrating multicultural education into the curriculum of teacher education[6]. In her view, an effective teacher education policy for the 21st Century must include as a major focus the education of all teachers, including blacksmiths, in ways to help them receive the knowledge, skills and attitudes necessary to work effectively with students of various ethnic and social groups.

The need to address the nature of school diversity in teacher education.

Multicultural education implies a broad treatment / examination of all the factors related to the school environment. According to Gorski, (1995), the factors related to the school environment are:

 Student experiences should be brought to the forefront of the classroom, making learning more active, interactive and more engaged.

 Traditional teaching approaches and pedagogical models should be deconstructed to examine how they contribute to and support institutional oppressive systems.

 Known abusive practices must be exposed and critically analyzed.

 All aspects of teaching and learning in schools must be reorientated and re-designed for students; instead of standardized scores of classes

[5] Gagliardi, Raul, *An Integrated Model for Teacher Training in Multicultural Contexts*. New York: UNESCO International Bureau of Education, 1994, pp. 230-233

[6] Dasen, Pierre, *Scientific Foundations of Intercultural Education in Intercultural Education. Experiences, policies, strategies,* Polirom Publishing House, Iaşi, 1999, p.162

and school rankings, emphasis must be placed on critical and creative thinking, on learning abilities and on deep social awareness.

 Pedagogy / education must offer equal opportunities for all students to capitalize on their potential.

Pedagogy must be flexible enough to allow productive education in the diversity of learning styles present in each classroom. All the aforementioned aspects of schooling must be included in the curriculum of teachers' profensiology programs to provide them with practical training on various aspects of pupils[7]. The main thing is that we need to prepare future teachers in ways to promote the similarities between the various aspects of cultural diversity and not to promote any aspect of culture and the promotion of the nation's culture must be horizontal in a particular society. Despite the fact that a particular group is typical, we must offer the training of future teachers as to how to promote and maintain unity within multiple cultural groups. Research has found that a school can involuntarily contribute to student aggression by inadequate classroom placement, irrelevant instructions, inconsistent management, overcrowded classes, rigid behavioral requirements, or insensitivity to student diversity (Gable, Manning and Bullock, 1997).

Van Acker, Grant and Henry (1996) when they say that "teachers need information about how they interact with students." Differentiated treatment of students becomes evident "(p. Zeichner (1993) identified some key elements of effective teacher education for diversity that provide the organizational framework for "Teacher Education for Diversity"[8]. These elements are as follows:

Element 1: Students are helped to develop a clearer sense of their ethnic and cultural identities.

Elements 2 and 3: Students are helped to examine their attitude towards other ethno-cultural groups. They are taught about the dynamics of prejudice and how to take them into account in the classroom.

Element 4: Students are taught about the dynamics of privileges and about school practices that contribute to the reproduction of societal inequalities.

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[7] Rey, Micheline, From logic "mono" to logic "inter". Paths for intercultural and solidarity education in Intercultural Education. Experiences, policies, strategies, Polirom Publishing House, Iasi, 1999pp. 243-245

[8] Wieviorka, Michel, *The Space of Racism,* Humanitas Publishing House, Bucharest, 1994, pp. 154-156

Element 5: The teacher training curriculum addresses the history and contributions of different ethno-cultural groups.

Element 6: Students are informed about the characteristics and learning styles of different groups and individuals. They are taught about the limits of this information.

Element 7: The Teacher Training Curriculum pays special attention to the knowledge of socio-cultural research, the relationship between language, culture and learning.

Element 8: Students are taught various procedures to obtain information about communities represented in classrooms.

Elements 9 and 10: Students are taught how to evaluate the relationships between classroom methods and preferred learning styles and interactions in student homes and communities. They are taught how to use different learning strategies and assessment procedures that are sensitive to cultural and linguistic variations and how to adapt classroom training and assessment to adapt to the cultural resources that students bring to school.

Element 11: Successful teaching examples are shown to pupils in ethnic minority classes and language differences.

Gibson (2004) is of the opinion that teachers should learn appropriate management and classroom techniques (Sheets, 1996) and related issues cultural diversity. Multicultural education of teaching staff involves effective teaching skills, sensitive to cultural diversity. Research into the need to train teachers for teaching in different classrooms with children from several ethnic backgrounds has provided adequate grounds for the researcher to conduct a research study. To investigate the need for teacher training with reference to multicultural teaching.[9]

The multicultural school is represented by schools where students of different cultures learn. Sometimes multiculturality is also called the diversity of cultures in the classroom. In such an environment where there are pupils from multicultural environments, specific teaching methods, as well as techniques of approaching and interacting with pupils from multicultural environments, are required. In the current scenario in the country, there is a pressing need to understand the culture of different ethnic groups in the country and to promote education with confidence, harmony and unity in cultural diversity.

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[9] Salat, Levente, *Liberal Multiculturalism: Normative Basics of Authentic Minority Existence,* Polirom Publishing House, 2001, p. 211

Generally speaking, in the curriculum for teachers, we find the elements of different differences of a different nature, such as psychic, social, physical differences, but the most important factor that has not been taken into account in the current curriculum for teacher education is diversity among pupils belonging to different multicultural classes[10].

Statement of the Problem: The present paper is an attempt to evaluate the B. Ed (Bachelor of Education) teacher curriculum with a specific reference to the future teacher training for teaching in multicultural courses.

Research Questions: This research has been conducted to find answers to the following questions:

1. What is multicultural consciousness or diversity in cultures?
2. What is the current situation of the teacher training curriculum, with specific reference to teaching staff teaching for multicultural classes.
3. It is necessary to address the multicultural diversity factor in the training of teachers.
4. Why is it essential to train teachers to teach in a multicultural classroom?
5. Is it necessary to develop a special training course for teacher education that addresses the nature, styles and problems of different cultures and the specific teaching methods for teaching in multicultural classrooms?

Delimitation of the study

The study was limited to the following factors:

1. Examining the curriculum for teacher training by B. Ed (Bachelor of Education).
2. Evaluation of courses taught at level B. Teacher training.
3. Analysis of subjects / courses B. Ed with reference to teachers teaching for teaching in multicultural courses.
4. Carrying out research by analyzing documents and obtaining information from teachers and teachers enrolled in the B. Ed.

[10] Nagy, N., *Fostering the exchange of ideas about diversity in the higher education classroom*. Scranton, PA: Marywood University. (ERIC Document Reproduction Service No. ED470706), 2000, p. 75

5. Educational consultants and potential teachers enrolled in the B. ED Editing Program, from the National University of Modern Languages (NUML).
6. Proposals / development of teacher training only for Level B. Ed.

Study procedure: It is a theoretical and review study. The current curriculum of B. Ed has been assessed with reference to the issue of teacher training for multicultural classroom teaching. Have been consulted, literature available in the form of books, articles, research papers theses.

The theoretical framework of the study

After reviewing the literature on the subject, the researcher decided to develop courses to teach teachers to teach in a multicultural classroom using the guidelines given by the Academic Awards Council

The competences that the Education courses offered through the Teacher Training Programs have to develop are: (Aurora R and Duncan C: 1986: 174):

1. Be prepared to prepare all pupils for life in a multicultural society;
2. To be able to teach in the multiethnic classroom; and,
3. To know the problems of intercultural relations (Analysis of the current curriculum of B. Ed

Here are the major subjects / courses that are taught in most teacher training institutions for teacher training from B. Ed:

1. Functional English
2. Introduction to the philosophy of education
3. Human development and learning
4. Curriculum development and training
5. Research, measurement and evaluation
6. Current education and perspectives
7. Guidance and counseling.
8. Planning, organizing and managing the school
9. Pedagogic techniques on Teaching English and general sciences
10. English teaching practice
11. The practice of teaching general science and computers

Of the eleven courses, 8 courses are theoretical, and 3 courses are related to teacher training in practical skills of teaching specific subjects. It is therefore necessary to propose a teacher training course for the teaching staff to teach in the multicultural classroom.

Discussions and conclusions

In the multicultural class, communication is complex because of relatively high cognitive and cultural differences and multiple interdependent relationships. Updating the curriculum by incorporating ethnic, sexual and multicultural perspectives can be beneficial in defining the class as a multicultural learning environment. Teachers who engage in cultural response - recognize and appreciate the ethnic context in class, creating vibrant learning communities characterized by mutual respect and collaboration and passion for knowledge. The results are excellent.

In the initial and continuous training of cadres there is the question of developing teachers' training courses for a certain national culture scenario. There is a universal construction of a multiculturalism course that is perfect for achieving all the goals for all students. "

It can be concluded that by including the courses offered in the teacher training curriculum, the current hate of ethnicity and frustration in different cultures can be minimized, if not eliminated, because the teacher plays a vital role in the formation of the mind, and the teacher is the person who has to interact directly with pupils belonging to different cultures. And if the teacher is trained how to deal with students from different cultures, understand their learning difficulties, their language problems, without discouraging and degrading their cultures, it has respect and respect for each culture without discrimination and prejudices, respect for the cultures of others. In this way, national unity will be promoted through multiculturalism and we will have a society whose individuals respect the opinions and cultures of others, and in school, students respect the opinion and culture of each of their colleagues regardless of ethnicity and culture.

Recommendations:

We list some suggested activities to promote multicultural group appreciation:

1. Representing different cultural groups such as displaying charts, articles, images, videos, story books, language books, cultural

information, social and moral values related to a specific cultural group.
2. Holidays / cultural days for different cultural groups in the class of students.
3. Showing different contributions / created of cultural groups without discrimination.
4. Debating competitions between different cultural groups.
5. Organizing excursions / visits in different areas of the country.
6. Celebrating national days through the participation of different cultural groups of the class.
7. Create an atmosphere in which each student of the class has respect for the feelings and experiences of other cultural groups.
8. Promote cooperative learning activities involving different groups.
9. Carrying out teamwork / collaborative project work.

REFERENCES

Allen, J.D., (2000), *Teaching about multicultural and diversity issues from a humanistic perspective*, pp. 179-182.

Aurora, R. & Duncan, C., (1986), *Editorial, In Multicultural Education: Towards Good Practice, (Eds) Aurora,* R. and Duncan, C., Routhengge & Kegan Paul, 114.

Arends, Richard, (2007), Learning to Teach. McGraw Hill New York, p. 61.

Dasen, Pierre, (1999), *Scientific Foundations of Intercultural Education in Intercultural Education. Experiences, policies, strategies,* Polirom Publishing House, Iaşi, p.162.

Gagliardi, Raul, (1994), *An Integrated Model for Teacher Training in Multicultural Contexts.* New York: UNESCO International Bureau of Education, pp. 230-233.

Henry, S.E., (2003), *Facing moral problems in teaching multiculturalism: Using pragmatism as a problem-solving tool.* Lewisburg, PA: Bucknell University. (ERIC Document Reproduction Service No. ED478108), p. 126

Nagy, N., (2000), *Fostering the exchange of ideas about diversity in the higher education classroom.* Scranton, PA: Marywood University. (ERIC Document Reproduction Service No. ED470706), p. 75

Salat, Levente, (2001), *Liberal Multiculturalism: Normative Basics of Authentic Minority Existence,* Polirom Publishing House, p. 211

Rey, Micheline, (1999), *From logic "mono" to logic "inter". Paths for intercultural and solidarity education in Intercultural Education. Experiences, policies, strategies,* Polirom, Iasi, pp. 243-245

Wieviorka, Michel, (1994), *The Space of Racism,* Humanitas Publishing House, Bucharest, pp. 154-156.

ACTIVE LEARNING IN JAPAN AND EUROPE

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Abstract: *The present paper offers insight into the application of active learning in Japanese and European undergraduate education, and examines active learning strategies used at Nagoya University of Commerce and Business (NUCB) and Maastricht University. Active learning is a recently introduced teaching methodology in Japan, and is regarded by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) as an alternative to the traditional, "passive" learning, which is based on rote memorization and teacher-centered classroom. It equips university graduates with generic skills necessary for working in increasingly challenging corporate environments. However, although active learning presents a number of benefits, insufficient experience or knowledge regarding active learning and its application may not yield the expected results, and may even have the opposite effect of demotivating and discouraging students.*

Keywords: *Active learning, generic skills, university education, employability, PBL.*

> Learning is not a spectator sport. Students do not learn much just by sitting in class listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, apply it to their daily lives. They must make what they learn part of themselves.
>
> (A.W. Chickering and Z.F.Gamson, *Seven Principles for Good Practice in Undergraduate Education*).[1]

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The concept of "active learning" has been regarded as an alternative to traditional teaching. In Japan it has been introduced quite recently, with the aim of cultivating generic skills necessary in industry, such as critical thinking, analytical reasoning, problem-solving and writing (Arum and Roksa, 2012, cited in Ito, 2017; Ito and Kawazoe, 2015).

Active learning is defined as

> "The process of having students engage in some activity that forces them to reflect upon ideas and how they are using those ideas. Requiring students to regularly assess their own degree of understanding and skill at handling concepts or problems in a particular discipline. The attainment of knowledge by participating or contributing. The process of keeping students mentally, and often physically, active in their learning through activities that involve them in gathering information, thinking and problem solving."[2]

Bonwell and Eison define it as "anything that involves students in doing things and thinking about the things they are doing"[3], and Felder and Brent as "anything course-related that all students in a class session are called upon to do other than simply watching, listening and taking notes"[4]. For Mizokami, it is "all kinds of learning beyond the mere one-way transmission of knowledge in lecture-style classes (=passive learning)".[5] Active learning is student-centered, collaborative, participative, and self-reflective. "Student-centered" is considered to be opposed to the more traditional "teacher-centered" approach (Pedersen and Liu, 2003). With the student-centered approach, there is a shift in the instruction paradigm from "teaching" to "learning" (Barr and Tagg, 1995;

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[1] Chickering, A.W. and Gamson, Z.F. Seven Principles for Good Practice in Undergraduate Education. *American Association for Higher Education Bulletin*, 1987, p. 5.

[2] J.W. Collins 3rd & N. P. O'Brien (editors). *The Greenwood Dictionary of Education*, Westport, CT: Greenwood, 2003.

[3] Bonwell, C.C., & Eison, J.A. *Active learning: Creating excitement in the classroom (ASHE–ERIC Higher Education Rep. No. 1).* Washington, DC: The George Washington University, School of Education and Human Development, 1991, p. 2.

[4] Felder, R.M. & Brent, R., Navigating the bumpy road to student centered instruction, 1996, p. 2 Retrieved September 8, 2017 from http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/Resist.html.

[5] Mizokami, S., Deep active learning from the perspective of active learning theory. In Matsushita, K. (Ed.) *Deep Active Learning: Deepening Higher Learning*, Tokyo, Keiso Shobo, 2014, p. 79.

Mizokami, 2014; Tsuchimochi, 2016). Students take control of their own learning and share acquired knowledge in small group settings, with the teacher as facilitator (Park and Choi, 2014). The teacher provides opportunities for students to learn on their own and by sharing with others, or by channeling the discussions and providing feedback whenever necessary.

Ryle (1949) pointed out that learning is essentially divided into knowledge of facts (declarative learning) and knowledge of how to do things (procedural learning). Active learning requires the teacher "to privilege the learner's participation over his or her declarative knowledge of the subject".[6] Procedural (or experiential) learning is considered to hold more value than declarative learning, especially in the workplace (Michael, 2006; Segal and Chipman, 1985). Procedural learning is not strictly limited to STEM fields, but in recent years it has become an indispensable element of learning in social studies and humanities. According to Clark and White, "a quality university business education program must include an experiential learning component".[7] As students of a business program prepare to become future business leaders and employees who will participate in the creation and implementation of business projects, the contents, pace of discussions, and even the atmosphere of their future workplace should be reproduced in class as authentically as possible.

Benefits of active learning

> *What I hear, I forget. What I see, I remember. What I do, I understand*
>
> (Xung Kuang).[8]

Among the recognized benefits of active learning there are increased motivation, improved deep understanding, enhanced retention, and development of critical thinking skills[9]. Students are engaged in learning

[6] MacVaugh, J. & Norton, M., Introducing sustainability into business education contexts using active learning, *International Journal of Sustainability in Higher Education*, 2012, 13(1), p. 74.

[7] Clark, J., & White, G. "Experiential Learning: A Definitive Edge In The Job Market". *American Journal of Business Education*, 2010/3(2), 115-118.

[8] Xun Kuang (340-245 BC), Chinese teacher and philosopher, author of *Xunzi*, an ancient collection of philosophical writings.

[9] Prince, M., Does active learning work? A review of the research. *Journal of Engineering Education*, 2004, 93, 223-231.

through such strategies as cooperative/collaborative/group learning, and problem based learning (PBL) or case-based learning, think-pair-share activities, conceptual change strategies, inquiry-based learning, discovery learning, and technology-enhanced learning[10]. There is a growing body of evidence in favor of collaborative learning, proving that collaborative learning is superior to individual learning (Bossert, 1988; Blumenfeld et al., 1996; Johnson et al., 2006).

Active learning contributes to the cultivation of transferable or generic skills, which are most in demand in industry. Yorke (2006) points out that, despite the fact that employers are satisfied with students' theoretical knowledge, the traditional methods of passive learning have failed to nurture generic or transferrable skills, which most employers are expecting to see in their young employees. Among transferable skills Bennett distinguishes personal skills, such as "ability to work well with others, the ability to organise, self-motivation", and information technology skills.[11] Dyer, Greersen, and Christensen (2011) further distinguish between generic skills of "delivery" and "discovery". Delivery skills are related to "analyzing, planning, detail-oriented, implementing and disciplined executing" and discovery skills "are associating, questioning, observing, networking, and experimenting".[12] Ito and Kawazoe (2015) point out that many famous Japanese companies such as Toyota, Sony or Nintendo, which have created and developed innovative products, were originally discovery-oriented. However, in recent years, due to the fast pace of innovation, these companies might have run out of innovative power, and have thus become delivery-oriented. Ito and Kawazoe (2015) stress that it is the research (i.e. discovery) skills that are vital for the progress of industry, and therefore Japanese education should focus more on cultivating innovation capabilities. However, they argue, it is more difficult to train discovery skills, and the current Japanese education might be more apt for educating disciplined workers than creative innovators.

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[10] Michael, J. "Where's evidence that active learning works?" *Advances in Physiology Education* 30 (2006): 159-167, p. 160 and Mullen, E.T. "Teaching an engaged analysis class through active learning". *PRIMUS*, 22 (2012), 186–200

[11] Bennett, R., Employers' Demands for Personal Transferable Skills in Graduates: a content analysis of 1000 job advertisements and an associated empirical study, *Journal of Vocational Education & Training*, 2002, 54:4, DOI: 10.1080/13636820200200209, p. 457.

[12] Ito, H. & Kawazoe, N., Active learning for creating innovators: Employability skills beyond industrial needs. *International Journal of Higher Education*, 4(2). 2015, https://doi.org/10.5430/ijhe.v4n2p81.

Active learning and Japanese tertiary education: why now?

Although active learning methodology has been around since 1990s, in Japanese education it debuted quite late, with a report of the Central Council for Education (CCE) published in August 2012 (Matsushita, 2018). The report defines active learning as a student centered learning methodology which uses methods like collaborative learning and problem based learning (Ito, 2017). The ultimate goal of this methodology is to cultivate generic skills, such as "cognitive, ethical and social capabilities, cultural refinement, knowledge, and experience".[13] The CCE report also stresses the importance of teaching these capabilities through the active participation of learners, instead of the one-sided lecture style of the past (Matsushita, 2018). Ito (2017) and Ito and Kawazoe (2015) point out that one of the goals of adopting active learning in Japanese education is to nurture generic skills, which university students will need in their future jobs. Ito and Kawazoe (2015) consider that the lack of generic skills causes mismatches between university graduates' capabilities and industry needs.

Yet why is active learning becoming fashionable in Japan now, after almost two decades? It is because in recent years the demand for generic skills in Japanese businesses is higher compared to previous decades. From the viewpoint of attitudes regarding employment, Hamaguchi (2013) describes Western societies as "job-oriented societies", and Japan as a "membership-oriented society".[14] Matsushita (2018) defines the essential difference between employments in each type of society. Thus, "[i]n a job-oriented society people are sought based on the job they are to perform; in a membership-oriented society people are sought based on their potential for contributing to a specific community (e.g., company or government office), flexibly allocating various tasks once employed."[15] Extrapolating this to university education, it would seem that Western universities equip their students with field knowledge and generic skills, whereas the traditional, "passive" learning, widespread in Japanese universities, brings up flexible and faithful workers, who can perform all kinds of job duties, without much emphasis on specific job skills. This is because, as

[13] Matsushita, K., An invitation to deep active learning. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education*. Springer Nature, p. 16.

[14] Hamaguchi, K., Wakamono to rôdô: "Nyûsha" no shikumi kara tokihogusu [Youth and labor: Unravelling the problem from the perspective of the system of "entering a company"]. Tokyo, Japan: Chuokoron-Shinsha, 2013.

[15] Matsushita, K. ibid.

Matsushita (2018) points out, that in the past, Japanese employers used to judge the candidates not according to their abilities, but rather by the name of the university and the department they graduated from, and there was not much interest in cultivating generic skills in social science and humanities departments.[16] Kajihara (1997) found that larger Japanese companies were more particular about professional skills, whereas medium-size companies focused more on general commonsense and social knowledge.[17] However, Matsushita continues, as Japan's unique type of "membership-oriented" society is no longer sustainable, the country's education system must change direction and ready itself for a "job-oriented" society.[18]

Not all that glitters is gold

Due to the relative novelty of the concept of active learning, insufficient experience, and a continuation of the traditional methods in primary and secondary education, there has been a fair amount of confusion regarding the most appropriate ways of applying active learning in Japanese tertiary education. Some authors argue that using collaborative or problem based learning methods does not necessarily mean that active learning is effectively applied (Ito, 2017; Nakai, 2015). In the same vein, others point out that active learning strategies used in isolation offer no guarantee that the expected educational outcomes will be achieved (Jones and Palmer, 2017; Kirschner, Sweller and Clark, 2006). Matsushita (2018) also considers that active learning is not a "silver bullet" of reform, and that, while some students may benefit from collaborative learning, others might find the atmosphere distracting and difficult to concentrate (p. 18). Mori (2018) warns against using "active learning" methods such as collaborative learning or problem based learning extemporaneously, as "band-aid" solutions, without a careful preparation and consideration of learning goals. She points out that, in order for active learning to be effective, it is necessary to give students time to first "internalize", or assimilate, the knowledge, before they are asked to "externalize" it, that is, to use it for group projects or problem

[16] Matsushita, K., Chapter 1. Introduction. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education* 2018. Springer Nature, p. 5.

[17] Kajihara, K., "The student's impression as expected by an enterprise", *Management Consulting Journal*, Vol. 44 No. 7, 1997, pp. 100-3 (in Japanese).

[18] Hamaguchi ibid.

solving.[19] She also warns that collaborative learning might cause discrepancies in student contribution and quality of learning. She emphasizes that, in a lecture-style classroom, learning begins in classroom; however, in an active learning classroom, it is essential for students to begin the "internalizing" process of learning before class (i.e. with home reading/assignments), and "externalize" the acquired knowledge through group projects and discussions in the classroom.

Active learning at NUCB: Observation of a Global Leadership Program (GLP) classroom.

We observed an undergraduate leadership classroom at Nagoya University of Commerce and Business (NUCB), a private business university in Japan. The course, "Rethinking Leadership", is a part of the Global Leadership Program, consisting of courses in business, culture, ethics, leadership and management offered to undergraduate students from NUCB and exchange students from partner schools from Europe, Asia, North and South America. The course is taught entirely in English. The class meets once a week and is comprised of Japanese and non-Japanese students. For observation we used an Active Learning Classroom Observation Tool developed by Birdwell, Roman et al. (2016).

Bridges (1977) notes that traditional leadership education used to resemble little of the real life situations in which leaders act. The learning style, language, emotional climate, and tempo have little in common with the situations students will have to face as leaders. The learning is "static, individualistic, passive, and subordinate", the emotional climate is neutral, and the tempo is far from the accelerated pace of the real life situations.[20] Higano (2018) points out that effective leadership education must be conducted using active learning methodology.[21] He suggests that for leadership courses, students can use the knowledge they already acquired in other classes and use it for output in leadership class projects.

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[19] Mori, T., The flipped classroom: An instructional framework for promotion for active learning. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education*, 2018, p. 98.

[20] Bridges, E.M. "The Nature of Leadership." In L. Cunningham, W. Hack, and R. Nystrand (eds.), Educational Administration: The Developing Decades. Berkeley, Calif.: McCutchan, 1977.

[21] Higano, M., New leadership education and deep active learning. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education*, 2018, p. 211.

The learning objective of the present class is to help students understand the concept of followership. In a pre-observation discussion, the professor pointed out that he would focus on student engagement and responsiveness using reading, listening, speaking, and writing, in an attempt to make students understand and remember the content of the course.

The observed class is held in the Active Learning Center (previously known as Computer Center, a building renovated in 2016, which features semi-circular auditoriums and flat-type classrooms equipped with whiteboards, projectors, computers, and ample space for group work/discussions). As Beichner et al. (2007), Park and Choi (2014) and Donovan et al. (1999) point out, classroom space is one of the essential factors which influence learning outcomes. The so-called SCALE-UP classroom (an acronym of Student-Centered Activities for Large Enrollment Undergraduate Programs), is a non-traditional type of classroom which allows lecture style and collaborative/interactive style learning in the same space (Beichner et al., 2007). Carmean and Haefner (2002) point out that learning, especially "deep learning" should not only be "active", but also "social", involving cognitive apprenticeship, promoting cooperation among students, offering prompt feedback, encouraging contact between students and teachers, and emphasizing rich, timely feedback.[22] A SCALE-UP type classroom is designed to facilitate social interaction among students, who are expected to engage in collaborative learning, and exchanges between students and teachers.[23] The benefits of the collaborative and interactive nature of a SCALE-UP classroom upon students have been found to be improved ability to solve problems, better understanding of concepts, better attitude and performance, and improved student retention (Beichner, 2008; Beichner et al., 2007; Oliver-Hoyo et al., 2004; Dori and Belcher, 2004).

The observed classroom has a SCALE-UP layout, with octagonal tables seating six people, whiteboards mounted on the walls, projector, two large screens for projection, and wi-fi internet access (Fig. 1 below). Students use their own laptops for research and written assignments.

[22] Carmean, C. and Haefner, J., Mind over matter: Transforming course management systems into effective learning environments, *Educause Rev.* 37 (6), 2002, p. 26.

[23] https://serc.carleton.edu/sp/library/scaleup/what_scale-up.html

Fig. 1. Active learning classroom layout at NUCB.

Forty students attended the class, and were seated in groups of three to six each. The class consisted of a mini-lecture, in which the professor summarized some of the leadership/followership characteristics, a survey and a short discussion. Before the lecture, the professor handed out the survey to the group leaders, who then distributed them to their peers.

1. Instructor use of the Active Learning Classroom to support active learning.

During the mini-lecture, which was delivered using the projector screens and whiteboard, the professor circulated among tables, asking the students to exemplify the concepts presented with examples from their own life or experience, to define concepts like implicit/explicit leadership, or to discuss certain business practices from the viewpoint of their own cultural experience (many of the students present were exchange students from NUCB partner schools in Europe, Asia and North America). The students used their own laptops to take notes or look up the concepts that came up during the lecture.

2. *Collaborative learning in the Active Learning Classroom*

After the mini-lecture, the professor introduced the survey, which would make the object of the following week's discussion, and asked all the students to fill it out, encouraging them to discuss with their peers for clarification if necessary. He circulated among tables and made sure that all the students understood the questions, providing explanation whenever solicited. The students completed the questionnaire discussing occasionally and consulting with each other about the questionnaire items. Finally the professor elicited responses and discussed the significance and implications of each survey section for the concept of leadership self-efficacy.

3. *Classroom management in the Active Learning Classroom.*

The professor kept the theoretical explanation to a minimum, and attempted to make it accessible with concrete examples from his own experience. The students used their laptops to take notes, were generally alert and attentive, and gave pertinent answers to the professor's questions, either whenever solicited or voluntarily, by raising their hands.

4. *General observations.*

The observed class displayed a good balance between input (mini-lecture) and output (survey and discussions). The professor used the survey as an experiential learning component to make the students understand the concept by having them reflect on their own perception of leadership. A greater amount of post-survey discussion was anticipated; however, due to the fact that students were relatively slow to settle and prepare for class at the start, there was relatively little time left for more in-depth discussions.

Maastricht University – the extreme pole of active learning

In the heart of Europe, at the southernmost tip of the Netherlands is Maastricht University, where all the programs are conducted within the PBL methodology frame. It is also the most internationalized university in the Netherlands, with 49% of students and nearly 40% of staff coming from abroad, and most of the study programs delivered also in English[24]. Adopting the PBL system in all programs can be financially challenging,

[24] statistical data are taken from the site of the university, https://www.maastrichtuniversity.nl/education/why-um

as students are divided in tutorial groups of 15, each group having a tutor who is accessible and always available to the students. However, the fact that Maastricht has become "the 6-th best young university worldwide" and no. 103 out of 1102 universities, according to the Times Higher Education (THE) World University Rankings[25], scoring high in international outlook and the income made from commissions from the business sector, shows that the investment made in human resources and infrastructure pays well. Foreign students choose Maastricht particularly for its PBL programs, as many interviews with its students show[26].

It can be argued that PBL appeared in medical and science education and it is not easy to extend in other fields, but the remarkable achievements of this university prove that it is possible to introduce PBL in social sciences and economics, even in arts and culture. Thus, in the THE Subject Rankings of 2016, the University of Maastricht was ranked 65th for Social Sciences, while in 2017 it ranked 59th for Clinical, Pre-clinical and Health, and even in Business & Economics it obtained a spot in the top 50, as it was ranked 45th.

To see what makes the Maastricht PBL programs so special, we will give a short outline of how they work. There are only 3 courses/week, but the two semesters are divided in two 2 months periods, and the courses change for each module. There are an average of 10 contact hours (they can vary between 6 and 12 according to Department), and 30 hours of self-study per week. Some courses have only one initial lecture, and then only PBL tutorials for six weeks, others have three courses and the rest tutorials, the last week of a module being always exam week.

Teaching methods can thus comprise assignments (in case of language teaching), lectures, PBL, presentations by students, work in subgroups, papers, or skills development.

The famous seven steps approach to PBL, devised at Maastricht University, can be summarized as:

1. **discussing the case** and making sure everyone understands the problem
2. **identifying the questions** that need to be answered to shed light on the case

[25] https://www.timeshighereducation.com/world-university-rankings/2018/world-ranking#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/stats

[26] https://www.maastrichtuniversity.nl/education/why-um/problem-based-learning

3. **brainstorming** what the group already knows and identify potential solutions
4. **analysing and structuring** the results of the brainstorming session
5. **formulate learning objectives** for the knowledge that is still lacking
6. **independent study**, individually or in smaller groups: reading articles or books, or attending lectures to gain the required knowledge
7. **discuss** the findings[27]

The initial five steps are set in the first lecture/tutorial, then the students divide in small groups or work individually to solve the problem, and then meet again in the second tutorial to discuss the results as a group.

My analysis of the Maastricht PBL method relies on interviews with several students of Romanian origin as much as on academic studies in the field, and the main reason students give for liking Maastricht so much is that it changed their outlook on life completely, making them responsible for what they learn, and giving them a practical approach and a feeling of how society actually works. The cases and problems which they study in tutorials actually appear in their further work, in the companies where they have internships, or are given as cases to solve during job interviews. Solving complex problems and reading and selecting information you need in order to solve the problem, as well as coordination and cooperation within the group, ensuring that everybody understands and does his part of work, are skills that will stand good later in life. As everywhere in life, students may sometimes encounter less pleasant problems, but the tutors are always there to help, and the overall satisfaction with this type of approach makes PBL one of the most promising methods in education.

REFERENCES

Arum, R., & Roksa, J., (2012), *Academically adrift: Limited learning on college campuses*. Chicago, IL: University of Chicago Press.

[27] https://www.maastrichtuniversity.nl/education/why-um/problem-based-learning

Barr, R.B. and Tagg, J., (1995), From teaching to learning–a new paradigm for undergraduate education. *Change*, 13–25.

Beicher, R., (2008), The SCALE-UP Project: A Student-Centered Active Learning Environment for Undergraduate Programs an invited white paper for the National Academy of Sciences, September 2008.

Beichner, R., Saul, J., Abbott, D., Morse, J., Deardorff, D., Allain, R., Bonham, S., Dancy, M., and Risley, J., (2007), Student-Centered Activities for Large Enrollment Undergraduate Programs (SCALE-UP) project, in *Research-Based Reform of University Physics*, edited by E.F. Redish and P.J. Cooney, American Association of Physics Teachers, College Park, MD.

Bennett, R., (2002), Employers' Demands for Personal Transferable Skills in Graduates: a content analysis of 1000 job advertisements and an associated empirical study, *Journal of Vocational Education & Training*, 54(4), 457-476, DOI: 10.1080/13636820200200209.

Birdwell, T., Roman, T.A., Hammersmith, L. & Jerolimov, D., (2016), Active learning classroom observation tool: A practical tool for classroom observation and instructor reflection in active learning classrooms. *Journal on Centers for Teaching and Learning*, 8, 28-50. Retrieved Nov 12 2017 from https://www.researchgate.net/publication/312937769_Active_Learning_Classroom_Observation_Tool_A_Practical_Tool_for_Classroom_Observation_and_Instructor_Reflection_in_Active_Learning_Classrooms.

Blumenfeld PC, Marx RW, Solloway E, and Krajcik J. (1996). Learning with peers: from small group cooperation to collaborative communities. *Educational Researcher* 25, 37–40.

Bonwell, C.C., & Eison, J.A., (1991), Active learning: Creating excitement in the classroom*, ASHE–ERIC Higher Education Rep. No. 1.*Washington, DC: The George Washington University, School of Education and Human Development.

Bossert, S.T., (1988), Cooperative activities in the classroom. *Review of Research in Education* 15, 225–250.

Bridges, E.M., (1977), The nature of leadership. In L. Cunningham, W. Hack, and R. Nystrand (eds.), *Educational Administration: The Developing Decades*. Berkeley, Calif.: McCutchan.

Carmean, C. and Haefner, J., (2002), Mind over matter: Transforming course management systems into effective learning environments, *Educause Rev*. 37 (6), 26.

Chickering, A.W. and Gamson, Z.F., (1987), Seven Principles for Good Practice in Undergraduate Education. *American Association for*

Higher Education Bulletin, 3-7. Retrieved Nov. 11, 2017 from http://files.eric.ed.gov/fulltext/ED282491.pdf.

Clark, J., & White, G., (2010), Experiential learning: A definitive edge in the job market. *American Journal of Business Education*, 3(2), 115-118.

Collins, J.W. 3rd & O'Brien, N. P. (eds.). (2003). *The Greenwood Dictionary of Education.* Westport, CT: Greenwood.

Donovan, M. S., Bransford, J.D., & Pellegrino, J.W., (1999), *How people learn: Bridging research and practice.* Washington, DC: National Academy Press.

Dori, Y. and Belcher, J., (2004), How does technology-enabled active learning affect undergraduate students' understanding of electromagnetism concepts, *Journal of the Learning Sciences, 14*(2).

Dyer, J., Greersen, H., & Christensen, C.M., (2011), *The innovator's DNA: Mastering the five skills of disruptive innovators*. Boston: Harvard Business Review Press.

Felder, R.M. & Brent, R., (1996), *Navigating the bumpy road to student centered instruction*. Retrieved September 8, 2017 from

http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Papers/Resist.html.

Hamaguchi, K., (2013), *Wakamono to rôdô: "Nyûsha" no shikumi kara tokihogusu [Youth and labor: Unravelling the problem from the perspective of the system of "entering a company"]*. Tokyo, Japan: Chuokoron-Shinsha.

Higano, M., (2018), New leadership education and deep active learning. In Matsushita, K. (Ed.) *Deep Active Learning: Toward Greater Depth in University Education*, Singapore: Springer, 207-220.

Ito, H., (2017), Rethinking active learning in the context of Japanese higher education. *Cogent Education* 4 (1).

Ito, H. & Kawazoe, N., (2015), Active learning for creating innovators: Employability skills beyond industrial needs. *International Journal of Higher Education*, 4 (2). https://doi.org/10.5430/ijhe.v4n2p81.

Johnson, D.W., Johnson, R.T., and Stanne, M.B., (2000), *Cooperative Learning Methods: a Meta-Analysis (online)*. Available at

https://pdfs.semanticscholar.org/93e9/97fd0e883cf7cceb3b1b612096c27aa40f90.pdf. Accessed November 7, 2017.

Jones, B.A. & Palmer, R., (2017), Active learning in Japanese university EFL Classes: Clarifying the construct. *Hirao School of Management Review*, Vol. 7, http://doi.org/10.14990/00002306, 107-125.

Kajihara, K., (1997), The student's impression as expected by an enterprise. *Management Consulting Journal*, Vol. 44 (7), 100-3 (in Japanese).

Kirschner, P.A., Sweller, J., & Clark, R.E., (2006), Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41(2), 75-86.

MacVaugh, J., & Norton, M., (2012), Introducing sustainability into business education contexts using active learning, *International Journal of Sustainability in Higher Education*, 13(1), 72-87,

http://dx.doi.org/10.1108/14676371211190326.

Matsushita, K., (2018), An invitation to deep active learning. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education*. Singapore: Springer Nature, p. 16.

Matsushita, K., (2018), Chapter 1. Introduction. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education* 2018. Singapore: Springer Nature, p. 5.

Michael, J., (2006), Where's evidence that active learning works? *Advances in Physiology Education* 30, 159-167, doi:10.1152/advan.00053.2006.

Matsushita, K. (ed.). (2018), *Deep Active Learning: Toward Greater Depth in University Education*. Singapore: Springer Nature. DOI 10.1007/978-981-10-5660-4_6

Mizokami, S., (2014), Deep active learning from a perspective of active learning theory. In K. Matsushita (Ed.), *Deep active learning: Deepening higher learning*, 31–51. Tokyo:Keiso Shobo.

Mori, T., (2018), The flipped classroom: An instructional framework for promotion for active learning. In Matsushita, K. (ed.) *Deep Active Learning: Toward Greater Depth in University Education*, Singapore: Springer Nature. DOI 10.1007/978-981-10-5660-4_6, 95-109.

Mullen, E.T., (2012), Teaching an engaged analysis class through active learning. *PRIMUS*, 22, 186–200.

https://doi.org/10.1080/10511970.2010.497957

Oliver-Hoyo, M., Allen, D., Hunt, W., Hutson, J., and Pitts, A. (2004). Effects of an active learning environment: Teaching innovations at a Research 1 institution, *Journal of Chemical Education, 81*(3).

Park, E.L. & Choi, B.K., (2014), Transformation of classroom spaces: traditional versus active learning classroom in colleges, *Higher Education*, 68(5), 749-771.

Pedersen, S. & Liu M., (2003), Teachers' beliefs about issues in the implementation of a student-centered learning environment. *Educational Technology Research and Development*, 51, 57–76.

Prince, M., (2004), Does active learning work? A review of the research. *Journal of Engineering Education*, 93, 223-231. doi:10.1002/j.2168-9830.2004.tb00809.x

Ryle, G., (1949), *The Concept of Mind*. London: Hutchinson.

Segal, J.W., Chipman, S.F., and Glaser, R., (editors). (1985), *Teaching and Learning Skills: Relating Instruction to Research*. Hillsdale, NJ: Erlbaum, vol. 1.

Tsuchimochi, G.H., (2016), *Evolving active learning. Shutaiteki manabi*, 4, 46–67.

Yorke, M., (2006), *Employability in Higher Education: What it is – What it is not*, ESECT, UK, The Higher Education Academy.

MORAL EDUCATION AND VIRTUE ETHICS - AN OPERATIONAL FRAMEWORK

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Abstract: *Nowadays, modern societies are more than ever confronted with vicissitudes of moral interrogation. Despite the general consensus regarding the aims of a good society, perfectly framed by Karl Popper metaphor upon openness*[1]*, the presence of significant number of adumbrated or declining democratic societies call for reflection. Moral education could represent the path to overpass present cultural and social cleavages, contributing also to the renegotiations of new societal equilibriums. Present article aims to offer an operational framework upon the condition of existence and possibility of moral education, seen as a formative tool of future citizens. The research revolves around two key hypotheses. The first proposes moral education as a tool for recreating new social and moral pacts, while the second offers virtue ethics as a normative equation for reconstructing the educational curriculum of young citizens.*

Keywords: *moral education, Virtue Ethics, moral values, citizenship, principles of moral reasoning.*

1. Introduction

The history of human evolution within socialization frame reveals the fact that living together does not imply living well. The clash between individual existence and the experience of living in a community raised an important and persistent question: how should the society that allows us to live happy lives be like?

Considering happiness as a founding landmark of a good society, there are two key themes that need to be taken in consideration: the moral values of the individuals and their engagement towards citizenship rules. The constitutional clause of democracies made the subject of prolific

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[1] Karl Popper, *The Open Society and Its Enemies,* Princeton: Princeton University Press, 2013.

enquiries on behalf of different theoretical traditions, establishing a corpus of desired features: separation of powers, free elections, government responsiveness, rule of contestation. The moral values and the moral education associated to the project of good society remain however more difficult to restrain in a simplified formula. Even if the modern state is not the same that Aristotle imagined when he wrote *Politics*, the difficulties and tensions encountered by democratically designed societies, engaged in the pursuit of good life, are, in a way, timeless. For Aristotle, political activity has a greater end as living well and ethical activity has the purpose in itself.

It is clear why a human being is more of a political animal than a bee or any other gregarious animal. No animal has speech (logos) except a human being. A voice (phone) is a signifier of what is pleasant or painful, which is why it is also possessed by the other animals. But speech is for making clear what is beneficial or harmful, and hence also what is just or unjust. For it is peculiar to human beings (...) that they alone have perception of what is good or bad, just or unjust, and the rest. And it is community in these that makes a household and polis. [I.2I253a8I8] – Aristotle Politica[2].

From these prospects that were made above it becomes clear that in Aristotle's view the polis represents a construct that exists by nature and that there is no man that could live beyond his political nature. This is why education is one of the first political concerns. Unlike Plato, Aristotle admits that family constitutes the first medium of interaction of a human being with values and virtues that could lead to a happy life.

For the things a father says, and the habits he imposes, have the same force in a household as legal provisions and customs in a city; or even more force, because of the bonds of kinship and beneficence; for offspring are naturally predisposed to feel affection for and to be obedient to fathers" [NE X9, II 80b3-7][3].

Plato's approach towards the formative goals of family education was strongly influenced by the intention to develop a functional relation amid morality and citizenship. As a meaningful sample, the guardians' education should include "education in the spirit of courage, e.g.

[2] Aristotle, *Politica in Marguerite Deslauriers and Pierre Destrée,* The Cambridge Companion to Aristotle's Politics, Cambridge: Cambridge University Press, 2013, p. 305

[3] Idem, p. 307.

censoring Homer reading, musical styles, in order to avoid the moral weakening of young people's souls" (387c)[4].

Both classical perspectives accentuate the role of early formation within moral sphere, considering this inception stage crucial for shaping the character of future citizens. In order to achieve the scope of a happy life in a state, there are several questions that require to be answered: how to live a good life as a person? And How to be a good citizen? If we look into our contemporary cultural and moral debates, we can also isolate a set of intermediary questions : "What is moral education?", "What role does the family have in the moral education of the citizen?"," What should be taught for a good life?", "How it should be taught?", "When it should be taught?", "Who should teach it?" and "Which authority is enabled to take this decisions in a democratic society?"

The article aims to sketch an operational framework on moral education, using Virtue Ethics, and to present one of the multiple solutions that could arise for character building of a citizen.

2. What is moral education?

Moral education refers to the processes through which the relevant values are transmitted and developed in the next citizen's mind, at an early time in his life. Moral education concerns thus the practices and strategies that allow later to the agents to prove that they have the resources to address issues about right and wrong in their everyday life into the society that they live in. Durkheim agrees that morality results from immersion in a social group, and manifests itself in respect for that group. In his opinion, moral life begins where the collective life begins. The process of education is a social phenomenon and consists of a systematic formation of the young generation. Therefore moral education is the process of internalizing morality into each new generational cluster.

"Society, therefore, goes beyond the individual; it has its own nature distinct from that of the individual; consequently it fulfils the first necessary condition for serving as the object of moral behavior. But, on the other hand, it rejoins the individual. There is no gulf between it and him. It thrusts into us strong and deep roots. The best part of us is only an emanation of the collectivity. This explains how we can commit ourselves to it and even prefer it to ourselves."[5]

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[4] Valentin Mureşan, *The Form of Justice in Plato's Republic,* Bucharest: Paideia, 1999, p. 65.

[5] E. Durkheim, E., *Moral Education. A Study in the Theory and Application of the Sociology of Education,* translated by Everett K. Wilson and Hermann Schnurer, NY: The Free Press, p. 74.

E. Durkheim's view has many common points with the theory of John Dewey when it comes to the idea that morality needs to be specific. There is no general "good" or "bad" without a context and without judging in accordance to specific living conditions.

"*In this book, our aim is not to formulate moral education for man in general; but for men of our time in this country.*"[6]

In an ideal way, moral education should be the answer for the problems of the citizens of the actual society and to be their instrument for a better life in a community.

3. When it should be taught?

The age when the individual is more likely to be open for a moral education process in school is a very interesting question to be answered. Understanding the stages of moral development will be helpful in developing or improving upon the citizen's morals or his values. L. Kohlberg's[7] theory of moral development provides the basis of moral education approach. L. Kohlberg's theory of moral development was highly influenced by the work of Jean Piaget and John Dewey and constitutes a reconciling point between Piaget and Durkheim. Kohlberg is bridging the differences in orientation that existed between the theories of moral growth held by Piaget and Durkheim. The idea that human beings develop philosophically and psychologically in a progressive way it is followed by the theorists mentioned above. Piaget's theory emphasizes the fact that there are different stages of moral development in the life of a child and the fact that with time, the child changes the way he sees the world. In the first stage, the sensorimotor stage, the child is still in the phase of motor and social skills and is not concerned with morality.

When the child exhibits unconditional respect for rules and submission to authority, he is already in the second stage. The most interesting stage the one in which the child recognizes the fact that rules are arbitrary and can be changed with group consensus. If already in the stage of Concrete Operational (from 7 years to 11 years), the child begins to think logically about certain events and he is now using inductive logic.

[6] John Dewey, *Democracy and Education. An Introduction to the Philosophy of Education,* NY: The Free Press. 1997, p.3.

[7] L. Kohlberg, *Moral education for a society in moral transition, Educational Leadership*, n. 33, 1975, p. 46-54.

During the stage of Formal Operational (from 11/12 Years to Adult) he begins to think abstractly and reason about hypothetical problems. Young adolescents begin to think more about moral, philosophical, ethical, social, and political issues that require theoretical and abstract reasoning. We can observe an increase in logic, the ability to use deductive reasoning and an understanding of abstract ideas. Children younger than 10 or 11 years think about moral dilemmas one way; older children consider them differently. Younger children regard rules as fixed and absolute. The older child's view is more relativistic and understands the fact that it is allowed to change a rule if everyone agrees and that rules are not absolute.

This is the moment when we can better approach such a subject in the child's education. There are other aspects to Piaget's work on moral judgment, but he essentially found a series of changes that occur between the ages of 10 and 12, just when the child begins to enter the general stage of formal operations[8].

On the same subject E. Durkheim mentions:

"One can distinguish two stages in childhood: the first, taking place almost entirely within the family or the nursery school - a substitute for the family, as its name suggests; the second, in elementary school, when the child, beginning to leave the family circle, is initiated into a larger environment. This we call the second period of childhood; we shall focus on it in discussing moral education. This is indeed the critical moment in the formation of moral character. Before that, the child is still very young; his intellectual development is quite rudimentary and his emotional life is too simple and underdeveloped. He lacks the intellectual foundation necessary for the relatively complex ideas and sentiments that undergird our morality. The limited boundaries of his intellectual horizon at the same time limit his moral conceptions. The only possible training at this stage is a very general one, an elementary introduction to a few simple ideas and sentiments."[9]

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[8] Jean Piaget, The Moral Judgment Of The Child, p. 137.
https://archive.org/stream/moraljudgmentoft005613mbp#page/n7/mode/2up, accessed in 29.11.2017.

[9] E. Durkheim, *Moral Education. A Study in the Theory and Application of the Sociology of Education, translated by Everett K. Wilson and Hermann Schnurer.* NY: The Free Press, 1925, p. 18.

Durkheim identifies the period that interests us most, as the period when we want to inculcate moral values in the child's mind and focusing on building moral character. The amendment is that if we are not concerned with this process of building the moral character in the right moment, it will be way harder to accomplish this in another time frame.

"On the other hand, if, beyond this second period of childhood i.e., beyond school age - the foundations of morality have not been laid, they never will be. From this point on, all one can do is to complete the job already begun, refining sensibilities and giving them some intellectual content i.e. informing them increasingly with intelligence. But the ground work must have been laid.[10]*"*

Although we can see the importance of the right moment in character building, we cannot see clearly the recommendation for the precise age and moment. According to Kohlberg's approach, the child internalizes the educational processes and this exercise leads the subject to the next moral stage, through the resolution of ethical conflicts or dilemmas.

L. Kohlberg used Piaget's storytelling technique to present to people stories involving moral dilemmas. In each case, he presented a choice to be considered, for example, between the rights of some authority and the needs of some deserving individual who is being unfairly treated.

L. Kohlberg identified six stages of moral thinking[11]:

Level 1 (Pre-Conventional) (up to age 9) when it is more likely to have:

1. Obedience and punishment orientation
2. Self-interest orientation.

Level 2 (Conventional) (10 years old to adolescence):

3. Interpersonal accord and conformity (a.k.a. The good boy/good girl attitude.
4. Authority and social-order maintaining orientation (a.k.a. Law and order morality).

[10] Idem, p. 18.

[11] L., Kohlberg, *Moral education for a society in moral transition, Educational Leadership,* n. 33, 1975, p. 49.

Level 3 (Post-Conventional) (adulthood):
5. Social contract orientation
6. Universal ethical principles (a.k.a. Principles conscience).

L. Kohlberg states that these stages could not be elided by any individual. They are stages that are to be progressed one stage at a time. Also, the importance of presenting a moral dilemma for discussion is a good reason to encourage the development of a "higher stage" of morality. Like J. Piaget, L. Kohlberg considered that a great part of moral development occurs through social interaction. The discussion approach is based on the insight that individuals develop their character as a result of cognitive conflicts at their current stage. Using J. Piaget's storytelling technique, L. Kohlberg remained attached to the equation of moral dilemmas. Each case had a choice to be considered, for example, between the rights of some authority and the needs of some deserving individuals who are being unfairly treated.

Studies are highlighting the fact that Moral Dilemma Discussion method in moral education programs is best used on subjects that are in the optimal age: adolescence. So looking over cognitive-developmental theory implies that the Moral Dilemma Discussions and similar methods for fostering moral judgment competence are best used in adolescents. In the same time, evaluating our information above, we may say that the starting of adolescence could be a good moment to teach moral education. Adolescents could be considered between 11 years to 15/ 16 years old, this being the best moment when we can inculcate moral values.

4. Who should teach it?

If we look upon moral education as a tool that is used for creating a social and cultural pact, a critical question refers to the promoters of this type of formation. The school can be seen as a mechanism for cultural and societal transmission. E. Durkheim, like J. Dewey, sees education as a social function. They both considered that education is a genuine institution where the normative patterns of thoughts, behavior and social interaction are offered to young citizens and learned in community. The school is the context where the young are practicing the participation in public life.

E. Durkheim defines education as a social function, because it is the "means by which a society prepares, in its young, the essential conditions

for its own existence"[12]. On the same side, J. Dewey conceives education as "a social function, securing direction and development in the immature through their participation in the life of the group to which they belong".[13] Both authors believed that any strong change wanted into a society it is to be made through education and through schools.

"It is in our public schools that the majority of our children are being formed. These schools must be the guardians par excellence of our national character. They are the heart of our general education system. We must, therefore, focus our attention on them, and consequently on moral education as it is understood and practiced and as it should be understood and practiced."[14]

Even if we cannot ask the school to be the only one responsible for the education of our citizens, it's made clear that it is one of the main resources that a state has in the context of building characters. We might not be able to ignore the importance that the entire society has in maintaining the good values that the schools are trying to inculcate to young citizens.

5. What role does the family have in the moral education of the citizen?

"Family, nation and humanity represent different phases of our social and moral evolution, stages that prepare for, and build upon, one another... The family, especially today, is a very small group of persons who know each other intimately and who are constantly in contact with one another. As a result, their relationships are not subject to any general, impersonal, immutable regulation."[15]

E. Durkheim considers the family as the first interaction of the child with society. In a natural way this will be the first place for the individual to learn the current values of the society he is born in. In the family is more likely to learn the first altruistic inclinations, the first feelings of solidarity; but the morality practiced in this setting is above all a matter of

[12] E. Durkheim, *Selected writings,* Cambridge: Cambridge University Press, 1972, p. 203.

[13] John Dewey, *Democracy and Education.* An Introduction to the Philosophy of Education., NY: The Free Press, 1997, p.81.

[14] E. Durkheim E., Moral Education. *A Study in the Theory and Application of the Sociology of Education,* translated by Everett K. Wilson and Hermann Schnurer. NY: The Free Press, 1925, p. 4.

[15] Idem, p. 147.

emotion and sentiment. It is learnt by emotion and impulses of the heart, more than using the abstract idea of duty.

"Up to this point we have talked of society only in a general way, as if it there was only one. As a matter of fact, man always lives in the midst of many groups. To mention only the more important, there is the family in which one is born, the nation or political group, and humanity. Ought one to commit oneself to one of these groups to the exclusion of others? This is out of the question."[16]

We always need to have in sight the multiple layers of the moral values and customs and to be able to distinguish between the values that ones can learn from the family and the virtues that can be inculcated by education and a good practice. As an intermediary conclusion, the ideal way of building a character of a good citizen could be more like a permanent collaboration between family, teachers, state and society.

6. To whom should it be taught?

The very existence of conflictual conceptions upon the definitions of good life in a community represented a symptom of a moral crisis. Contemporary approaches upon the topic of moral education tend to emphasize that "liberal democratic societies require citizens with "thick" authentic identities", characterized by civic virtues and "committed to the vision of higher good".[17]

Trying to fill the difference of moral representations between generations could be a way of bridging a representational gap. The individuals can have connections to the state, but not necessarily to each other. When we try to solve such a complex problem, we need to look closely to the pluralism that plays a massive role in contributing to diversity and dynamism in the political community. We must always look for democratic deliberation and to encourage everyone that can bring checks and balances on state operations. The ideal could be a society that has each member taught and informed about the same rules of the game, operating with the same set of values and collaborating in an open and transparent relationship with the state that is always open and responsive to his own citizenships.

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[16] Idem, p. 74.

[17] Hanan A. Alexander, *Moral education and liberal democracy: Spirituality, Community and Character in an Open Society,* Educational Theory, University of Ilinois, volume 53, n. 4, 2003, p. 376.

In a more concrete and proximal stage we could aim for integrated courses of moral education in each area of interests, ruled in an tailored way to the needs of each target group, and following a common purpose.

7. How should it be taught?

Moral education based on the ethics of virtue could indicate an efficient method to be addressed to the young citizens-to-be. The target group is constituted by early age, between 11 years to 16 years old, structured in classes or large groups from 5 to 20. It seems that we do need a person to represent in a symbolic way, the authority when we are trying to inculcate virtues and to overcome personal preferences.

A subject on Durkheim and Dewey, surprisingly, are in opposition, is that morals cannot be associated with customs or personal habits. Morality may depend thus by the presence of a persona of authority.

"*...since moral requirements are not merely another name for personal habits, since they determine conduct imperatively from sources outside ourselves, in order to fulfill one's obligations and to act morally one must have some appreciation of the authority sui generis that informs morality. In other words, it is necessary that the person be so constituted as to feel above him a force unqualified by his personal preferences and to which he yields. "(…) It is the nature of rules that they are to be obeyed, not because of the behavior they require or the probable consequences of such behavior, but simply because they command."*[18]

When we speak about how moral education should be taught, we might make the distinction between the curriculum and the methodology. If we refer to methodology used to inculcate moral values in the mind of the child, then there are multiple choices to be made and the main focus could be made both on the standard school curriculum (introducing a special class that teach moral education and citizenship) and on the hidden curriculum, that can integrate moral values and conclusion during workshops, sport classes, through play and games, storytelling, art classes and so on.

[18] E. Durkheim, *Moral Education. A Study in the Theory and Application of the Sociology of Education.* Translated by Everett K. Wilson and Hermann Schnurer, NY: The Free Press, 1929, p. 34.

8. What it should be taught?

Despite the fact that there is little consensus about what precisely to be taught, one of the solutions that can be used, in character building and moral education, is virtue ethics.

Moral education for citizenship contains a necessary distinction between:

a. the individual as a subject of ethics and law, entitled to all the human rights inherent in the human condition and

b. the citizen with the civil and political rights, recognized by the national constitution of each country.

The main focus of this type of education concerns the relations between individuals and society, more specific between citizens and the government. In order to live well in a democratic society it could be helpful for a person to have a moral characteristic named virtue. It is common for virtue theorists to state that a virtuous person acts in a virtuous way, as the result of ration thought rather that from instinct. This encourages the right action. An action is right when a virtuous person possesses and lives the virtues. A good reason to use the virtue ethics is the fact that it can be used in any area of a person's life. It is centered on the person and on what it means to be human.

To look for a common set of virtues, that will be useful and all human beings would benefit from, at a certain point in time, in a specific society, is not an easy task to be done. A research of most virtue theorists say that it is possible to find such a list. We could see ethics as a matter of cultivating appropriate virtues and guiding both individual actions and building character. Virtue ethics is focused on developing virtues of character and satisfying both the need of an instrument that helps you decide what is right, and also the necessity of character development on the long therm.

Excellence [of character], then, is a state concerned with choice, lying in a mean relative to us, this being determined by reason and in the way in which the man of practical wisdom would determine it. Now it is a mean between two vices, that which depends on excess and that which depend on defect. [19]

[19] Aristotle, *Nicomachean Ethics, and Politics,* in The Complete Works of Aristotle, J. Barnes (ed.), 2 vol., Princeton, NJ: Princeton University Press, 1984, (1106b36–1107a3).

If we think about building a good citizen character, we will assume that we need to build a good person, first of all. First of all we must explore the key values of a good person, in our contemporary societal framework. Subsequent to this stage, we must put together all the specific virtues of a good citizen in the specific context that we are focused on. This will provide us a specific set of virtues, that could be considered consistent and that will answer the special needs of the democratic society.

Aristotle remains the representative authority that is used in the majority of educational materials, based on virtue ethics. Furthermore, it is necessary to take into consideration the virtue ethics that are specific for each historic and cultural background. It seems that many cultures have a common base when it comes to what is right or wrong.

C.S. Lewis[20] is presenting a multicultural model to define common virtues. In this context we may pursuit the fallowing hypothesis: In order to develop a good character we might need virtues as gentleness, honesty, loyalty and compassion, justice, respect, dignity, responsibility and courage. There are also some vices that are condemned in many cultures: torture, murder, betrayal.

The analysis of virtues could start from the table described by Valentin Mureşan within an analysis endeavor upon Aristotle's Ethics[21].

Affect	Excess	Mediate	Shortcoming
Fear and self-confidence	Temptation (inadequacy)	Courage	Cowardice
Pleasure and sensual pain	Debauchery	Temperance	Insensitivity
The pleasure of giving and receiving material goods	Waste	Generosity	Avarice
Honor and contempt of honor (major)	Vanity	Soul grandeur	The little soul
Honor and contempt of honor (minor)	Ambition	True ambition	Lack of ambition

[20] Gerard Reed, C.S. Lewis, *Explores Vice and Virtue*, Kansas City: Beacon Hill Press of Kansas City, 2014.

[21] Valentin Mureșan, *Aristotle's Ethics*, Bucharest: The University of Bucharest Publishing House, 2011, p. 69.

Anger	Irritability	Gentleness	Impassivity
The pleasure of expressing your beliefs with others	Boastfulness	Sincerity	Concealment
Pleasure in conversation	Buffoonery	Cheerfulness	Rudeness
The mutual desire of the other's good	Flattery	Friendship	Moroseness
Shame	Shyness	Decency	Shamelessness
Indignation	Envy	Just indignation	Wickedness
The pleasure of winning	Unmerited earnings	Distributive justice (what is right)	Undetermined loss
Pleonexia	Unrighteousness through excess possession	Corrective justice	Grievance through dispossession
The other affects manifested in the relationships with others	Injustice	(equality, impartiality)	Injustice

As we can observe, the median is the virtue, the one that interests us in our approach. Next, a new table of virtues will be cited, which provides a synthesis of the qualities of a good citizen in three different moments, identified by three different authors. Comparing virtues in regard to the character of a good citizen are found below in a comparative table[22]:

Traditional Values (according to Walton, 1988[23])	Personal Values (according to Nash,, 1990[24])	Essential ethical principles (according to Josephson, 1993[25])
Wisdom or prudence	Honesty	-

[22] Table reinterpreted from J. Thomas Whetstone, *The Language of Managerial Excellence: Virtues as Understood and Applied, Journal of Business Ethics,* 2003, Vol. 44, pp. 343-357.

[23] C. Walton, *The Moral Manager,* New York: Harper & Row, 1988.

[24] L. Nash, *Good Intentions Aside: A Manager's Guide to Resolving Ethical Problems,* Cambridge: Harvard Business School Press, 1990.

[25] M. Josephson, *Teaching Ethical Decision Making and Principled Reasoning,* Ethics: Easier Said Than Done, 27–33, 1988.

Temperance	Trust	Trust
Courage	Achievements	-
-	-	Responsibility
	Safety	
Temperance	-	-
-	Self-respect	-
Justice, fairness	Righteousness	Justice and fairness
-	Integrity	-
-	Respect for others	Respect
The hope	Loyalty	-
-	The family	-
Faith	Religion	-
-	-	Civic Virtue and Citizenship
-	Conscientiousness	
Love	Love	-

This is a comparative table in which we can see, as a guideline, some changes in the importance of ethical virtues. Benjamin Franklin in his autobiography[26] gives the readers a list of 13 virtues: temperance, tranquility, order, goals, frugality, diligence, sincerity, justice, moderation, cleanliness, calm, honesty and modesty. This is a theoretical position dating back to the eighteenth century. On a detailed analysis, it will be noticed that the key moral landmarks tend to evolve and change, depending on the context. That's why it remains important to find the answer to the following question: What set of virtues should we take into consideration for a moral education in democratic society?

[26] William Temple Franklin, *The Autobiography of Benjamin Franklin,* edited by Jared Sparks, Henry G. Bohn: London, 1850.

Civic virtues are desirable, including for economic reasons. A society with virtuous citizens will surely be a more prosperous society, since corruption will be much lower. In this context is obvious the economic situation of the state could improve[27]. Citizenship education actually seeks to form the individual for a life in community, where he can exercise his features and virtues such as respect, responsibility, justice, honesty, care, loyalty to the ideals of society.

The role of a good citizen in a participatory democracy is to be, first and foremost, a moral person and, moreover, to be an active citizen, to assist the state and to be involved with good intentions in the society in which it lives. The ethical specificities of a citizen must be those that help him successfully fulfill this role within the state.

Works of some authors such as Richard Dagger, William Galston, David Jones, Mark Kingwell, Stephen Macedo and Thomas Spragens offers interesting guidelines for establishing a functional frame upon moral education. Richard Dagger, in Chapter XII of his book Civic Virtue: Citizenship, Citizenship and Republican Liberalism[28] talks about civic virtue. He considers it necessary to cultivate both Republican liberalism and autonomy, cultivating virtues that make possible autonomy. For Dagger, civic virtue and autonomy are important, first because it actually leads to the second. Autonomy for him is important in society, as an active member of it, not outside of it. For him there are six important civic virtues: respect for individual rights, valorization of autonomy, tolerance of differences of opinion and beliefs, justice, civic culture and active participation in community life.

William Galston[29] discusses the fact that the institutions of a liberal state are affected to a considerable extent by the character of the citizens of that state. He draws up a list of liberal virtues that he considers necessary. Independence - Citizens have the responsibility for themselves, avoiding being addicted to others. Tolerance - Citizens act in accordance with their beliefs in education. Another key feature is represented by Courage, seen as submission to the law without threats or punishments

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[27] P. Aghion, Yann Algan, and Pierre Cahuc, "Civil society and the State: The Interplay between Cooperation and Minimum Wage Regulation", Journal of the European Economic Association, Volume 9, No. 1, 2011.

[28] Richard Dagger, *Civic Virtues: Rights, Citizenship, and Republican Liberalism,* Oxford: Oxford University Press, 1997.

[29] William Galston, *Civic Education in the Liberal State, Liberalism and the Moral Life,* Ed. Nancy L. Rosenblum, Cambridge: Cambridge University Press, 1993, pp. 89-101.

from the state, loyalty, respect, discernment, self-control, lack of hypocrisy.

David Jones[30] provides also a structure of civic virtues under four categories: conscience, tolerance, reciprocity and civic concern. This four fundamental dimension also contain values as: loyalty, sense of duty, fidelity, pragmatic tolerance, attempt to avoid evil, reciprocity and interest in information about society and its own state policy. In conclusion, it can be said that a set of virtues is needed for formation of a good citizen in a participatory democracy. It can also be said that this is not the only possible set of virtues, being just one of the many variants and perspective.

9. Which authority is enabled to take these decisions in a democratic society?"

The last question which remained to be answered refers to the problem of decision. Which authority should entitled to promote the moral education frame, remaining faithful to the principle of democratic decision. If we approach democracy as J. Dewey proposes, we may define it in a broader sense as a process of living together. In this context we can discuss upon moral meaning and education.

"*...democracy is more than a form of government; it is primarily a mode of associated living.*"[31]

J. Dewey considers that a simple form of government, like the state, does not incorporate all possible associations between people. That's why a special mode of associated living is more desirable:

"...democracy has many meanings, but if it has a moral meaning, it is found in resolving that the supreme test of all political institutions and industrial arrangements shall be the contribution they make to the all - round growth of every member of society."[32]

[30] David Jones, "A Pragmatic Defense of Some Liberal Civic Virtues", The Southern Journal of Philosophy 30:2, 1992, pp.77-92.

[31] J. Dewey, *Democracy and Education. An Introduction to the Philosophy of Education,* NY: Free Press, 1997, p.101.

[32] Idem, p. 101.

We are interested in the idea of democracy, because it is strongly related to the idea of moral education for citizenship. Dewey defines democracy as a process of living together. Education is seen as a tool to make changes in a society; therefore moral education for citizenship can be defined as educating children, from early childhood, to become clear-thinking and enlightened citizens, who participate in decisions concerning society and the state in which they live in. That's why it concerns politics and institutions and also the individual.

Civic virtue is closely related to the historical period and especially to the political framework in which citizens exercise it. Civic virtue is the cultivation of personal habits that are important to the success of the community. It is opposed to the idea of having advantages from other members of society.

"Democracy is a practice: Though based on values that can be transmitted, it is essentially a way of acting. It is by putting it into effect that we justify it; it is by making use of it that we give it legitimacy".[33]

These civic virtues that are of interest in our approach are those that usually facilitate community co-operation and help with good social culture. They can influence civil society even through the financial results obtained through cooperation on the labor market and by diminishing corruption at the level of society. We believe that an individual has civic virtues when he does not think that exploiting others for personal profit is something good. Respect for others and society is very important. Family, civic virtue and political involvement are interconnected. Where we have families that do not cherish society, we will have children who will also be politically uninterested and will not respect society.

Civic virtues are desirable, including for economic reasons. A society with virtuous citizens will certainly be a more prosperous society, since corruption will be much lower; it is obvious that the economic situation of the state will improve. Citizenship education actually seeks to form the individual for a life in society where he can exercise his features and virtues such as respect, responsibility, justice, honesty, care, loyalty to the ideals of society. Commitment to and participation in the community is part of the characteristics of a good character.

[33] P. Meyer, Bisch, *A culture of democracy: a challenge for schools,* Paris: UNESCO, 1995, p.5.

10. Conclusion

This study intended to emphasize the common base of values that all the societies tend to recollect nowadays, highlighting consequently the importance of understanding the uniqueness and specificity of each culture in a precise moment in time. It is vital for the ones concerned with education of a society to be aware of the needs of that specific society and to be able to identify the set of values that could help to obtain the desired result. This type of moral education aim to sustain the long process that a democratic society has to go through in order to obtain the best democratic mechanism that assure a good life, lived together. Virtue ethics it is one of many ways of doing moral education. We have chosen to discuss this type of moral education for citizenship because we were looking for a sustainable democratic solution for developing moral character. As any change, it takes time and collective sustained effort and coherence. From the family, schools, society, state and institutions, everyone needs to be an active part of this process for its best results.

REFERENCES

Aghion P., Yann Algan, and Pierre Cahuc, (2011), "Civil society and the State: The Interplay between Cooperation and Minimum Wage Regulation", Journal of the European Economic Association, Volume 9, No. 1.

Aristotle, *Nicomachean Ethics, and Politics,* in The Complete Works of Aristotle, J. Barnes (ed.), (1984), 2 vol., Princeton, NJ: Princeton University Press.

Alexander, Hanan A., (2003), *Moral education and liberal democracy: Spirituality, Community and Character in an Open Society, Educational Theory,* University of Ilinois, volume 53, n. 4.

Bisch, P. Meyer, (1995), *A culture of democracy: a challenge for schools,* UNESCO.

Kohlberg, L., (1975), *Moral education for a society in moral transition. Educational Leadership,* n. 33.

Dagger, Richard, (1997), *Civic Virtues: Rights, Citizenship, and Republican Liberalism,* Oxford: Oxford University Press.

Dewey, John, (1997), *Democracy And Education. An Introduction to the Philosophy of Education,* NY: The Free Press.

Dewey, John, (1997), *Democracy and Education. An Introduction to the Philosophy of Education,* NY: The Free Press.

Deslauriers, Marguerite and Pierre Destrée, (2013), *The Cambridge Companion to Aristotle's Politics,* Cambridge: Cambridge University Press.

Durkheim, E., (1925), *Moral Education. A Study in the Theory and Application of the Sociology of Education,* translated by Everett K.Wilson and Hermann Schnurer. NY: The Free Press.

Durkheim, E., (1972), *Selected writings,* Cambridge: Cambridge University Press.

Franklin, W.T., (1850), *The Autobiography of Benjamin Franklin,* edited by Jared Sparks, Henry G. Bohn: London.

Galston, William, (1993), "Civic Education in the Liberal State", Liberalism and the Moral Life, Ed. Nancy L. Rosenblum, Cambridge: Cambridge University Press.

Jones, David, (1992), "A Pragmatic Defense of Some Liberal Civic Virtues", The Southern Journal of Philosophy 30:2.

Josephson, M., (1988), *Teaching Ethical Decision Making and Principled Reasoning, Ethics: Easier Said Than Done,* 27–33.

Mureşan, Valentin, (1999), *The Form of Justice in Plato's Republic,* Bucharest: Paideia.

Mureşan, Valentin, (2011), *Aristotle's Ethics,* Bucharest: The University of Bucharest Publishing House.

Nash, L., (1990), *Good Intentions Aside: A Manager's Guide to Resolving Ethical Problems,* Cambridge: Harvard Business School Press.

Piaget, Jean, The Moral Judgment Of The Child, source:

https://archive.org/stream/moraljudgmentoft005613mbp#page/n7/mode/2up

Popper, Karl, (2013), *The Open Society and Its Enemies,* Princeton: Princeton University Press

Reed, Gerard, (2014), *C.S. Lewis Explores Vice and Virtue,* Kansas City: Beacon Hill Press.

Walton, C., (1988), *The Moral Manager,* New York: Harper & Row.

Whetstone, J. Thomas, (2003), *The Language of Managerial Excellence: Virtues as Understood and Applied,* Journal of Business Ethics, Vol. 44.

Jones, David, (1992), "A Pragmatic Defense of Some Liberal Civic Virtues", The Southern Journal of Philosophy 30:2.

THE IMPORTANCE OF HUMANITIES IN BUSINESS EDUCATION

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Abstract: *This paper aims to present a series of arguments that support the importance of humanities in business education. In a complex, dynamic and extremely competitive business environment, functioning in a society where market rules tend to expand into more and more areas, including higher education, graduates of universities involved in business education need to deeply understand the social and political phenomena, the cultural environment and the human nature, and this desideratum can be achieved only through genuine and complete higher education.*

Keywords: *business education, management education, higher education, humanities, philosophy, arts.*

Introduction

Post-modern higher education has and aims to have a pronounced utilitarian character, universities often resemble to more sophisticated and stylish schools of crafts, technical or commercial schools, practical skills are formed, "know-how" is appreciated. They say there is nothing wrong with that, it is true that nobody wants to have unemployed graduates, on the contrary. There is nothing wrong with that, as long as we do not resume to "know-how" and "know-how" alone. The competitive and demanding labour market and the hope to be recruited after the graduation determine the orientation of young people to areas of study with immediate applicability and to presumptive well paid professions. Parents and youngsters invest time and money in what is called human capital, relying on and hoping for a return and a [massive] multiplication of these investments in a very short time. Education is tending nowadays to have utilitarian reasons and goals, it is not designed for building better persons, for "flourishing" human beings, and it is not pursuing Aristotelian eudaimonic happiness and virtue, but getting more material

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wealth and hedonic well-being. And maybe there is a point in all that, as basic needs are hard to be fulfilled for many people. What shall we do after we meet our primary needs of food, shelter, safety? This is the real question!

On the other hand, a highly specialised, technical education with narrow skills and less intellectual opening implies major risks for individuals and for society as well. For individuals, as more knowledge is accumulated, we even dare to say "more wisdom is gained", the stronger are the chances to adapt to various situations in a dynamic world. The labour market in post-modern times is quite unpredictable, and the demand for certain professions is possible sometimes to be diminished. "Know-how" is very important, but the capacity to understand "the big picture", an educated and creative mind capable of logical and critical/analytical thinking, these are also very important features for a human being in any society, including the contemporary one. And a society with individualist subjects working like breathing machines is easy to be manipulated in many ways, and this is a major risk for the social and democratic mechanism as well.

Apart from the predominantly practical nature, the higher education system has become a business, functioning on free market bases. It provides education services to students as customers wishing to acquire skills that are useful in the labour market and, not less important, to obtain diplomas, as graduation certifies the existence of these certain specific skills. Higher education is generally organized in a standardized manner generated by international evaluations and rankings, also by rules and regulations like those brought by Bologna educational system, and there are many voices that criticise some features that can fit into what George Ritzer called, in his well-known work, "the mcdonaldization of society", meaning "the process by which the principles of the fast food restaurant are coming to dominate more and more sectors of the American society as well as the rest of the world"[1], based on efficiency (as Ritzer says, "just fill in the box"), calculability ("grades, scores, ratings, and rankings"), predictability, and control. Still, the fact that the students are considered and often they consider themselves "customers", the fact that they sometimes pay for these services does not mean that they should require/claim or decide what and how much they are going to learn

[1] George Ritzer, *The McDonaldization of Society*, 5th edition, University of Mariland, Pine Forge Press, an Imprint of Sage Publications, Inc., 2008, p. 1.

within higher education. The universities themselves have to choose a path and it would be better for all of us if they choose *curricula* with holistic features, and the goal resembles as much as possible to a paideic model, as the results/products, i.e. the young graduated citizens that are now "growing" in the world, influence and affect us all, including future generations.

I do not plead by no means for denying mundane practice in universities, and for abstract science alone, but for building and enforcing a genuine intellectual, humanistic environment that gives to the students, including the students enrolled in business education, the opportunity and the capacity to think, to speak and to understand the world at a level that justifies the fact that tertiary education is called so easily "higher education". We should go beyond multiple-choice testing and re-evaluate the purpose of this kind of education that creates leaders and deeply influences our lives.

Business education has a major role in shaping the society nowadays and from now on, as future graduates will be business men and women, bankers, managers, perhaps CEOs, advisors for politicians and even politicians, and it should be clear that they need complex knowledge in areas as economics, but also political science, and, some scholars say, *humanities*. They need to really understand, beyond appearances, the ways and means that make society move, as some of them, hopefully the best of them, and not the wicked ones, might have the opportunity to build something important in their lives, important for them, and important for the society they live in.

Why humanities?

In order to answer the question "What are the humanities?" Josiah Ober, professor of classics and of political science at Stanford University, explains: "The humanities can be described as the study of how people process and document the human experience. Since humans have been able, we have used philosophy, literature, religion, art, music, history and language to understand and record our world. These modes of expression have become some of the subjects that traditionally fall under the humanities umbrella. Knowledge of these records of human experience gives us the opportunity to feel a sense of connection to those who have come before us, as well as to our contemporaries."[2]

[2] http://shc.stanford.edu/what-are-the-humanities

Why *philosophy*? One good reason might be the fact that philosophy is a challenging, always demanding practice for the mind, an exercise for "fitness" that might give a rare kind of "ache" to an untrained "muscle" like human brain. Philosophy develops logical, critical and creative thinking, gives the courage to go beyond limits, to climb the highest mountains of thought and to explore the unmeasurable depths of human soul, feeds and stimulates the curiosity of those who truly wish and tirelessly try to understand the world.

Another important reason: the roots of economics lie in philosophy. Economics, with its different theories and doctrines, has philosophical origins. Adam Smith, the author of *Wealth of Nations*, and of *Theory of Moral Sentiments*, so much cited for the concept of the invisible hand, was a moral philosopher. There is no doubt that the issues that great economists of the world are concerned of are connected at a speculative level with philosophical concepts and theories, whether it is value, utility, reason, experience, rationality and economic rationality, rational choices, human action, power, liberty, morals/ethics, justice, equity, welfare, happiness and so on, and in order to really understand what economics is about, whether we are talking about mainstream economics or not, philosophy is certainly necessary. Economics and philosophy are separate but connected, and "the frontiers between economics and philosophy concerned with methodology, rationality, ethics and normative social and political philosophy are buzzing with activity".[3]

Evidence can be found about the philosophical foundations of economic thought. As an example, the philosophical roots of management thought are partially revealed as "dominating themes taught in management schools have recognizable philosophical origins: Power in human relationships is a heroic concept; the case for management education is of rationalist descent; and the conviction that research is to be a value-free, inductive enterprise is a legacy of positivism. Further, the importance of innovation is a romantic theme; accepting one's personal responsibility for one's decisions is a distinctively existentialist demand; and the idea that the world and human existence are without firm foundations is the dominating message of postmodernism."[4]

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[3] https://plato.stanford.edu/entries/economics/#7

[4] Jean-Etienne Joullié, "The Philosophical Foundations of Management Thought", published online before print, May 29, 2014, doi:10.5465/amle.2012.0393, *Academy of Management Learning & Education*, March 1, 2016 vol. 15 no. 1 157-179, http://amle.aom.org/content/15/1/157.short

There are important universities that offer combined programs – Philosophy, Politics, and Economics. As an example, Oxford University and its program "PPE": "Studying Philosophy, you will develop analytical rigour and the ability to criticise and reason logically, and be able to apply these skills to questions concerning how we acquire knowledge or make ethical judgements. The study of Politics provides a thorough understanding of the impact of political institutions on modern societies. It helps you to evaluate the choices that political systems must regularly make, to explain the processes that maintain or change those systems, and to examine the concepts and values used in political analysis. Economics is the study of how consumers, firms and government make decisions that together determine how resources are allocated. An appreciation of economics has become increasingly necessary to make sense of governmental policy-making, the conduct of businesses and the enormous economic transformations throughout the world."[5]

Management education represents an important part of business education. In a volume[6] edited in 2006, Pasquale Gagliardi and Barbara Czarniawska gathered a series of works that pleaded with strong arguments for the study of humanities in management education. Although he is aware of the fact that he can be considered a hopeless idealist looking for a completely new form of management education, Pasquale Garliardi, in the introductory study, presents the imbalance that generally exists between management research and practical management, applied in companies/organizations. Thus, he identifies three categories of management experts: researchers that are academic scholars who study management and organizations at a profound level, as cultural and social phenomena; a second category of researchers, dealing with management theories, management "design", with normative character, indicating what needs to/has to be done in managerial practice; and a third category, the trainers and consultants, experts in charge with management education, who transfer the knowledge created by the first two categories to management practitioners. Referring to management design, Gagliardi shows that, in general, the most common concept describes organizational management as a system, a scheme, a pattern in which goals, roles and tasks are crearly

[5] https://www.ox.ac.uk/admissions/undergraduate/courses-listing/philosophy-politics-and-economics?wssl=1

[6] Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA, 2006.

established, generally neglecting real and important issues such as the combined effect of physical, symbolic and social structures, thus maintaining a very long distance and a great diference between scientific research in management and daily managerial practice.[7]

In Gagliardi's opinion, European research in the management area have had lately the tendency to become more cultural, taking into account values like "tolerance, an openness to discussions, and appreciation of cultural diversities".[8] It is well known that analyses in management research have often been combined with knowledge from other scientific fields, the traditional partners of management science being economics, psychology and sociology. More recently, there have been incursions in fields that had not tangible links with management, such as anthropology, but also humanities like: "philosophy, history, literary criticism, linguistics, the study of art and aesthetic experience".[9]

Still, there is a big difference between scientific research and applied management. Issues that arise in practical management are considered concrete facts, and are therefore deemed to require "technical", efficient solutions, with little or rather no connection with values and emotions. This situation, Gagliardi explains, "has probably come to predominate because it serves to qualify management as a scientific phenomenon".[10]

Thus, within the manager's profession, the emphasis is on the rational and instrumental dimensions, to the detriment of the moral dimension (it is often forgotten the fact that "no choice is morally neutral") and aesthetics. And to impose in management education the concept that a company/organization is just "an economy", ignoring the values and emotions and the fact that people spend their entire active life in these human communities has the effect of severely damaging these communities, affecting the state of well-being and the quality of the employees' lives.[11] There is no use, no benefit of the fact that academic researchers have recently had a cultural openness, since this "richness and vitality" was not extended in practical management, and responsible for that was management education, business education in general.[12]

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[7] Pasquale Gagliardi, "A role for humanities in the formation of management", in Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA, 2006, pp. 3-4.

[8] *Ibidem*, p. 5.

[9] *Ibidem*.

[10] *Ibidem*.

[11] *Ibidem*, pp. 5-7.

[12] *Ibidem*, p. 5.

And we totally agree with Gagliardi: "In *Hadrian's Memoirs*, Marguerite Yourcenar recounts that the great statesman's first thought on being told that he had become emperor was: 'I felt responsible for the beauty of the world'. Exactly: I believe that managers should feel responsible not only for profit and turnover but also for the beauty of that portion of the world which they have the fortune to govern. And I do not think that a manager can be a statesman unless he has a profound humanistic culture, a thorough knowledge of history, of philosophy, of art, of the heritage of knowledge and sensibility that humankind has constructed in its history on this continent, and which can be an inexhaustible source of inspiration and creativity. [...] A humanistic culture will not provide administrators with prescriptions or information that can be used immediately to solve specific problems, analytical or relational; nor will it enable them to take technically satisfactory decisions. But perhaps it will help them to evaluate events and persons with greater humility, to view phenomena from a broader perspective, to courageously confront the moral risks and responsibilities involved in doing their job, to rely constantly on a set of values rather than apply algorithms, and to give just as much importance to passion as to reason, to wisdom as to competence. "[13]

In the contemporary economic environment that John Hendry calls and defines as post-bureaucratic, the challenges of management are extremely complex. Business organizations have various forms of organization, some keeping bureaucratic elements and vertical hierarchical structures, others being structured in teams and communicating through channels that form extensive networks, characterized by high degrees of freedom and flexibility.[14] Business organizations are human communities, but they also have precise goals to be achieved, and trust and loyalty are needed although the goals of the organization, shareholders, managers and subordinates do not always coincide. So, in what Hendry calls post-bureaucracy, technical issues must be solved by technology and by well-trained technicians, and management is primarily about morality, and so should be management education.

[13] *Ibidem*, pp. 7-8.

[14] John Hendry, "Management education and the humanities: The challenge of post-bureaucracy", in Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA, 2006, pp. 27-28.

Never the less, management education is still focused on teaching/learning techniques, is still based on instrumental rationality, on associated control function, as if the manager should be the morally neutral technician described in old management models. However, Hendry says, those times are gone, the human context cannot be ignored anymore. And "with this human context comes values and political interests"[15]. In the new conditions of post-bureaucracy, management education has the following tasks: "the development of a knowledge base, the creation of a new managerial identity, and the development of the person".[16] Managers need explicitly non-scientific knowledge, knowledge associated with the humanities.[17]

John Hendry has made an essential conclusion: higher education [including business education and management education] should take much more into consideration than economic competence. Both in business education and in the rest of the university, the real purpose is to grow and develop human beings. And this is not just an ideal desideratum, but a necessity including the managers of post-bureaucratic companies that have to operate in an ever changing environment without a set of well-established rules (like used to be in bureaucratic organisation).[18] As John Hendry concludes, "The outcome of these processes, if successful, is not knowledge in the scientific form sense but wisdom. And if it's wisdom we are looking for, we are much more likely to find it in humanities than in techniques of economic efficiency."[19]

In management, as in other business areas and beyond, scholars[20] talk about what is called bounded rationality. People cannot apply schemes learned by heart in concrete situations, because in reality they face much more complex facts, with various degrees of uncertainty and not at all value-free as people lives are involved. And this is why management is not and cannot be an objective, value-free science, taught and learned in a positivist manner. A distinction should be made in management education between "a science of objects" and "a science of subjects".[21]

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[15] *Ibidem*, p. 34.

[16] *Ibidem*, p. 35.

[17] *Ibidem*, p. 36

[18] *Ibidem*, p. 39.

[19] *Ibidem*, p. 40.

[20] Stewart R. Clegg and Anne Ross-Smith, "Revising the Boundaries: Management Education and Learning in a Postpositivist World", *Academy of Management Learning & Education,* Vol. 2, No. 1 (Mar., 2003), pp. 85-98.

[21] *Ibidem.*

Stewart R. Clegg and Anne Ross-Smith bring into discussion the Aristotelian concept of "phronesis", a set of virtues that conduct to practical wisdom, indispensable in their opinion in business and in management. "In terms of pedagogy, we need to refocus the curriculum less around answers to apparent problems and more on questions that undercut the apparent problematics of the answers proposed."[22] It's obvious that "practical wisdom" is something else then "practical skills", reflexivity is always needed as particular problems cannot be solved with universal, abstract rules and formulas, they don't include "standing conditions". And reflexivity is not easy to be taught.

Stewart R. Clegg and Anne Ross-Smith offer an alternative to the positivist, value-free frame of management science, an advocacy for a new kind of discourse needed in the management academy: "Postpositivist, philosophically oriented writing is both a good element in a more pluralist management academy and a signpost to a future management academy more vigorously engaged, one which takes stances on ethical and political matters in a way that positivist work shuns."[23]

In a study on tourism education[24], Kelee Caton, convinced of beneficial influence that humanities can have, describes several of their advantages for the cognitive and emotional development of students.

Thus, referring to philosophy, she shows, for example, that Socratic reasoning represents a valuable skill for today's students both for self-reflection ability and for contributing to the development of critical thinking about the status quo, as well as to the ideas of others. In general, it advocates the beneficial effect of philosophy on education because, among other advantages, philosophy encourages the analysis of important issues of the world and of life, values and moral beliefs and personal and social objectives, helping to understand social realities.

The arts also have the capacity to contribute to the formation of better leaders. "The arts can help us leverage the potential of the relationship between emotions, attention, engagement, and memory to draw our students more deeply into a web of contemplation, analysis, and dialogue that may ultimately prove transformational."[25]

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[22] *Ibidem*, p. 85.

[23] *Ibidem*, p. 96.

[24] Kelle Caton, "Underdisciplinarity: Where are the humanities in tourism education?", *Journal of Hospitality, Leisure, Sport & Tourism Education*, 15 (2014), pp. 24-33.

[25] *Ibidem*, p. 31.

Approaching these issues in a different way, in a paper published in 2017[26], Jeffrey Wagner presents three examples of humanities used "as technology" for teaching economics:

- The one-act play as technology – students prepare responses concerning an economics course (the course about principles of microeconomics in this case) as a play with a script that has the topic of a job interview;
- Poetry as economics teaching technology;
- Philosophical tracts as technology – it is proposed Plato's Republic as a platform for discussing economic principles.

Jeffrey Wagner argues that using these technics learning economics becomes more challenging, dullness is avoided and business education can embrace humanities in a creative manner.

At this point, we shall refer once again to John Hendry's study, as he identifies the difficulties of implementing the humanities-based management education[27], difficulties which can be extended to the implementation of humanities-based business education:

- The generally low level of humanities knowledge previously acquired in high school, because humanities-based education is a gradual, cumulative process, and in order the process to be successful, previous knowledge is required;
- Not so many resources directly related to business, as "business may have neglected the humanities, but also humanities have neglected business"[28]; some examples can be found in the bibliographic resources mentioned below[29, 30];

[26] Jeffrey Wagner, "Humanities as technology in teaching economics", *International Review of Economics* Education, 25 (2017), pp. 35-40.

[27] John Hendry, "Management education and the humanities: The challenge of post-bureaucracy", in Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA, 2006,, pp. 40-41.

[28] *Ibidem*, p. 41.

[29] Some examples are presented in: Michael Watts, Robert F. Smith, "Economics in Literature and Drama", The Journal of Economic Education, Vol. 20, No. 3 (Summer, 1989), pp. 291-307, Taylor &Francis, Ltd., available online at the address:

http://www.sscnet.ucla.edu/polisci/faculty/chwe/austen/wattssmith.pdf

[30] William O. Aydelotte, "The England of Marx and Mill as Reflected in Fiction", The Journal of Economic History, Volume 8, Issue 51, January 1948, pp. 42-58, published online on 01 February 2011.

- Professors in business school have to be truly educated themselves in the spirit of humanities;
- "Finally, if business schools are to develop the person, and not just provide her with a convenient mask, they need faculty members who can engage as people, and provide role models" and "this is perhaps the greatest challenge of all"[31].

A survey about the importance of humanities in business education

Between February and June 2015, as part of a postdoctoral research project, I conducted a survey based on a questionnaire among the students of the Bucharest University of Economic Studies. The study involved 615 students at bachelor courses (3rd year) and masters courses (2nd year) at five faculties.

The questionnaire was designed to allow feedback from respondents about the educational process they were enrolling at that time. The data was collected through the method of self-administering the questionnaire. Completion of the questionnaire was voluntary, so only those interested in the subject of the survey expressed their opinions, a situation that strengthens the relevance of the results obtained.

Regarding the structure of the sample (a total of 615 students), 24.07% were males and 75.93% females; 467 (75.90%) were attending bachelor courses and 148 (24.10%) masters courses.

I have included some issues in the questionnaire to find out the opinion of the students of the Bucharest University of Economic Studies about the importance of studying humanities (philosophy, ethics, sociology, political science, anthropology, history, etc.) in order to become educated and informed citizens and well-trained professionals, as I believe that greater attention should be paid for studying these subjects and integrating them coherently and concertedly into curricula at the university level. They should be included in interdisciplinary study areas, as they are essential for forming a holistic image of the complex functioning of the society.

As a result of the application of the questionnaire, it emerged that among the 615 students participating in the survey, 60.5% considered that the study of humanities, in addition to business curricula, was important, and 73.8% believed that political science would help them better understand the political phenomena and the democratic game.

[31] *Ibidem*.

76.60% of the respondents believed that it is necessary to study moral values and principles within the university, thus implicitly favouring inclusion/maintenance in educational programs of ethics as a subject of study, and 71.3% thought that organizing debates on ethical dilemmas within classes, involving discussions between students and professors, could contribute to the formation of a moral behaviour. On the other hand, 45.7% of the respondents considered that there was too little emphasis on the moral values in the faculty and only 14% considered that the university should not consider moral education, respectively 4% did not have any opinion in this respect.[32]

The results of the survey shows that the experience of the students involved, their knowledge and their common sense are supporting the argumentation presented here. This is the very beginning of a wider research.

Conclusions

As the Humboldtian model of higher education is considered to be outdated, is it utopian to think that there could be a humanistic reform of business education? Even if there are voices pleading for this kind of change, the ways and the means are still a blur, they are still unclear. But we can follow Garliardi's suggestion to be optimistic that the system of business education can be reconstructed from scratch.[33] They say that if there is a will, there is a way. The example of Oxford University that offers complex programs including Philosophy, Politics and Economics remains an inspiration.

Undoubtedly we must not forget that the reality of life and extended research on moral education have proved again and again that humanities-based education offers no guarantees. For no matter how much philosophy you have read, no matter how many artwork you have looked at, whatever classical, sublime music you have listened to, it is still possible to be immoral/amoral, it is possible not to understand, it is possible to remain selfish and inert like a plain, soulless rock on a dusty road, that has no role, and no goal, but just to hurt the feet of those who

[32] The survey we referred to in this paper was part of a research co-financed from the European Social Fund, through the Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/159/1.5/S/138907 "Excellence in scientific interdisciplinary research, doctoral and postdoctoral, in the economic, social and medical fields - EXCELIS", coordinator The Bucharest University of Economic Studies.

[33] Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA, 2006, p. 8.

are passing by. Human nature is a perpetual question and philosophy won't rest in its noble never ending effort. However, humanities are good for mind and soul, and their presence in human life and especially in education, including business education, is absolutely desirable and preferable to their absence. As we have the moral obligation to do whatever it takes to offer the right path and the best conditions for human "flourishing". Hopefully, some virtues can and should be taught.

REFERENCES

Aydelotte, William O., "The England of Marx and Mill as Reflected in Fiction", *The Journal of Economic History*, Volume 8, Issue 51, January 1948, pp. 42-58, published online on 01 February, 2011.

Caton, Kelle, (2014), "Underdisciplinarity: Where are the humanities in tourism education?", *Journal of Hospitality, Leisure, Sport & Tourism Education*, 15.

Clegg, Stewart R. and Anne Ross-Smith, "Revising the Boundaries: Management Education and Learning in a Postpositivist World", *Academy of Management Learning & Education*, Vol. 2, No. 1 (Mar., 2003), pp. 85-98.

Gagliardi, Pasquale, Czarniawska, Barbara (Eds.), (2006), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA.

Gagliardi, Pasquale, (2006), "A role for humanities in the formation of management", in Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA.

Hendry, John, (2006), "Management education and the humanities: The challenge of post-bureaucracy", in Pasquale Gagliardi, Barbara Czarniawska (Eds.), *Management Education and Humanities*, edited in association with Fondazione Giorgio Cini, Edward Elgar Publishing, UK, USA.

Joullié, Jean-Etienne, "The Philosophical Foundations of Management Thought", published online before print, May 29, 2014, doi: 10.5465/amle.2012.0393, *Academy of Management Learning & Education*, March 1, 2016 vol. 15 no. 1 157-179,

http://amle.aom.org/content/15/1/157.short

Ritzer, George, (2008), *The McDonaldization of Society*, 5th edition, University of Mariland, Pine Forge Press, an Imprint of Sage Publications, Inc.

Wagner, Jeffrey, (2017), "Humanities as technology in teaching economics", *International Review of Economics* Education, 25, pp. 35-40.

Watts, Michael, Smith, Robert F., (1989), "Economics in Literature and Drama", *The Journal of Economic Education*, Vol. 20, No. 3, pp. 291-307, Taylor &Francis, Ltd.

https://www.ox.ac.uk/admissions/undergraduate/courses-listing/philosophy-politics-and-economics?wssl=1

https://plato.stanford.edu/entries/economics/#7

http://shc.stanford.edu/what-are-the-humanities

EVALUATION OF PRE-SERVICE BIOLOGY TEACHERS' OPINIONS ABOUT PEDAGOGICAL EDUCATION CERTIFICATE PROGRAM

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Abstract: *Pedagogical Formation (Education) Certificate Program (PFSP) is a program in Turkey that has opened for students who are attending or have graduated from faculties of science are granted the right to become teachers upon completing their undergraduate program. Actually the students who are graduated from education faculties has the right of becoming as a teacher directly but Pedagogical Formation Certificate Program also give chance to other students who has successfully finished this program. PFSP's policy, which conflicts with education faculties' main goal of educating highly qualified teachers, is believed to cause a number of problems. Based on this consideration, this study aims to examine and evaluate pre-service biology teachers' opinions on Pedagogical Formation Certificate Programs offered by selected universities with the approval of the Council of Higher Education (YÖK). Data on pre-service biology teachers' opinions were analysed using content analysis, and similar opinions were grouped under various categories by using ATLAS.ti program. Pre-service biology teachers' opinions on pedagogical formation certificate programs, more specifically on how they define these fast-track formation programs, the injustices they feel they are subjected to as a result, the problems related to difficulties with acquiring teaching skills and competencies in a short period of time, were examined and evaluated along with their recommendations concerning these programs.*

Keywords: *Pedagogical Formation (Education) Certificate Program, Pre-service biology teachers' opinions, Educational problem.*

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1. Introduction

One of the most important elements of the education system is teachers. As teachers are the major determinant of the quality of education, training of teachers is a matter to be emphasised particularly (Gök & Okçabol, 1998).[1] In order to educate qualified teachers, it is important to work with individuals being able to realise the due task and responsibilities required for the teaching profession, and equipped with the required knowledge, ability and positive attitude (Şahin, 2004).[2]

In Turkey, teacher training has its roots in the teacher training school with the name Darülmuallimin (boy's teacher training school) established in Istanbul on 16 March 1848 during the Ottoman Empire period (Akyüz, 2009).[3] Teacher training, with a historical background of 170 years in our education system, has always covered various practices. Until the proclamation of the Republic, because of the conditions of war in the Ottoman Empire, only minor changes were made about the teacher training until 1920 (Karagözoğlu et al. 1995).[4] After the proclamation of the Republic, the name of Darülmuallimin was changed to Muallim Mektebi (teacher training school in old Turkish) as of the 1924 and 1925 school year and to teacher training school as of 1935s. In 1940, Village Institutes were established. These teacher training schools which were active between 1940 and 1953 met a great need in terms of training teachers for the schools in villages, and constituted an authentic model in the teacher training history of Turkey (Öztürk, 1998).[5] Being closed in 1953, Village Institutes were re-structured as 6-year Teacher Training Schools. In 1974, those with suitable conditions were turned into Education Institutes and the rest remained as teacher high schools (Akyüz, 2009).[3] Education Institutes were assigned to train branch

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[1] Gök,F. ve Okçabol, R., *Öğretmen profili araştırma raporu. [Teacher Profile Research Report].* Eğitim SEN, 1998.

[2] Şahin, A.E., (Öğretmen yeterliklerinin belirlenmesi [Determination of teacher competencies]. *Bilim ve Aklın Aydınlığında Eğitim Dergisi*, 2004, 5(8), 58-62.

[3] Akyüz, Y., *Türk eğitim tarihi M.Ö. 1000 – M.S. 2009 [History of Turkish education B.C. 1000- A.C. 2009].* Pegem Akademi, Ankara, 2009.

[4] Karagözoğlu, G., Arıcı, H., Bülbül, S. Çoker, N., *Türkiye'de öğretmen eğitim politikaları ve modelleri [Teacher education policies and models in Turkey].* Avrupa konseyi ülkeleri öğretmen yetiştirme politikaları ve modelleri toplantısı, Milli Eğitim Basımevi, Ankara, 1995.

[5] Öztürk, C., *Türkiye'de dünden bugüne öğretmen yetiştiren kurumlar,* [Teacher training institutions in Turkey form yesterday to today] İstanbul: Marmara Üniversitesi Atatürk Eğitim Fakültesi Yayınları, İstanbul, 1998.

teachers but later on, this task was undertaken by the Higher Teacher Training Schools. These schools were attached to universities as "Education Faculties" in 1982 (Yıldırım & Vural, 2014).[6]

According to the report "Teacher Training and Education Faculties" (2007) of YÖK[7], the Council of Higher Education, between 1982 when the teacher training authority was transferred to universities and 2007, important regulations were made with regard to teacher training for Education Faculties:

In 1992, Ministry of National Education (MEB) pointed to the possible deficit of class teachers due to the increase in the period of study of education schools to four years; and stated that it might be necessary to appoint faculty graduates with a pedagogical formation certificate in order to meet this need; and accordingly, required to open pedagogical formation courses for at least 26 weeks and with 21 credit/hours, and to appoint graduates of different faculties completing this course as class teachers.

In collaboration with MEB, YÖK initiated a work for Re-structuring in Education Faculties, which entered into force in 1997. Based on this work initiated by YÖK, the authority to train teachers was completely transferred to education faculties with a few exceptions, and these faculties were structured in a way to highlight departments and programmes which provide training to teachers for elementary education. It was decided that the period of study for these non-thesis master's programmes would be 3.5+1.5 for the students of education faculty, and 4+1.5 for the graduates of science and literature faculties (YÖK, 2007).[7]

Within the scope of the regulation made in 2006, courses such as history of science, scientific research methods, effective communication skills, Turkish education history and introduction to philosophy were introduced with the aim of enhancing intellectual skills of pre-service teachers; and the number of courses on general culture was increased. Training for 3.5 years for the field knowledge + 1.5 years for professional knowledge was waived and the courses on professional knowledge were spread in the period of study (YÖK, 2007).

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[6] Yıldırım,İ., Vural, Ö.F. , Türkiye'de öğretmen yetiştirme ve pedagojik formasyon sorunu, [Problems Related with Teacher Training and Pedagogical Formation in Turkey]. *Journal of Teacher Education and Educators*, 2014, 3 (1), 73-90.

[7] YÖK, *Öğretmen yetiştirme ve eğitim fakülteleri [Teacher training and education faculties]*. Yükseköğretim Kurulu, Ankara, 2007.

In line with a new regulation of YÖK in 2010, it was provided to end non-thesis master's programmes and to maintain the right to pedagogical formation training of those who are still studying in science and literature faculties or those who have graduated, provided that they fulfil the required conditions (Demircioğlu & Özdemir, 2014).[8] In 2012, pointing to the problem of surplus of teachers YÖK lifted formation training but due to the reactions, later on in 2013, YÖK decided to maintain these programmes. According to a statement made by YÖK, within the context of the work of MEB for a new teacher training strategy, placement of students to secondary education field teaching departments under the faculties of education was ceased as of 2013 and 2014 school year; and the quota for science faculties was decreased. In the announcement of YÖK in its website in 2014, about the Secondary Education Field Teaching Programmes, it was stated that "student placement to the secondary education field teaching departments under the faculties of education will continue as of the next school year, in order to enhance competition and quality in teacher training. It was decided to decrease the period of study in field teaching from 5 to 4 as of 2014 and 2015 school year."; and by this means, maintenance of secondary education field teacher programmes was ensured.

Department of Biology Teacher Education, under the secondary education teaching programmes is one of the departments in education faculties, training its students with the awareness of being a teacher. Although the number of students entitled to become biology teachers after graduating from education faculties adequately meets the biology teacher need in Turkey, Pedagogical Formation training provided by YÖK to the students of science faculty to grant them the right to become teachers leads to a surplus in the number of those entitled as biology teachers. Accordingly, this raises the concern that the Pedagogical Formation Certificate Programmes, which are still being applied in an unplanned manner, will lead to possible future problems about the employment of teachers. Granting the right to become a teacher after completing the Pedagogical Formation Certificate Programmes open to students and graduates of science faculties, in a short period of time; and

[8] Demircioğlu, A., Özdemir, M., *Fen ve Edebiyat Fakültesi öğrencilerinin öğretmenlik mesleğine yönelik tutumlarının çeşitli değişkenlere göre incelenmesi [*Analyzing Attitudes of Students Studying at the Faculty of Arts and Sciences Towards Teaching Profession According to Various Variables*]. Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 2014, 10 (3), 110-122.

considering them equal with the students of education faculties is also another problem of education. The reason is that the students studying in the biology teacher education departments of the education faculties are trained with the awareness of being a teacher by taking field courses as well as courses of educational sciences and by getting involved in teaching practices during their graduate studies. It is considered that the awareness of being a teacher cannot be raised in such a short while among the students and graduates of science faculties, who have completed Pedagogical Formation Certificate Programmes.

2. Aim of the Research

This research aims to evaluate the opinions of the pre-service biology teachers about the Pedagogical Formation Certificate Programme, opened in universities deemed appropriate by YÖK for the students or graduates of biology departments of science faculties.

3. Methodology of the Research

In this research, content analysis technique, which is one of the qualitative research techniques, was applied to review and assess the opinions of the pre-service biology teachers about the Pedagogical Formation Certificate Programme for the students and graduates of science faculties. Qualitative researches provide the researcher with detailed and in-depth information despite studying with a small group (Patton, 1990)[9]; and besides this, content analysis is defined as a research technique composed of text composition, classification, comparison and inference (Cohen, Manion & Morrison, 2007).[10] In this research, content analysis was preferred as it unites similar statements of pre-service teachers under certain categories and makes them plainer for the readers.

Workgroup of this research is composed of 35 voluntary senior students registered in the Division of Biology Education under one of the Faculty of Education in Turkey.

As a means of data collection in the research, the question: "What are your positive and negative opinions about the Pedagogical Formation

[9] Patton, M.Q., *Qualitative Evaluation and Research Methods (2nd ed.)*. CA. Sage, Newbury Park, 1990.

[10] Cohen, L., Manion, L. & Morrison, K., *Research methods in education*. RoutledgeFalmer, London, 2007.

Certificate Programme for the students of biology department in the science faculties?" was asked to the senior students of biology education.

Content analysis of the data collected under the research was made through ATLAS.ti, one of the qualitative analysis programmes. Accordingly, each of 35 senior students was coded starting from B1 to B35. Opinions of the pre-service biology teachers were reviewed one by one and primarily, some codes were determined; and then, these codes were presented in a table under certain categories. This table also contained the frequencies and percentages of the pre-service biology teachers with similar opinions and some of the opinions were presented as examples.

4. Results of Research

In line with the aim of this research, opinions of the pre-service biology teachers about the Pedagogical Formation Certificate Programme opened in universities deemed appropriate by YÖK for the students or graduates of biology departments of science faculties were analysed.

According to these analyses, opinions of 35 participating pre-service biology teachers about Pedagogical Formation Certificate Programmes were categorised as follows:

- Definition of Formation
- Unjust treatment
- Failure to ensure Competence and Requirements of Teaching
- Other Problems caused by Pedagogical Formation Certificate Programme
- Recommendations and Requests about the Pedagogical Formation Certificate Programme

4.1. Definition of Formation

Depending on the analysis of the opinions of the senior students of biology education participating in the research, it was observed that the concept of formation was expressed in different ways. Accordingly, some of the expressions made by pre-service biology teachers about the concept of formation are as follows:

B4: "*Formation is in fact an unnecessary programme introduced only for political interests to prevent the claims of unemployment.*"

B6: "*Formation is a certificate of injustice, given unnecessarily to the graduates of science faculties in such a short period of time as 3-4 months,*

without having any activity done, without ensuring the required acquisitions and with almost no pressure upon the students as they pay for it."

B12: "I *believe that it is a non-sense programme organised by the state to make money, even by taking the risk of collapse in the education system*."

B20: "*It is a crash course to become a teacher organised on the basis of the decision of YÖK to allow those who attended a 4-year field education in science faculties to hooray for becoming a teacher in such a short time as 4 months*."

B27: "*Pedagogical formation certificate programme is an unnecessary programme organised by the state to gain unjust profit, as a result of a wrong education policy*."

B31: "*Formation is a chronic problem of the education faculty graduates*."

4.2. Unjust Treatment

According to the analyses, the most important matter mentioned by all the participating 35 pre-service biology teachers is that Pedagogical Formation Certificate Programme is a severe unjust practice against them and this unjust treatment should be prevented a.s.a.p. Categories of the opinions of those who claim to be exposed to unjust treatment are presented in Table 1.

Table 1: Opinions of pre-service biology teachers claiming their exposure to unjust treatment

Category	Opinions	Frequency (f)	Percentage (%)
Unjust Treatment	Exposure to unjust treatment by the state	28	80
	Obstruction of the employment of education faculty graduates	24	68
	Graduation within a short period of time	19	54
	Although they enter university with lower scores, they become more advantageous for employment after graduation	18	51

As seen in Table 1, 80% of the pre-service biology teachers participating in the research consider that Pedagogical Formation Certificate Programme opened by YÖK to entitle the graduates of the faculties other than the education faculty to become teachers exposes students of the education faculties to an unjust treatment of the state.

B14: "*Although it is the state to ensure democracy and to protect our rights, we face with "legal" unjust treatment by the state*"

B15: "*As a student of education faculty, I do not want the students of science and literature faculties to receive pedagogical formation. I consider this as an unjust treatment by the state to me and to thousands of people*."

B33: "I *believe that the pedagogical formation training provided by some universities to those who have not graduated from education faculties is a severe unjust treatment against the graduates of education faculties*."

About 68% of the pre-service biology teachers consider that besides the biology teachers graduating from the education faculties, entitling the graduates of biology departments to become teachers through Pedagogical Formation Certificate Programme causes an unjust treatment against the graduates of the education faculties, as it hinders their employment.

B3: "*Employment opportunities of education faculty graduates are being obstructed by the students of science and literature faculties by receiving pedagogical formation*."

B22: "*Formation training makes our appointment more difficult as it considerably increases the number of teachers*."

Senior students who have not completed their undergraduate studies or the graduates of the biology department of science faculties are entitled to become a teacher in a shorter period of time than the graduates of biology education teaching departments of education faculties and this is another point that makes 54% of the participating pre-service biology teachers to think that they are exposed to unjust treatment. Duration of undergraduate study for the biology departments of the science faculties is 4 years, and undergraduates may attend Pedagogical Formation Certificate Programme within this 4-year period while the graduates can attend it at any other time; and accordingly, they are entitled to become a teacher in maximum 4.5 years. However, before 2014, students studying in the Division of Biology Education under the Secondary Education Science and Maths Teaching Departments of the Education Faculties were used to complete their undergraduate studies in and entitled to become a teacher in 5 years. On the condition of pursuing Pedagogical Formation Certificate Programme, students to graduate from biology education departments until 2017 will be entitled to become a teacher in a longer period of time than the graduates of science faculties, who have completed this programme.

B11: "I *do not think that it is fair to provide teacher training in 6 months through pedagogical formation to students and graduates of science and literature faculties, which is provided in 5 years in education faculties*."

B18: "*I totally disapprove this unjust treatment made by providing teacher training to the students of science and literature faculties in a short period of time, which is 5 years for the students of education faculties.*"

As an another aspect of unjust treatment, 50% of the participating pre-service biology teachers underline that although they had received higher scores than the students of science faculties in the university entrance exam, graduates of science faculties turn out to be more advantageous after graduation in terms of employment opportunities. Graduates of biology education under the education faculties are just entitled to work as biology teachers while the graduates of biology departments under the science faculties may act as biologists or as biology teachers after attending the Pedagogical Formation Certificate Programme; and thus, it is clear that they have more advantage in finding a job.

B19: "*It is unfortunate that the graduates of science faculties have the opportunity to be entitled both as biologists and biology teachers while the graduates of education faculties can only work as biology teachers and while their advancement in other branches is blocked. Therefore, I believe that there is a great unjust treatment in this regard*."

B21: "*Following the 4-year undergraduate study, students of science faculties receiving pedagogical formation training are regarded as equal with the graduates of education faculties and may also work as biology teachers. It is us who are unfortunate. We complete a 5-year study and can only work as teachers but they are entitled as biologists and biology teachers, even they had taken lower scores in the university entrance exam. This unjust treatment against us is very saddening*."

4.3. Failure to ensure Competence and Requirements of Teaching

As a result of the analysis of the opinions of 35 biology pre-service biology teachers participating in the research about the Pedagogical Formation Certificate Programme, data on their opinions concerning the failure to ensure competence and requirements of teaching are presented in Table 2.

Table 2: Opinions of pre-service biology teachers about the failure to ensure competence and requirements of teaching

Category	Opinions	Frequency (f)	Percentage (%)
Failure to ensure Competence and Requirements of Teaching	Inability to ensure professional awareness and sprit of teaching in a short while	33	94
	The fact that the students of education faculties are trained with the spirit of teaching	30	86
	Lack of teaching practices in the formation training and resulting unqualified teachers	22	63
	Failure to act in accordance with the students' level	16	46
	Ignorance of the responsibilities of the teaching profession	10	29
	The fact that everybody is not equipped with the ability to be a teacher	10	29

As seen in Table 2,94% of the participating senior students of the biology education divisions under the education faculties emphasised that the students attending the Pedagogical Formation Certificate Programme covering a short period of time cannot adopt the spirit of teaching and the professional awareness in such a short time.

B7: "*How it is possible to enable the students of science faculties to adopt the spirit of teaching in such a short time as 6 months, even if they receive formation courses. I have been working as a trainee teacher in a training centre for 2 years. There are six biology teachers, in this training centre. Except me, the other five are science faculty graduates and have become teachers by receiving pedagogical formation certificate. I am still a student of education faculty but there are clear differences between me and the other teachers in giving a lecture and in the attitude towards the students.*"

B20: "It *is impossible that the students who were placed to science faculties after the university entrance exam, who do not consider themselves as capable of explaining, sharing or understanding other people and who are not skilled in this sense adopt these skills within 4-5 months. It is not possible that the students of science faculties comprehend the concept of "teacher", raise a professional awareness, and to put these into practice in such a short time.*"

About 86% of the group participating in the research consider that the students of education faculties are trained to be equipped with the spirit of teaching and to gain awareness in this sense through the field courses and courses of educational sciences provided in each year of their 5-year undergraduate studies and with the support of the academicians in their departments.

B24: "*During our 5-year undergraduate study, we are provided with a lot of information extended to a long period of time such as how to become a good teacher and how to manage a class. We practice these in our courses. When we behave in a way that is not suitable with the profession of teaching, we receive feedback promptly and correct it at once.*"

B26: "*In education faculties, students always gain the knowledge and awareness about the teaching profession during their five-year undergraduate studies. I am not sure how this awareness can be ensured among the graduates of science faculties through very short formation training.*"

63% of the participating candidates consider that Pedagogical Formation Certificate Programme does not cover sufficient practice and activities related to teaching due to its short duration, and therefore, it leads to unqualified teachers.

B17: "*Sometimes, even years of training is not enough to have all the qualifications required to become a good teacher but people are entitled to practice this profession within just a few months by passing an uncomplicated exam. I do not think that a student of science faculty is as qualified as a student of education faculty in terms of teaching profession.*"

B34: "*As the students of education faculties have the opportunity to practice what they learn in the field of teaching and relatedly to develop themselves, they gain the capacity to duly perform their profession when they graduate. However, it is not possible to equip students of science faculties with these qualifications through the pedagogical formation courses taken in a short period of time.*"

Courses provided in education faculties during the undergraduate study and their content provides guidance to the pre-service biology teachers about the ways of lecturing according to the age groups and how to behave according to their developmental stages. It is very important that the graduates are aware about how to behave according to the level of a student, based on the observations, practices and activities experienced during the five-year undergraduate studies and the traineeship period. About 46% of the pre-service biology teachers participating in the research consider that graduates of pedagogical

formation training do not or cannot act according to the levels of the students.

B6: "*I have observed that the graduates who became teachers through a very short formation training, which we complete in 5 five years; and through a traineeship period of a few months, which is two semesters for us behave negatively towards high school students and lead to social problems as they do not act according to their developmental psychology*."

B29: "*It is clear that people who receive courses on education within a few months, and then considered as pre-service biology teachers, as against our efforts in education faculties for years to pass these courses cannot duly perform teaching profession and act according to the developmental stages of the students*."

It is an inevitable fact that the people performing the teaching profession should provide qualified education to train competent future generations. About 29% of the pre-service biology teachers participating in the research expressed their opinions that the students attending the Pedagogical Formation Certificate Programme are not aware of the responsibilities of the teaching profession, that it entails a high level of responsibility and that everybody is not equipped with the ability to be a teacher.

B20: "*It is impossible that the students who were placed to science faculties after the university entrance exam, who do not consider themselves as capable of explaining, sharing or understanding other people adopt these skills within 4-5 months. It is not possible through the pedagogical formation training that the students of science faculties comprehend the concept of "teacher", raise a professional awareness, and to put these into practice in such a short time*."

B30: "*I do not think that awareness about teaching cannot be raised through formation courses provided within a short period of time. Being a teacher is a distinct qualification, it is absolutely not a simple profession that can be performed by anybody*."

4.4. Other Problems caused by Pedagogical Formation Certificate Programme

Opinions of 35 pre-service biology teachers participating in the research about the Pedagogical Formation Training were analysed. Accordingly, opinions caused by pedagogical formation provided to the students of science faculties are presented in Table 3.

Table 3: Opinions of pre-service biology teachers about the other problems caused by Pedagogical Formation Certificate Programme

Category	Opinions	Frequency (f)	Percentage (%)
Other Problems caused by Pedagogical Formation Certificate Programme	Deterioration of the education system	24	66
	Emerging idea that the teaching profession has become purchasable	20	57
	Problems in the appointment of teachers	18	51
	Leaving a bad future to our children	17	49
	Decrease in the prestige of the teaching profession	13	37

When Table 3 is examined, it is seen that 35 pre-service biology teachers participating in the research consider that providing Pedagogical Formation Certificate Programme to the students or graduates of the science faculties triggers some problems. Accordingly, 66% of the participating pre-service biology teachers believe that the formation programme approved by YÖK and opened by certain universities leads to deterioration in the education system.

B1: "*I think that the quality of education will deteriorate as the formation programme which enables being a teacher within a few months will not train qualified teachers and relatedly, as these people will not be able to provide qualified education.*"

B8: "*Objectives of science faculties and education faculties in training their students are based on totally different values. Science faculties aim to train scientists while the latter aims to train teachers. I think that the number of unqualified teachers will increase as a result of the formation training provided to the students of science faculties, who have different goals. Accordingly, I wonder that this will cause deterioration in our education system.*"

Based on the analysis of the opinions of the pre-service biology teachers, another problem related to the formation training is the emerging idea that the teaching profession has become purchasable. About 57% of the individuals participating in the research expressed their inconvenience that the teaching profession which is deemed divine and which necessitate a great devotion has begun to be seen as purchasable because of gaining the title of teacher after a short, insufficient and paid training."

B4: "*In my traineeship practice at a school, I attend the courses of a biology teacher who has been entitled as a teacher following the so-called education courses given in 3-4 months; and I observe how this profession is performed when it is purchased and I feel sorry*."

B23: "*Teaching necessitates not only knowledge but also the ability to transfer it. I think that 99% of science faculty graduates who became teachers after the formation training do not have this qualification. In my opinion, it is not acceptable that the title of teaching profession is purchased through such a programme in a short time by those who are worried about employment opportunities after graduation*."

Another problem is related with the issue of appointment due to the increase in the number of teachers as a result of the Pedagogical Formation Training Certificate, which is opened by the universities and which paves the way for the science faculty students to become teachers. 51% of the pre-service biology teachers participating in the research claim that the problem of appointment has emerged due to the unplanned increase in the number of teachers.

B6: "*Number of students graduating from education faculties in a year is rather low while thousands of people become so-called teachers within 3-4 months following the formation training and this leads to the problem of appointment*."

B29: "*Number of teachers' increases highly due to the formation training, and our appointment gets more difficult. This should no more be applied*."

Nearly half of pre-service biology teachers participating in the research emphasised that we create a bad future for our children due to the unqualified teachers who are in fact graduates of science faculties but became teachers following short formation training.

B13: "*Teaching is in fact a profession whose practitioners should be selected meticulously but through formation training, everybody without even solid criteria is allowed to become teachers. Then, these people who are unqualified to become teachers begin to lecture the students, who are our future. Thus, we plunge our country into darkness through "legal" means*."

B27: "*Placing teachers who are not/cannot be trained in the field of education through short formation training, at every stage of the education system will cause massive problems and prevent us to succeed in leaving a better future for the next generations*."

Teaching profession has always been a prestigious field of profession, appreciated by the society. There is a strong relation between the social status and reputation of the teaching profession and its practitioners. About 37% of those participating in the research consider that the people

who are entitled to become teachers through a short, intense training are unqualified and therefore, negatively affect the prestige of the teaching profession.

B14: "*Formation training supports the idea that if you cannot find any job, then, become a teacher; and thus, decreases the prestige of the teaching profession in the society*."

B27: "*Considering that the four-month training is not enough to become a teacher, and that teaching and being a teacher are not the same, I have exerted efforts for years to gain the teaching qualifications. However, this short formation training degrades the teaching profession, considered as divine and decreases its status. This is very saddening*."

4.5. Recommendations and Requests about the Pedagogical Formation Certificate Programme

Senior biology students participating in the research on the Pedagogical Formation Certificate Programme expressed their opinions about the formation training provided to the science faculty students and underlined that it should no more be applied. Related recommendations and requests are as follows:

B3: "I *am not sure whether the students who received formation training prefer teaching profession as they really want to become a teacher or as they have to do it, but I believe that each faculty should focus its studies on its own field. Accordingly, I hope that the formation training will be abolished*."

B15: "*Graduation from an education faculty should be a must to become a teacher, and formation training should be abolished*."

B21: "I *hope that the formation training will be abolished as soon as possible and those who really want to become teachers will be trained in the education faculties; and those who want to become biologists will enter science faculties. By this means, everybody can duly perform his/her job and the unjust treatment is eliminated.*"

B29: "*Atatürk says: 'Teachers: the new generation will be your masterpiece' Accordingly, teaching profession should be performed by us, the graduates of education faculties, in other words, by those who have adopted the spirit of teaching, who have been trained to teach and learn in the best way and to become a teacher. The practice of formation training should be abolished as soon as possible*."

B31: "*Graduates of education faculties should enjoy the benefits they deserve and be privileged in appointments or some additional scores may be granted in*

the examination for appointment, just like the practice for the graduates of teacher high schools in the university entrance exam."

B33: "*In order to create a difference between us and the people who are entitled to become teachers through the formation training, we should at least be privileged in the teacher appointments through KPSS, public personnel selection examination. By this means, perhaps not all the problems will be solved but the unjust treatment against us will be prevented to a certain degree*."

5. Conclusion and Recommendations

Considering the importance of teacher training, various steps have been taken about the process of teacher training, based on the problems encountered. People are still suspicious whether these steps have been taken pursuant to approaches on teacher training systems or to political and social concerns (Yıldırım &Vural, 2014). Today, besides the education faculties aiming to train teachers, students and graduates of science faculties can also become teachers through a Pedagogical Formation Certificate Programme opened in certain universities deemed appropriate by YÖK; and this brings about some problems. As stated by Çocuk et al. (2015)[11] considering the graduates of faculties other than the education faculty as competent for the teaching profession following short formation training has always caused the teacher training process to be a matter of dispute. Education necessitates planning the future. Training qualified teachers who are going to shape our future requires a long process. It is disputable how much the teaching qualifications can be acquired through the Pedagogical Formation Certificate Programme, completed in a short period of time. Besides the knowledge, skills and competence about the field, being a teacher necessitates understanding, devotion, displaying behaviours according to the developmental stages of the students, planning the process in the most effective way, class management and acting in line with the required acquisitions on the basis of the training programme. Training qualified teachers with these features and ensuring the spirit of and awareness about teaching requires a long process. Therefore, the practice to entitle students and graduates of

[11] Çocuk, H.E. , Yokuş, G., Tanrıseven, I., *Pedagojik formasyon öğrencilerinin öğretmenliğe ilişkin özyeterlik ve metaforik algıları: mersin üniversitesi örneği.* [Pedagogical formation students' self-efficacy and metaphoric perceptions related to teaching profession] *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 2015, 12 (32),373-387.

science faculties as teachers following a short pedagogical formation certificate programme should be ended as soon as possible.

When the reasons that make the senior students of the biology education department under the education faculties consider being subject to unjust treatment are examined, it may be said that they are right to a great extent. Excess number of teachers following the entitlement of the students and graduates of science faculties to work as teachers, through the Pedagogical Formation Certificate Programme provided in certain universities deemed appropriate by YÖK also leads to employment problems. Since 2013, except for the students and graduates of the biology education departments of the education faculties, nearly 7,000 individuals who are the students and graduates of science faculties and who received formation training have been entitled to become biology teachers. Increase in the number of biology teachers brings along employment problems. It is clear that until the end of 2017, period of study to graduate for the students of the biology education departments of the education faculties who are going to complete their undergraduate studies in 5 years is longer than the students of science faculties who receive formation training. As of 2013, YÖK decreased the period of study for biology education departments of education faculties to 4 years. Moreover, when ÖSYM (Student Selection and Placement Centre) guides on university and department preferences are examined, it is clearly seen that the students of biology departments of science faculties are placed to universities with lower scores. Moreover, it is highly unjust that the students of science faculties who also receive formation training graduate earlier than the students of education faculties, and also they become privileged by being entitled both as biologists and biology teachers. This opinion is verified by the statement of Biber &Tuna (2015)[12] "today, education faculties are responsible to train teachers but upon secondary education's becoming widespread and upon the increasing need for teachers, science and literature faculties also tend to train teachers and included teacher training among their duties of making researches in the field of basic sciences, and training scientists in these fields."

[12] Biber, A.Ç., Tuna, A., *Pedagojik formasyon eğitimi alan matematik bölümü mezunu öğretmen adaylarının öğretmenlik uygulaması dersi hakkındaki görüşleri* [Views of Teacher Candidates with Pedagogical Formation in Department of Mathematics on Teaching Practice Course], *Başkent Universıty Journal of Education,* 2015, 2(2), 131-140.

In Turkey, aim of the education faculties is to train qualified teachers, while science faculties aim to train scientists, who like to do researches. Students who preferred the related departments of these faculties with two different aims should be able to work in their own jobs after graduation, without any employment concern. On the basis of a planning to be made in collaboration between YÖK and MEB, sufficient number of teachers should be trained in the education faculties, and the practice to entitle the students and graduates of science faculties as teachers through the Pedagogical Formation Certificate Programme should be abolished.

REFERENCES

Akyüz, Y., (2009), *Türk eğitim tarihi M.Ö. 1000 – M.S. 2009 [History of Turkish education B.C. 1000- A.C. 2009].* Pegem Akademi, Ankara.

Biber, A.Ç., Tuna, A., (2015), *Pedagojik formasyon eğitimi alan matematik bölümü mezunu öğretmen adaylarının öğretmenlik uygulaması dersi hakkındaki görüşleri* [Views of Teacher Candidates with Pedagogical Formation in Department of Mathematics on Teaching Practice Course], *Başkent Universıty Journal of Education,* 2(2), 131-140

Cohen, L., Manion, L. & Morrison, K., (2007), *Research methods in education*. RoutledgeFalmer, London

Çocuk, H.E., Yokuş, G., Tanrıseven, I., (2015), *Pedagojik formasyon öğrencilerinin öğretmenliğe ilişkin özyeterlik ve metaforik algıları: mersin üniversitesi örneği.* [Pedagogical formation students' self-efficacy and metaforic perceptions related to teaching profession] *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 12 (32),373-387.

Demircioğlu, A., Özdemir, M., (2014), *Fen ve Edebiyat Fakültesi öğrencilerinin öğretmenlik mesleğine yönelik tutumlarının çeşitli değişkenlere göre incelenmesi [*Analyzing Attitudes of Students Studying at the Faculty of Arts and Sciences Towards Teaching Profession According to Various Variables*]. Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 10 (3), 110-122.

Gök, F. ve Okçabol, R., (1998), *Öğretmen profili araştırma raporu. [Teacher Profile Research Report].* Eğitim SEN.

Karagözoğlu, G., Arıcı, H, Bülbül, S., Çoker, N., (1995), *Türkiye'de öğretmen eğitim politikaları ve modelleri [Teacher education policies and models in Turkey].* Avrupa konseyi ülkeleri öğretmen yetiştirme politikaları ve modelleri toplantısı, Milli Eğitim Basımevi, Ankara.

Öztürk, C., (1998), *Türkiye'de dünden bugüne öğretmen yetiştiren kurumlar, [Teacher Training Institutions in Turkey form yesterday to today]*

İstanbul: Marmara Üniversitesi Atatürk Eğitim Fakültesi Yayınları, İstanbul.

Patton, M.Q., (1990), *Qualitative Evaluation and Research Methods* (2nd ed.). CA. Sage, Newbury Park

Şahin, A.E., (2004), Öğretmen yeterliklerinin belirlenmesi [Determination of teacher competencies]. *Bilim ve Aklın Aydınlığında Eğitim Dergisi*, 5(8), 58-62.

Yıldırım,İ., Vural, Ö.F., (2014), *Türkiye'de öğretmen yetiştirme ve pedagojik formasyon sorunu,* [Teacher training and pedagogical formation problems in Turkey]. *Journal of Teacher Education and Educators*, 3 (1), 73-90.

YÖK, (2007), *Öğretmen yetiştirme ve eğitim fakülteleri [Teacher training and education faculties].* Yükseköğretim Kurulu, Ankara.

FORMATION OF BIOTECHNOLOGICAL TERMS IN ENGLISH AND UKRAINIAN LANGUAGES

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Abstract: *The article is devoted to the analysis of the formation and structure of one-component biotechnological terms of the English and Ukrainian languages. The common word formation tendencies, which are characteristic of both studied languages, are defined, which include the cases of predominance of fixation as a way of generating biotechnological terms, peculiarities of the formation of composites with the predominance of terms with the connecting vocal in the Ukrainian language and hyphenated writing in the English language. On the basis of the analysis of existing forms of one-component terms, the most productive methods of their formation by affixal method are established with the use of a large number of Latin and Greek elements.*

Keywords: *biotechnological terminology, word-formation processes, morphological features, term formation.*

Introduction

One of the main directions of science and technology development is the biotechnology industry. The progress of biotechnology generates a large number of new knowledge, new industrial trends, each of which gradually forms the terminological apparatus of this sphere. The study, description of the terms emerging in new fields of knowledge, to which, without doubt, biotechnology belongs, is one of the most important areas of modern linguistic research.

Biotechnology is served exclusively by English-language terminology, although the development of research in the field of biotechnology is not a priority of the English-American community. Biotechnological terminology is at the stage of formation, which makes relevant linguistic studies related to the study of the new terminology, because they allow you to disclose the essence of the processes of terminology and show the laws of the formation of a special vocabulary,

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which may be interesting as a linguist, and an interpreter who works in this area.

The appeal to the questions of biotechnological terminology is also explained by the growing need for international cooperation, which is particularly important for the further development of society, supporting the progress of science and technology is the intercultural communication of specialists in the field of biotechnology.

The urgency is caused by insufficient study of the processes of formation and peculiarities of the reproduction of terminological units of the English language in the field of biotechnology in Ukrainian, as well as modern requirements for such translation, when it concerns about transferring not only the form of the original, but also the optimal reproduction of the content.

The analysis of the scientific literature

Various aspects of the study of the concept of "term" and the works of many scholars are devoted to the peculiarities of the formation of the terminological system.

The research of the terminology of biotechnology in the English language was carried out by such scientists: E. Myshak[1] carried out a structural and derivative analysis of English biotechnological terminology[2], L. Rytikova[3] conducted the study of the terminology of biotechnology and general trends of its development in English, morphological features of one-component terms in the sphere of biotechnology in Russian and English were the subject of the study of S. Vasilieva[4], multi-component terms in the sublanguage of biotechnology (based on Russian and English languages) were studied by T. Kudinova[5].

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[1] Myshak, E., *The main means of formation of biotechnological terms,* European Journal of Research, Austria, 2017, 3 (3).

[2] Myshak, E., *Structural and derivational analysis of English biotechnology terminology,* Cogito, 2016, 8(4).

[3] Rytikova, L.L., *Osoblyvosti formuvannya biotekhnolohichnoyi terminolohiyi anhliys'koyi movy*, Ahrarna nauka i osvita, 9, (3-4), 2008, pp.122-126.

[4] Vasil'yeva, S.L., (2015), *Morfologicheskiye osobennosti odnokomponentnykh terminov sfery biotekhnologiy v russkom i angliyskom yazykakh, Filologicheskiye nauki*, Voprosy teorii i praktiki, 2 (44).

[5] Kudinova, T.A., *Strukturno-semanticheskiye osobennosti mnogokomponentnykh terminov v pod"yazyka biotekhnologiy (na materiale russkogo i angliyskogo yazykov): Avtoref. diss.* ... k. filol. n. Orel, 2006, p.21.

The analyzed scientific literature on the problem gave the reason to suggest that the analysis of English biotechnological terminology is a growing interest of scientists as it is a young terminology system that is at the stage of formation in connection with the high level of innovation and dynamism of biotechnology. Therefore, the study of general trends in the development of terminology in the English and Ukrainian languages and some of its particulars is interesting in our opinion, both from theoretical and practical point of view.

The volume of the article does not allow to analyze all aspects of the formation of the terminological system in the field of biotechnology, therefore the object of research is terminological formations of English and their equivalents in Ukrainian.

The purpose of the article

The purpose of the study is to identify the peculiarities of the formation and structure of one-component biotechnological terms in the comparative aspect of the English and Ukrainian languages.

Materials and methods of research

In the preparation of work we used the method of a continuous selection of biotechnological terms from continuous sampling one-component terms of scientific literature in English and Ukrainian languages (publication of scientific journals, monographs, materials on the Internet) and biotech dictionaries and as well as their morphological analysis.

Definition of the term in the scientific literature

Before analysis of the main ways of formating one-component biotechnological terms in the English and Ukrainian languages, we examined the definitions of the term in the scientific literature.

In modern linguistics "term" is presented as "a word or word combination that expresses clearly defined concept of a certain science, technology, arts, social and political life, etc.[6]" [3, c. 306].

Most researchers admit that terminology is one of the main stylistic features of a scientific style, an informative vocabulary core of languages of science. Under the term, as a rule, it is understood the linguistic means of expressing a special concept.

[6] Maruzo, Z.H., *Slovar' lingvisticheskikh terminov. Per. s frants,* M.: Inostrannaya literatura, 1960, p.306.

O. Akhmanova defines the term as a "word or phrase of a special (scientific, technical, etc.) language, which is created, received or borrowed for the exact expression of special concepts and the designation of special objects"[7].

V. Danilenko holds the view that "the term is a word (or phrase) of a special sphere of application, which calls a special concept"[8].

We find approximately the same definition of terminology in foreign dictionaries of linguistic terms.

Thus, in the dictionary of J. Maruzo[9] terminology is defined as a system of terms used to express the concepts inherent to this science.

At the base of each term necessarily lies the definition of the reality that it denotes, so the terms represent an accurate and at the same time a brief description of the object or phenomenon. Each branch of knowledge operates its own terms, which constitute the essence of the terminology system of a certain science.

Consequently, all scientists emphasize on the specificity of the terms, their monosemy and in relation to the concepts of a certain field of knowledge. Concepts have a linguistic expression and can not exist without it.

Thus, in the article the term is understood as "a special word or word combination accepted in professional activities, which is used in special conditions"[10].

Biotechnological terminology in the English and Ukrainian languages

Since the term is the unit of the denomination in a particular scientific field, we define the biotechnological terminology system as a collection of lexical units that are related to the concept of "biotechnology" and express its conceptual content, revealing an appreciable or pragmatic meaning.

Biotechnology terminology is a complex phenomenon, since at the beginning of the twenty-first century biotechnology transformed into a comprehensive integration science combining tens sections and

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[7] Akhmanova, O.S., *Lingvisticheskiye problemy perevod*, Sb. statey MGU, 4, 1981, p.11.

[8] Danilenko, V.P., *Semanticheskaya struktura spetsial'nogo slova i yeye leksikograficheskoye opisaniye, Sverdlovs*k, 1991, p.12.

[9] Maruzo, Z.H., *Slovar' lingvisticheskikh terminov. Per. s frants,* M.: Inostrannaya literatura, 1960, p.361.

[10] Superanskaya, A.V., Podol'skaya, N.V., Vasil'yeva, N.V., *Obshchaya terminologiya: Voprosy teorii.* Nauka, Moskva, 1989, p.14.

directions. It is characterized by the use of terms borrowed from the terminology of various disciplines – biology, genetics, ecology, bioethics, philosophy, sociology, psychology, jurisprudence.

An element of the biotechnological terminology is the biotechnological term. We define the biotechnological term as a word or lexical unit that verbalizes knowledge about the use of living organisms and biological processes in production and serves biotechnology, a branch of science combining the features of both biology and technology. The biotechnological term, like any term, is characterized by certain requirements: motivated, monosemy, semantic and structural relationships. At the basis of referencing the word to the biotechnological term is the allocation of its content and conceptual features that allow the word to be included in the scientific sphere or the field of "biotechnology", which is considered by us as a branch of science that studies the possibilities of using living organisms, their systems or products of their life for the solution of technological problems, as well as the possibility of creating living organisms with the necessary properties by genetic engineering.

The word, entering into the use in the biotechnological field, becomes an element of the terminology system that serves the biotechnology industry and forms a complex of terminological systems depending on the direction of biotechnological activity, which are combined into a unified term system, which we call the biotechnological terminology or terminology of the sublanguage "biotechnology".

Since the terminology of biotechnology has broad and branched semantic relations with contiguous compatible terminologies, it is impossible clear line between it and others[11].

The formation of the biotechnological terminological system is important in the study of the common terminology of the English and Ukrainian languages. Analysis of the processes of word formation as a source of the formation of terminology of biotechnology is necessary for understanding the factors influencing the general composition of the vocabulary of the English and Ukrainian languages.

On the basis of the studied material, it was found that the number of non-derivative terms in the sphere of biotechnology is: 30% in English and 29% in Ukrainian. Such close indicators are explained by the fact that

[11] Myshak, E., *Classification potential of abbreviations used in biotechnology*, The First Independent Scientific Journal, 20, 2017, pp. 40-47.

most of the non-derivative words in both languages are borrowed from Latin and Greek and are exclusively highly specialized terms that do not function outside the scientific sphere: vacillus, gamete, hormone.

Indicators of derivative terms in English and Ukrainian languages are almost the same - 60% of English and 62% of Ukrainian, but the ways of creation and the affixes used in the languages may vary.

Formation biotechnological terms in the English language

English biotechnological terms-nouns are formed predominantly with suffixes and prefixes. The most productive suffixes involved in generating biotechnological terms in English include the following: -ion, -tion (bioaugmentation, bioremediation, pollination, hybridization, polymerization, population, selection, expression, recombination, replication, reproduction, transcription, transformation, translation, duplication, explantation); -ing (cloning, splicing, sequencing, inbreeding, engineering, crossing (breeding), mapping, profiling); -tide/-cide (nucleotide, pesticide, herbicide); -ance (-ence) (dominance, inheritance, sequence, resistance); -ism (mutualism, organism, parasitism, metabolism, photoperiodism, commensalism, polymorphism, dimorphism); -er (transfer, marker, dimer, fermenter, fertilizer, impeller, isomer, promoter); -or (attenuator, biosensor, bioreactor, immunosensor, operator); -ity (consanguinity, cytotoxicity, heritability, incompatibility, instability); -y (allelopathy, dichogamy, exogamy, fortify, immunotherapy, lysogeny, karyogamy) and others.

It is worth noting that among the traditional noun suffixes of the English language the suffixes -ion, -tion, -ation, -ing reveal high word-building productivity in the biotechnological terminological system.

The formation of English biotechnological terms (adjectives) occurs with the following suffixes: -ic (antigenic, homeotic, genetic, inorganic, heterotrophic, intragenic, metabolic, anaerobic); -al (asexual, microbial, mitochondrial, artificial, bacterial, clonal, monoclonal, functional); -able (degradable, predictable, vegetable, usable, favourable, inflammable); -ive (alternative, reproductive,defective, degrative, competitive, extensive, positive, negative, relative); -ar (extranuclear, nuclear, unicellular, multicellular); -ant (tolerant, dominant, constant, abundant, toxicant); -ous (analogous, autonomous, autologous, dangerous, gaseous, hazardous); -ful/less (harmful, harmless, careful, careless); -y (complementary, sedimentary, hereditary, fragmentary); -ent (dependent, independent, effluent).

The process of prefixation, that is, the formation of derivative terms using derivative morphemes, is less explicit in the terminology system of biotechnology.

Most prefixes are borrowed, they are prefixes of Latin (re-, de-, in-, pre-, ad-) and Greek (anti-, auto-, chemo-, bio-) origin.

Among the most productive prefixes with which one-component biotechnological terms (nouns) are formed, are as follows: de- (decomposition), di- (dialysis, diffusion), im-, in- (inbreeding, inhibitor, intragenic, inorganic, immunity, imunosensor), inter- (interference, intermolecular, interaction), co- (co-factor, co-transfection, co-enzyme, co-linearity), re- (recombination, regeneration, remark (replica), recombinant), sub- (sub-clone, subspecies, sub-strain, substrate), super- (supergene, supercoil, superbug, supernatant, superstructure), trans- ((transgenic, transposase, transposon, transcription, transformation, translation), ultra- (ultrasonication), ex- (excinuclease, excision, explantation, explant, express).

Greek prefixes are represented by the following elements: anti- (antibody, antibiotic, anticodon, antigen, antisense RNA, anti-oncogene), a- (abiotic, acellular), hyper- (hyperploid, hypertonic, hyperthermia), dia- (dialysis, diakinesis, diazotroph), epi- (episome, epistasis, epitope, epicotyl, epigenesist), hypo- (hypomorph, hypoploid, hypotonic, hypocotyl), para- (parahormone, paralogous, paratope, parasite), poly- (polymerase, polygene, polycistronic, polyadenylation, polymorphism, polypeptide), endo- (endocytosis, endoderm, endodermis, endomitosis, endonuclease, endopolyploidy).

Formation biotechnological terms in the Ukrainian language

In Ukrainian, as in English, the most productive in the formation of biotechnological terms are suffixes and prefixes.

The following suffixes for the formation of biotechnological terms-nouns are most frequently used: -ann (klonuvannya, sekvenuvannya, pohlynannya, markuvannya, inhibuvannya, paruvannya, uspadkuvannya, peresadzhennya); -enn (zaplidnennya, zaborona, oprominennya, zcheplennya, zabrudnennya, rozmnozhennya, vidnovlennya, obstezhennya); -atsiya (amplifikatsiya, hibrydyzatsiya, dublikatsiya, aktyvatsiya, replikatsiya, rekombinatsiya, hidrohenizatsiya); -ach (posylyuvach); -nik (pokaznyk, zabrudnyk, shkidnyk); -ist / -yst (ahonist, virulentnist', heterozihotnist', rodyuchist', bezpechnist') and etc.

As noted above, in English the most productive suffixes in the sublanguage "biotechnology" are suffixes with the abstract meaning -ion, -

tion, -ation, and -or, which form nouns with meaning of action or process. In Ukrainian such terms with suffixes -ion / -tion and -or usually correspond to terms that are derived from analogous terms of the English language by transliteration and / or tracing and contain Latin suffixes -ator or –atsiya and -or (hybridization – hibrydyzatsiya, recombination - rekombinatsiya, replication - replikatsiya, biosensor -biosensor, terminator - terminator, stymulator - stymulyator).

Thus, most of the suffixal terms of the sphere of biotechnology in the Ukrainian language are formed, which, in turn, explains the close indicators of suffixation of terms in the Ukrainian and English languages. However, there are also such cases in the Ukrainian language, when the term is formed by combining transliteration and tracing, but using the suffix of the Ukrainian language, for example, cloning - klonuvannya, sequencing - sekvenuvannya, insemination – zaplidnennya, mapping – kartuvannya.

In the formation of biotechnological terms-adjectives in the Ukrainian language the following suffixes are most productive: -ychn / ichn (abiotychnyy, biotekhnolohichnyy, metabolichnyy, somatychnyy, orhanichnyy, henetychnyy, hibridolohichnyy, metabolichnyy); -enn (antropohennyy, ekzohennyy, endohennyy, heterohennyy, homohennyy, kantserohennyy); -ov (mizhrodovyy, hidratovani, pistonovi, zalyshkovyy,); -n- (odnoklitynnyy, hametnyy, yadernyy, markernyy, kyslotnyy); al'n-, -lin- (monoklonal'nyy, bazal'nyy, lateral'nyy, pohlynal'nyy, funktsional'nyy).

In the formation of biotechnological terms-nouns and adjectives in the Ukrainian language, the following prefixes are involved: de / dy- (dehalohenirovannya, dehidrohenizatsiya, denaturovanyy, determinovanyy, deionizirovannyy, deruhuvannya, dyversyfikatsiya); re- (rekombinant, rekombinantnyy, remediatsiya, restriktsiynyy, rekul'tyvatsiya); ne- (nehistonovi, neavtonomni, nedeterminovani, nematrychni, nesumisni, nestabil'nist', neorhanichni, nebiolohichni, nebezpechni, neshkidlyvi) and others.

In both studied languages, various methods of connecting elements to composite formations appeared to be relevant. So complex words in English and Ukrainian languages correspondingly are created by contiguity, that is, they do not contain connecting elements and have fused writing: Engl. centrifuge, centrifugation, chimeraplasty, fingerprinting, mericloning, macromolecule, macrophage, nutriceutical, proteinaceous, chromatography, radioimmunoassay, retrovirus, pyrophosphate, pseudogene,

bioaugmentation, bioanalysis, macromolecule, macrophage, macropropagation; Ukr. alkaloyidy, autoimmunnyy, aminokyslot, bakteriotsyn, bakteriofah, bakulovirus, embriotekhnolohiya, embriohenez, hlyukoinvertaza, hlikoliziya, hialoplazma, onkohen, solestiykist'.

7% of the terms of biotechnology in English are graphically connected and have hyphenated spelling (bio-augmentation, bio-assay, down-regulate, electro-blotting, sib-mating, topo-isomerase, single-use) and 2% in Ukrainian (beta-halaktozydaza, beta-sytosterol, vestern-bloh, hel'-fil'tratsiya, hen-irota, daunstrim-protsesynh, nonsens-mutatsiya).

Complex words with connecting vowel are typologically more characteristic of the Ukrainian language, therefore, the terms of the sphere of biotechnology are no exception. 8% of complex terms in the Ukrainian language are formed by the connecting vowel (elektroblotynh, henotop, imunosensor, somatokrinin, plastokhynon), while in English such terms are only 3% (gametoclone, xenotransplantation, genotype, gametogenesis, telophase).

It is worth noting that in the English language the common way of word-creation of biotechnical terms is the conversion and elliptical contractions, in contrast to the Ukrainian language, which does not have these phenomena at all. For example: map (Ukr. kartuvannya) as a noun has the meaning: a diagram showing the relative location of the loci in the chromosome and the distance between them. As a verb map (Ukr. kartuvaty) changes in grammatical forms: maps, mapped, mapring and has meaning to determine the relative positions of the loci (genes or DNA sequences) in the chromosome. Consequently, in this case there is a conversion.

Elliptic abbreviations as a source of biotechnological terms are associated with the factor of language economics. English-language terminology may take several steps before a new term is formed, for example: renewable energy sources → renewable sources → renewables; biodegradable cleaners → biodegradables, etc.

Conclusions

Thus, it can be noted that the terminology of the sphere of biotechnology reflects the tendencies of word formation, characteristic of both studied languages. These include cases of predominance of affixation as a way of generating biotechnological terms, peculiarities of the formation of composites with predominance of terms with connecting vowel in the Ukrainian language and hyphenized writing in the English

language, etc. The study shows that the terminology of the sphere of biotechnology also shows its peculiarities. The general similarity in the methods of creating the terms of the Ukrainian and English languages, which is determined by the etymological community, on the one hand, the individual terms borrowed originally from the English language, and then with the development of the biotechnology industry - through the English language into Ukrainian by means of tracing and / or transliteration; and, on the other hand, Greek -Latin morphemes (prefixes and suffixes).

Insignificant differences in the ways of creating the terms of the Ukrainian and English languages in the sphere of biotechnology are associated with such phenomena as conversion and elliptical contractions that are not typical for the Ukrainian language.

Thus, the obtained data testify that the formation of English biotechnological terminology is characterized by an advanced character in comparison with the Ukrainian language, it is based on the tradition of using the Greek-Latin elements, and is also a source and / or mediator for borrowing terms within the scope of the study for other languages.

REFERENCES

Akhmanova, O.S., (1981), *Lingvisticheskiye problemy perevod,* Sb. statey MGU, 4, pp.11-27.

Gerd, A.S., (1986), *Yazyk nauki i tekhniki kak ob"yekt lingvisticheskogo izucheniya,* Filologicheskiye nauki, 2, pp.48 - 56.

Danilenko, V.P., (1991), *Semanticheskaya struktura spetsial'nogo slova i yeye leksikograficheskoye opisaniye,* Sverdlovsk, p.155.

Kudinova, T.A., (2006), *Strukturno-semanticheskiye osobennosti mnogokomponentnykh terminov v pod"yazyka biotekhnologiy (na materiale russkogo i angliyskogo yazykov):* Avtoref. diss.... k. filol. n. Orel, p.21.

Maruzo, ZH, (1960), *Slovar' lingvisticheskikh terminov.* Per. s frants, M.: Inostrannaya literatura, p.436.

Myshak, E., (2016), *Structural and derivational analysis of English biotechnology terminology,* Cogito, 8(4).

Myshak, E., (2017), *Classification potential of abbreviations used in biotechnology,* The First Independent Scientific Journal, 20, pp. 40-47.

Myshak, E., (2017), *The main means of formation of biotechnological terms,* European Journal of Research, Austria, 3 (3).

Superanskaya, A.V., Podol'skaya, N.V., Vasil'yeva, N.V., (1989), *Obshchaya terminologiya: Voprosy teorii.* Nauka, Moskva, p.248.

Rytikova, L.L., (2008), *Osoblyvosti formuvannya biotekhnolohichnoyi terminolohiyi anhliys'koyi movy,* Ahrarna nauka i osvita, 9, (3-4), pp.122-126.

Vasil'yeva, S.L., (2015), *Morfologicheskiye osobennosti odnokomponentnykh terminov sfery biotekhnologiy v russkom i angliyskom yazykakh,* Filologicheskiye nauki, Voprosy teorii i praktiki, 2 (44).

INFLUENCES OF STREET PLAY ON THE GENERAL MOTRICITY OF THE HUMAN BODY

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Abstract: ***The purpose*** *of this study is to present the contribution of streetball to developing self-organizing capacity as well as conscious self-discipline ability. Essentially, the game is a "organized organization" in terms of space, time and player relationships, this aspect having an impact on general behavior in young people.*

Practicing the streetball game *also contributes to the development and education of the initiative, the combativeness and the will to overcome the hardships. Especially in younger ages, man is spiritually developed in the sense of subordinating the collective interests of the team, educating him in the way to understand that the achievement of individual goals and aspirations must be integrated into the achievement of the common objectives of the team.*

The present paper *encompasses its approach and historical background to the development of this game, which records flourishing moments through competitive events organized around the world.*

The main goal of streetball-based programs is to convey a message for health; to develop through the sport the health and inclusion of communities.

Conclusions. *Educational Streetball contributes to the strengthening of health (sanogenetic or sanotrophic function), the development and education of motor skills and psychic capacity, normal physical development and the education of collective spirit and competitiveness, as well as the self-organizing and self-governing capacities.*

Keywords: *streetball, motor skills, health, psychic qualities, self-discipline, worthy behavior.*

Introduction

Being considered one of the specific means of modern physical and sport education, streetball contributes by its playful activity to their multilateral integration.

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Streetball also represents an active means of relaxation and rest. Its form of manifestation can be associated with sport amusement.

From the point of view of motricity, streetball manages to positively influence the development of the movement-related qualities at the general and specific level. The development of the basic movement abilities, (running, jumping, throwing, catching), depend to a large extent on the required and developed motricity, but also on the technical and tactical activities that take place during the game. The latter represent the essence of the streetball technique. Skillfulness, the dominant quality, mainly based on coordination, detente and speed, which is to be found especially at the level of those segments that control, handle the ball, develops due to the dynamism of the technical and tactical abilities and skills.

The specific skills involve certain, relatively autonomous movements, which vary from the point of view of the plans and rhythms specifc to the segments the body. These movements develop a neuromuscular coordination, which is characteristic of skillfulness.

According to the spontaneous circumstances that can occur during a streetball game, the players' capacity of self-control is determined by the implementation of the fine and precise neuromuscular coordination in very diversified circumstances of equilibrium, speed and force, taking into account the physical and psychical pressure.

In the streetball game, speed is a very important element, that develops while practicing the game, under all its forms of manifestation. Compared to other sports, the streetball manages to develop especially the speed of reaction and execution. We expand upon this idea and we come to the conclusion that certain techniques implemented during the game need certain forms of the speed of reaction, such as: the capacity to go into action rapidly, end of the action, followed by other, new rapid and continuous actions[1].

Apart from the development of speed and skillfulness, the streetball has the ability to educate the speed in accord with the force, (explosive force). The détente can be noticed not only in the case of jumps, but also in the case of certain technical and tactical actions.

Resistance represents the background according to which the other movement qualities develop during the game, conferring them an interactive character and representing together a specific regime of manifestation. Thus, both basketball and streetball develop resistance in

[1] Neranzis Hristos, *The legend of the Greek basketball,* Athens, Cosmos, 1987, p. 92.

accord with the speed, the détente, the force and especially with the skillfulness specific to the technique.

The psychical qualities are also affected by the practice of streetball. Streetball contributes to the development and training of the human personality.

Both team and collective spirit stand for the basic psychical qualities that develop together with the practice of the collective sport. Consequently, the notion concerned with the subordination of the collective interests, (of the team) is developed in the case of the young people, who are trained and made to understand that the achievement of the individual goals and aspirations must be associated with the achievement of the team's common objectives. This is possible due to the game's essence, that focuses on the development of the spirit of working together and sustaining and encouraging one another.

Both the capacity of self-organization and the ability of self-discipline are characteristics that can be trained by the acceptance of the rules of streetball. The game mainly represents "an organized organization" from the point of view of space, time and relations among the players. This aspect influences the general behavior manifested by the young people.

Streetball practice also contributes to the development and training of the initiative, of combativeness and will to overcome the difficulties.

Reason is specific to the game. In certain respects, reason is superior to the uncontrolled actions. The wish and "stubborness" characteristic to the players, taking into account the limits imposed by the regulations, bring important contributions by the development of similar qualities, present in the everyday life.

The rules force the player to approach a respectable behavior, specific to sportsmanship, contributing to the attainment of certain moral qualities, with a great ethical value. This thing takes into account one of the most important objectives of the game, accounting for a real educative value. According to the rules of the game, almost all the ways of treating the adversary violently were eliminated. Most of the actions specific to this game rely on skillfulness and thinking and less on force. This is due to the principles and rules of the game, but also to its spirit. These principles make the difference between the unfinished and insufficiently controlled physical qualities and the technical nature, the control of reason over the complexity of movement and the fairness during the game.

Streetball is well-known by its contribution to the development of thinking, contributing to the development of a practical thinking, with

various aspects of spontaneous creativity. The activities that take place during the game shape the player's habit to analyse the various game situations, compare them to other, previous experiences and rapidly come to practical conclusions. These conclusions turn into actions, contributing to the development of an operational thinking, of the processes of thinking, characterized by the correlation of the analyzed situations, that control and develop the distributive and concentrated attention, as well as the capacity to anticipate the actions. The continuation of the cognitive processes by means of concrete and immediate actions develop under circumstances of great physical tension, is to be noticed during the streetball.

The whole complex of biometric qualities is present during the game, which is due to the extensive movement content-related content of the game and to the various movements that it involves. These qualities are to be found under different forms, such as:

-Skillfulness, suppleness, coordination are manifested by fine movements, which are reflected in the process of handling the ball, equilibrium, speed of reaction and the direct adversary confrontation;

-Speed, under all its forms of manifestations, (execution, movement, repetition) under pressure;

-the force that manifests itself under the form of detente, while jumping or maintaining the defence position, a quality which is closely related to the precision of the assists and shots;

-General and specific endurance, as well as the regime of the other biometric qualities.

The streetball represents one of the best means by which the body develops harmoniously, contributing to the shaping of a correct position, taking into account the fact that most of the movements made during the game, with or without the ball, are varied and complex, requiring an alternative or simultaneous, symmetrical or asymmetrical participation of all the segments of the body.

The psychical qualities, such as "the power to fight," the decision, the courage and perseverance are qualities that can be developed by practising streetball.

Streetball also operates at the level of thinking, as the activity that develops during the game forces the player to analyze the situations he encounters, compare them to similar situations and come to a practical conclusion.

The conclusions do not remain at the level of thinking, they turn into complex, tactical actions.

All the processes of thinking involved in the streetball, are characterized by both quickness, rapidity and the correlation of the analyzed situations that lead to the development of the distributive attention and the ability to anticipate the actions.

One of the most remarkable things connected to the process of thinking and their transformation into game actions, is the fact that these take place in circumstances of significant physical and emotional tension.

3. The organization and development of the study.

3.1. Research methods used within the development of the study:

-the study of the specialty bibliography;

-the development of certain statistics, on the basis of the data obtained after having studied the specialty bibliography.

3.1.1. The study of the specialty bibliography.

We have studied various bibliographical resources, laying emphasis on both general and specific aspects, so as to have access to the defining elements of the approached theme.

The methods used are modern, offering the access to the internet, in orser to study the database specific to streetball.

3.1.2. The development of certain statistics, based on the data obtained after having studied the specialty bibliography.

We have used various data offered by the specialized sites, between 2013-2015, with a view to developing a report that reveals the increase in the streetball community, as well as in the number of both the amateur and professional practitioners all over the world.

We have made use of column and radial type diagrams, of graphs, in order to clearly emphasize the spread registered by the streetball, during the last three years.

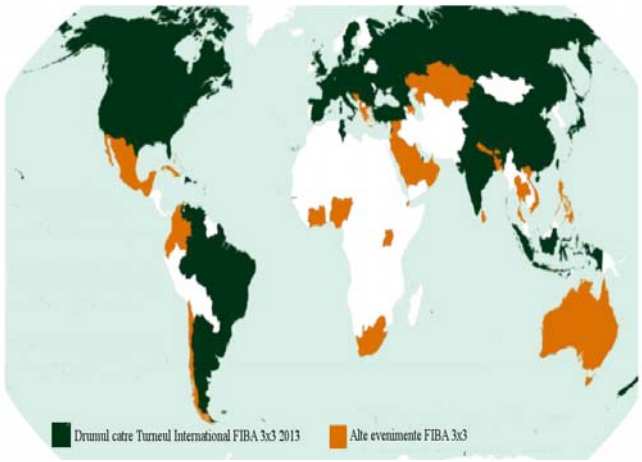
3.2. The evolution of streetball during the last years

2013 represents for the streetball a flourishing period, especially from the point of view of the events organized worldwide, as well as of the number of practitioners, that rises yearly. During this period, over 1250

events took place in various regions of the world, events open for everybody who wanted to participate. The most important event is considered to be FIBA International Tournament 2013, that spreads on four continents. A number of 105 countries took part to the competitions that developed in 2013, whereas the total number of the players involved in the competitions was about 44.000[2].

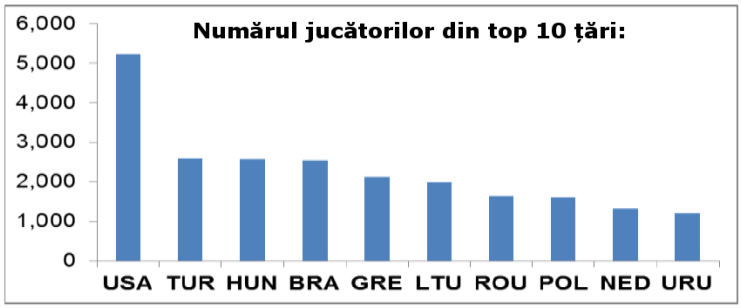
From among all the countries that took part in the FIBA International Tournament, 10 made themselves conspicuous for the number of players that took part in the competitions. Romania ranges among these ten countries, occupying the 7th position, with a number of about 1.700 registered players. Furthermore, in 2012 Romania manages to defeat the national representatives of the USA at the World Championship. One of the masters, Angel Santana, the player that scored the winning shot against the USA declared that "for myself, the 3x3 basketball is a form of relaxation. The 5x5 basketball is characterized by more professionalism, seriousness, you cannot manifest yourself as you wish, all the time. However, I feel free here, I feel at ease, and even if we do fight on the field, in the end, we must all be friends. Streetball is relaxation, amusement and this is what I am trying to do."

The countries participant in various 3x3 basketball competitions in 2013.
Fig.1.



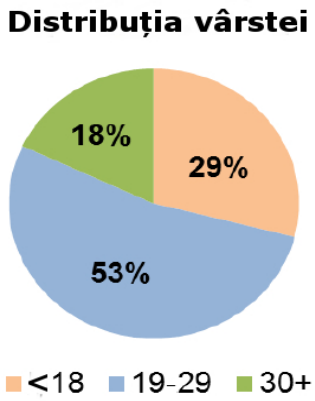
[2] Dedukos Tavropoulos, *The training of basketball teams.* Athens, Atlotipo, 1991, p. 83

The number of the countries that registered the largest number of participants Fig.2.



From the point of view of diversity, the events that took place addressed both genders, as well as the various "age categories, which turns the streetball into a "sport for everybody."

Fig.3. Age distribution 2013



Poland, Holland, Brasil, Uruguay, Lithuania, Slovenia, Romania and Guatemala range among the countries that made themselves conspicuous during the 2013 competitions, at different age categories. Fig.4.

Pozițiile clasificărilor federațiilor de 3x3
(1.11.2013)

	Masculin	Feminin	Masculin <18	Feminin <18
Locul I	POL	NED	URU	BRA
Locul II	BRA	BRA	LTU	NED
Locul III	SLO	ROU	ROU	GUA

Slovenia, Romania, USA and China got themselves noticed during the 3x3 2013 competitions, due to the special skills of their players. Fig.5.

Cei mai buni jucători
La sfârșitul anului 2013

Masculin	SLO
Feminin	ROU
<18 M	CHN
<18 F	USA

At the 2013 championship, apart from other countries that took part in the previous championships, a series of new countries qualified for the finals, whereas most of the medals were obtained by European countries. Romania is to be found among the countries that qualified for the 2013 National Championship. Furthermore, it obtained several medals.

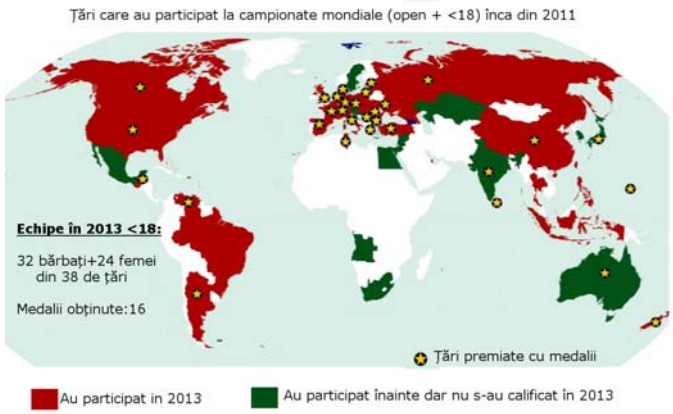


Fig.6.

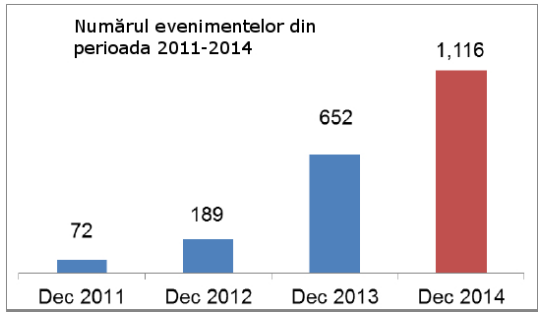
In 2014, Romania organized the first streetball European Championship. This championship took place in September, at Bucharest, being organized by the Romanian Basketball Federation in collaboration with Sport Arena. There were 59 teams that took part in this championship, 32 of them being male teams and the rest, female teams. The tournament that took place in front of the Palace of Parliament, brought together more than 10.000 spectators in its arenae in three days. A record number of 311 teams and 1.200 players took part in the competition. After this event, Bucharest has been worldwide considered

"the unofficial capital of streetball," according to Cyriel Coomans, the temporary president of FIBA Europe[3].

One of the most important 3x3 competitions organized in 2014 was the European Championship. Romania played a very important part in this tournament, winning the title of European champion, qualifying for the 2015 European Championship.

Fig.7.

2014 proved to be better for streetball, registering an increase in the number of competitions, compared to the previous year. The number of practitioners is larger than the one registered in 2013. According to fig.8., we can notice in 2014 a doubling of the number of events that took place in 2013, the number of players being around 68.000. Each 3x3 event that could be watched in 2014 registered an average number of 45 games. The total sum of the money prizes within the 2014 competitions reached 120.000 $. From among the countries medaled at the 2014 competitions, we could mention: Belarus, (3 medals), Spain, (2 medals), Russia, (2 medals), USA, (2 medals), Argentine, France, Italy, Qatar, Serbia. Fig.8.

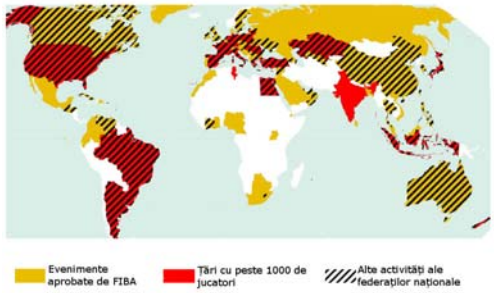


[3] Wissel Hall, *Basketball. Steps to success,* Canada, Human Kinetics, 1994, p. 162-164

Drawing a parallel with 2013, we can clearly notice that during the following year, the number of the countries participating in the 3x3 competitions worldwide increased. (Fig.9.). Fig.9.

Apart from the competitions organized by FIBA in 2014, many other competitions organized by the national federations took place. Most of the competitions were authorized by FIBA, being sustained by the federation.

Activities organized by the national federations Fig.10.



From among the events organized outside FIBA, 65% of them were oragnized by various companies that focused on the promotion of streetball as a sport of relaxation and health, with positive effects on the lifestyle[4].

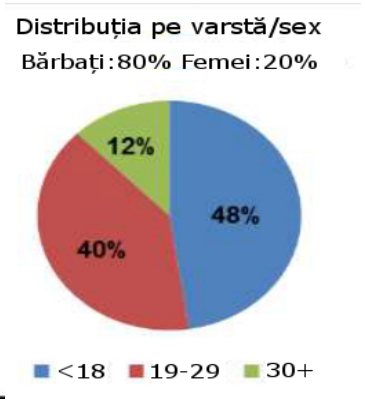
Fig.11.

Clasări individuale la 1 Noiembrie 2014	
Masculin	SRB
Feminin	BEL
Masculin<18	LTU
Feminin<18	EST

[4] Predescu Teodora, Ghițescu G., *Basketball. The training of performance teams.* Bucharest, Semn 2001, pp. 73-74

2014 represented a very good year for streetball, that becomes more and more known worldwide, whereas the number of practitioners and professional players increases is on the rise. At the end of all the events that took place in 2014, countries such as Serbia, Belarus, Lithuania and Estonia made themselves noticed by the positions occupied at different categories.

Fig.12.



2015 represents a major development for streetball as a relaxation, but also as a professional sport. The number of competitions all over the world increases together with the number of active participants in the 3x3 events. The diversity of streetball practitioners increases together with the increase in their number. The graph concerned with the diversity of players in 2015 can be studied in Fig.12. Compared to the previous years, we can notice an increase of about 17% in the number of practitioners under 18, which shows the young people's wish to take exercise, as well as the spectacular nature of streetball as a sport for the young people.

Apart from the increase in the percentage of young practitioners of 3x3 game, we can also notice the increase in the number of players over 30, from 12% in 2013 to 18% in 2015, which shows that streetball is a good way to relax, irrespective of the age.

Fig.13.

		1 Iunie 2015				
Zona	Campionate Nat.-masculin	Campionate Nat.-feminin	Număr jucători clasați	Evenimente în ultimele 12 luni	Țări calificate la Turneul Nat.	Drumul către Turneul Nat.
Africa	1	1	6%	3%	3	4%
America	5	4	18%	20%	22	24%
Asia	3	3	25%	22%	20	18%
Europa	10	10	48%	51%	30	52%
Oceania	1	2	3%	3%	2	2%
Total	**20**	**20**	**75,146**	**1,163**	**77**	**385**

Certain countries that took part in major competitions made themselves noticed by the number of streetball players. Countries such as Turkey, India and Hungary registered over 4000 3x3 practitioners.

Fig.14.

		1 Iunie 2015				
Zona	Campionate Nat.-masculin	Campionate Nat.-feminin	Număr jucători clasați	Evenimente în ultimele 12 luni	Țări calificate la Turneul Nat.	Drumul către Turneul Nat.
Africa	1	1	6%	3%	3	4%
America	5	4	18%	20%	22	24%
Asia	3	3	25%	22%	20	18%
Europa	10	10	48%	51%	30	52%
Oceania	1	2	3%	3%	2	2%
Total	**20**	**20**	**75,146**	**1,163**	**77**	**385**

2015 was a good competitional year for streetball. According to the data obtained on the 1st of June 2015, the 3x3 events become more and more numerous. Europe represents the main place where most of the National Championships for both men and women, as well as more than half of the events that took place in the last 12 months are organized. Overall, 2015 comes with 20 National Championships, (men) and other 20 for women, 1.163 events, organized between the 1st of June 2014 and the first of June 2015, a number of 75.146 players qualified in FIBA rankings and 77 countries manage to qualify for the National Tournament.

Fig.15.

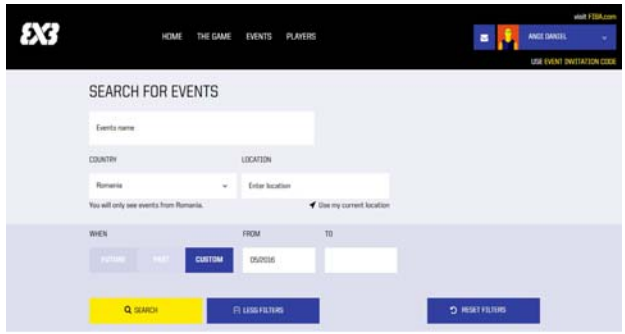
Fig.16.

3.3. The promotion of streetball worldwide.

3x3planet.com represents a web page owned by FIBA that has as official sponsors well-known companies, such as "Nike" or "Wilson." The main aim of the page is to bring together the streetball community and describe the 3x3 events that take place all over the world. The first page of the site offers news on streetball, as well as on all the important 3x3 competitions. The site is meant to promote the streetball and shape new connections between all the practitioners all over the world. The page also comes with a complex search engine based on a "ranking" system, according to FIBA standards[5].

By the creation of a player account, you will be able to enrol directly from the site for local, national, or world competitions. Finding an event is also based on a search engine able to localize events from more than 230 countries.

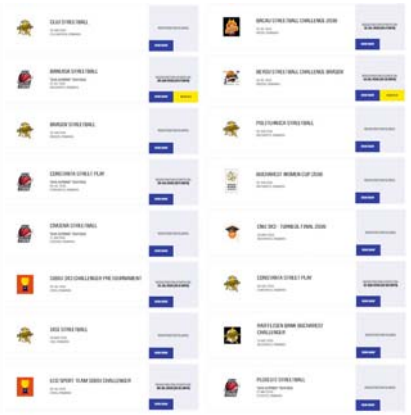
Fig.1.
The search engine for the events.



The search engine allows the users to search for events according to the country, the event, or the time, (future events/past events) and introduce either the location, or the exact period during which the event will take place.

[5] Predescu Teodora, *Basketball.* Târgu-Jiu, Spicon, 2000, p. 125-126

Fig.2.
Events that take place in Romania between Mai-August 2016.



The players' search engine also includes a top of the best players registered on the site. This top is based on a system of points that are obtained by the participation in 3x3 competitions. The top is updated daily and it includes players from all over the world that organize streetball competitions[6].

This search engine allows the users to search for players according to their names, region, age, nationality, as well as to the points obtained during different competitions or to the number of games played.

Fig.3.
Players search engine.

[6] Bota I., Colibaba-Evuleț D., *Sport games. Theory and method.* Bucharest, Aldin, 1998, pp. 138-140

3x3planet.com allows the users to create a profile with specific data, such as the age, the number of kilograms, or the height, in order to determine the category they belong to, if they want to take part in the future competitions. All these details turn this page in a real development center for the streetball community.

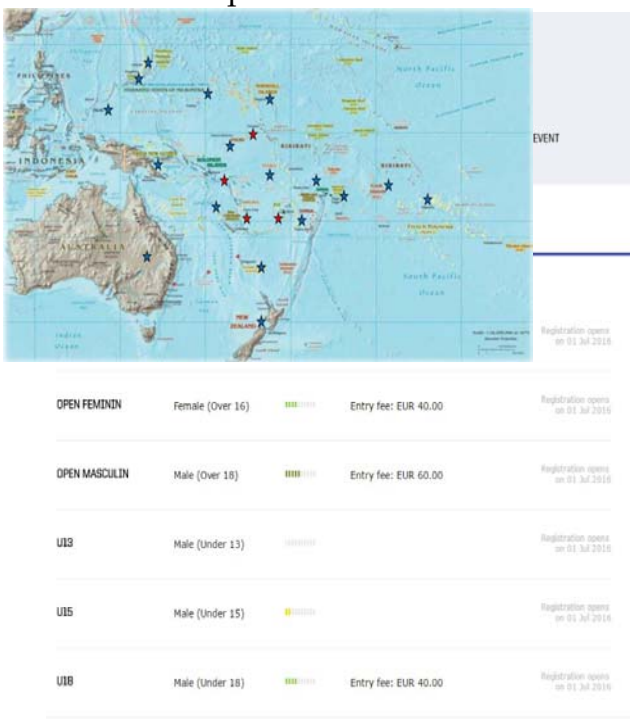
Fig.4.
The profile of Dusan Domovic Bulut (Nr. 1 in the world)

Fig.5.
Top 10 best streetball players

WORLD RANK	PLAYER	NATIONALITY	LOCATION	GAMES PLAYED	RANKING POINTS
1.	DUSAN DOMOVIC BULUT	SERBIA	NOVI SAD, SERBIA	284	1,176,600
2.	DEJAN MAJSTOROVIC	SERBIA	STARI RANOVCI, SERBIA	254	1,149,300
3.	MARKO ZDLRO	SERBIA	NOVI SAD, SERBIA	272	1,084,800
4.	MARKO SAVIĆ	SERBIA	NOVI SAD, SERBIA	275	1,038,300
5.	JASMIN HERCEGOVAC	SLOVENIA	LJUBLJANA, SLOVENIA	245	890,700
6.	TOMO CAJIĆ	SLOVENIA	ŠKOFJA LOKA, SLOVENIA	141	880,500
7.	ALEŠ KUNC	SLOVENIA	BREZOVICA PRI LJUBLJANI, SLOVENIA	248	873,300
8.	BLAŽ CRESNAR	SLOVENIA	MARIBOR, SLOVENIA	257	865,700
9.	GAŠPER OVNIK	SLOVENIA	TRBOVLJE, SLOVENIA	238	770,700
10.	SIMON FINZGAR	SLOVENIA	LJUBLJANA, SLOVENIA	258	756,240

The events available on 3x3planet.com are described at large. The description contains the date when the competition will take place and a map meant to guide the users, the categories that are available within the competition, a summing-up on the nature and aim of the competition, details on the organizers, the teams and the players registered, as well as the entrance fee. Furthermore, each event is associated with a level of difficulty, according to the age categories.

Fig.6.
The description of an event.



3x3planet.com represents by the services it offers, one of the best ways to promote streetball, bringing together all the practitioners of the most common urban team sports in the world.

The program entitled **"Hoops 4 Health"** represents a humanitarian cause organized by the Department of Foreign Affairs of Australian Government in partnership with FIBA.

The main aim of the program is to develop by sport the health of communities. "Hoops 4 Health" represents a program that uses basketball as a tool necessary to convey a health-related message. This program is focused on all categories of individuals, inhabitants of Australia, or of the islands around. The founders of the program intend to rely especially on

the 3x3 game, due to the benefits offered by this game system. The program is meant to increase the number of physical activities by the participation in basketball games. On the other hand, it aims at training the communities with respect to the health diseases that might occur due to a sedentary life, (obesity, diabetes, heart diseases, cerebrovascular accidents, kidney diseases).

The target areas of the "Hoops 4 Health" program Fig.7.

Fiji, Kiribati, the Solomon islands, Vanuatu and other 17 federations from Oceania are among the target countries the "H4H" program has in view.

Some of the results expected after the Pacific program are the following ones:

-The improvement of governance, as well as of the operational efficiency of the basketball federations in the Pacific

-The increase in the capacity to plan, execute and participate in the basketball programs

-The increase in the participation in basketball events of those individuals diagnosed with diseases caused by a sedentary life[7].

-The increase in the participation of women and young girls in sport competitions

[7] Drăgan I., *Plea for health,* Bucharest, Albatros, 1983, pp. 150-152.

-The improvement of the collaboration between the Pacific basketball federations and the development partners. Fig. 8. The structure of the ages in the countries aimed at

Fiji	**0-14 years:** **15-64 years:** **65 and over:**	**28.2%** **66.0%** **5.6%**
Kiribati	0-14 years: 15-64 years: 65 and over:	38.5% 58.1% 3.4%
Solomon Islands	0-14 years: 15-24 years: 25-45 years: 55-64 years: 65 and over:	36.2% 20% 35.4% 4.4% 4.1%
Vanuatu	0-14 years: 15-64 years: 65 and over:	32.6% 63.7% 3.7%
Australia	0-14 years: 15-24 years: 25-45 years: 55-64 years: 65 and over:	18% 13.3% 41.8% 11.8% 15.1%
Other Federations	0-14 years: 15-24 years: 25-45 years: 55-64 years: 65 and over:	14.8% 11.7% 41.6% 14% 17.8%

4. Conclusions and proposals

One of the sport's pillars for young people is represented by the conscious effort.

1. The physical exercises and sport, (streetball is associated with), practiced by the young people, represent a great source of biological, psycho-social and economic advantages, as well as a way to relax. They bring everybody something good and first of all to the body and life – "the optimism of youth."

2. Streetball can be practiced not only as a way of general physical training, but also as a way of active and sporting recreation and rest, (a form of usage that can also be designated as recreational sport).

3. Streetball is associated not only with sporting or physical education, but also with one of the typical techniques of modern sporting and physical education, as it contributes to the social integration of children and young people, as well as to their multilateral training by the playful activity specific to its practice.

4. From the point of view of this educational aspect, streetball contributes to the health improvement, (a sanogenetic and sanotrophic function), to the development and education of the movement qualities and the psychical capacity, to the normal physical development and the education of team spirit and the spirit of competitiveness, as well as of the capacity of self control.

5. In order to be practiced, streetball needs small groups, (only 3 players). The fact that it can be played both inside and outside, on fields that do not need large surfaces, emphasizes the organizational accessibility.

This characteristic of accessibility is obvious, which is the reason why it is preferred by children and young people as a way of recreation.

6. Due to its educational valences, streetball also represents, together with other kinds of sports, an efficient way of sport culture and education, characteristic of the modern society.

On the basis of the present study, we propose:

1. The practice of streetball, due to its educational valences and recreational and amusement activities, by both men and women, regardless of the age.

2. Due to the rapid progress, civilization and evolution of the society, the evolution of the sporting activity must always follow an ascending path.

3. Streetball as a way of modern, sporting activity should become a necessity, not only a form of relaxation.

The old maxim "Mens sana in corpore sano" acquires another meaning, namely, the modern man, who turned into a victim of technique and supercivilization, no longer does enough exercise, he no longer allocates enough time necessary for the development of a vigorous body. The sedentary life, the permanent stress we must face daily, running out of time and pollution stand for the factors that consume the body.

Concomitantly with the high standard of civilization, more and more attention must be paid to the physical activity and streetball.

"The most important thing is to never stop asking questions. Curiosity has its own reason for existing." – Albert Einstein.

REFERENCES

Bota, I., Colibaba-Evuleț D., (1998), *Sport games. Theory and method.* Bucharest, Aldin, pp. 138-140.

Dedukos, Tavropoulos, (1991), *The training of basketball teams.* Athens, Atlotipo, p. 83.

Drăgan, I., (1983), *Plea for health.* Bucharest, Albatros, pp. 150-152.

Neranzis Hristos, *The legend of the Greek basketball,* Athens, Cosmos, 1987, p. 92.

Predescu, Teodora, (2000), *Basketball.* Târgu-Jiu, Spicon, p. 125-126

Predescu, Teodora, Ghițescu G., (2001), *Basketball. The training of performance teams.* Bucharest, Semn pp. 73-74.

Wissel, Hall, (1994), *Basketball. Steps to success,* Canada, Human Kinetics, p. 162-164.

DESIGN THINKING: WHAT IT IS AND HOW IT WORKS. A CASE STUDY ON ROMANIAN LIBRARIES

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Abstract: *Our paper looks at the main theories and definitions of design thinking and human centered design and their role in organizational innovation. It contrasts and compares the main models existing in the literature as well as describing in a little more detail a particular model for human centered design intervention aimed at public libraries. We then focus on a particular example provided by piloting the introduction of design thinking techniques through a workshop whose participants were coming from two Romanian libraries. We are looking at the results of a training needs analysis process and how they have shaped the implementation design of the workshop for better results. Our exploratory research shows the importance of term definition through active experimentation and empathy building prior to any design thinking intervention.*

Keywords: *design thinking, participatory approach, co-design, innovation, creativity, libraries, training design.*

Introduction

In many languages, the term design is connected to the context of arts and craftsmanship. Although initially rooted in engineering, Design Thinking refers to intentional development of products and services, based on people needs[1]. Much of the design thinking (or participatory

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[1] T. Lindberg, R. Gumienny, B. Jobst and C. Meinel, "Is there a need for a design thinking process", *Proceedings of the 8th Design Thinking Research Symposium*, University of Technology, Sydney, 2010, p. 243-254.

design or co-design) owes to Northern European countries as Norway, Denmark and Sweden, which, since 1970s, used to engage workers in the development of new processes and systems for their workplaces[2]. Design thinking as a method complements approaches such as user-centred innovation because it considers the "thinking" aspect too. Most knowledge workers are trained in analytical thinking and in predicting future based on data from the past. This classic approach to problem solving limits the capacity to envision innovative solutions and even change for the future[3]. From a behavioural perspective, Design Thinking makes its way to organizations, because it is not limited to designers[4], but it gives room to people from across all organisational functions and with various professional backgrounds, and even to final users, to participate in the informing, ideating and conceptualization of the products and/or service they will employ.

What is design thinking and how it works

While is not a new term or concept, it is only recent that the interest in the "design thinking" discourse has gained interest in the popular and in the academic literature, especially in discourses related to innovation, emphasizing "user-driven innovation"[5].

The term "design thinking" is ambiguous and is often left with definitions such as "approaching organisational problems as designers approach design problems"[6]. Although such definition offers little explanation, it calls attention to the type of problems designers address and to the way they do this[7]. The problems designers face, are characterised by complex interdependencies and changing and

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[2] E.B. Sanders & P.J. Stappers, "Co-creation and the new landscapes of design", *CoDesign – International Journal of CoCreation in Design and the Arts*, 2008, no.4(1), p.5-18.

[3] M. Shamiyeh, *Creating desired futures: How design thinking innovates business*. Basel: Birkhäuser, 2010, p.27-37.

[4] P. Badke-Schaub, N.F.M. Roozenburg and C. Cardoso, "Design thinking: a paradigm on its way from dilution to meaninglessness", *Proceedings of the 8th Design Thinking Research Symposium*, University of Technology, Sydney, 2010, p. 39-49.

[5] E. von Hippen, *The sources of innovation,* New York, Oxford University Press, 1988, p.25-28.

[6] D. Dunne & R. Martin, "Design thinking and how it will change management education: An interview and discussion", *Academy of Management Learning and Education,* 2006, no.5(4), p.512-523.

[7] A. Rylander, "Design Thinking as Knowledge Work: Epistemological Foundations and Practical Implications*", Journal of Design Management*, 2009, no. 4(1), p.7-19.

contradictory requirements and are often called "wicked problems"[8]. Linear techniques are therefore ill suited to solve such problems. On the other hand, the design process is described as iterative, characterized by a continuous re-definition of the problem and of the solution based on the feedbacks gathered from end-users, until a final solution is reached[9]. Liedka suggests that both science and design thinking depend on generating and testing solutions, but the "scientific method seeks to uncover what is, while the aim of design is often to envision what might be, but is not yet"[10]. Razzouk & Shute argue that design thinking is a situated process as designers define solutions situated in the specific environment in which they design[11].

Nigel Cross stresses the differences between business/ engineering-degree holders' and designers' way of thinking. His research illustrates that for designers, the design process is driven by shape and aesthetics, while for business people and engineers the process is shaped by cost and complexity. This is because designers are mainly trained through learning by doing methods, rather than by case studies and analysis, as typically happens in business studies[12]. Designers learn through the usage of sketches, prototypes and intuition and this richer sensory experience reduces ambiguity[13].

According to Dunne & Martin, design thinking is constructive and empirical, undertaking the needs of the people who will employ a product or service and of the system that enables it. Moreover, they consider it, "inherently optimistic" because a designer perceives constraints as an incentive to innovative solutions, while in a conventional management approach, constraints are perceived as obstacles to the creation and implementation of new ideas. [14]

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[8] H. Rittel & M. Webber, "Dilemmas in a general theory of planning", *Policy Sciences*, 1973, no.4, p.155-169.

[9] B. Lawson, *How designers think: The design process demystified*, London, Routledge, 2006, p.112-127.

[10] J. Liedtka, "Strategy as design", *Rotman Management Alumni Magazine*, 2004, no. Winter, p.12-15.

[11] R. Razzouk & V. Shute, "What Is Design Thinking and Why Is It Important?", *Review of Educational Research*, 2012, 82(3), p.330-348

[12] N. Cross, "Expertise in design: An overview", *Design Studies*, 2004, 25(5), p.427-441.

[13] L. Kimbell, "Design practices in design thinking", *Design,* 2009, no. May/July, p.1-24.

[14] D. Dunne & R. Martin, "Design thinking and how it will change management education: An interview and discussion", *Academy of Management Learning and Education,* 2006, no.5(4), p.512-523.

To Brown, design thinking is a creative process which encourages non-routine and out-of-the-box ideas[15]. Martin sees design thinking co-existing and colliding with critical thinking – a process of analysis and deconstruction of ideas – into organizations and therefore, as a source of competitive advantage[16].

Razzouk and Shute describe design thinking as a process in which the initial idea of how a product or service should look like and work evolves into a detailed description of the product/service, thanks to a continuous refining of its characteristics. The intermediate phases of this process are highly iterative as specifications about the product/service may change due to unexpected problems and/or proposals that can arise during the process[17]. Hatchuel and Weil follow the same line and describe the design thinking process as exploratory and sometimes chaotic[18].

Dunne and Martin analyse the design thinking process from a mental point of view and describe it as a circuit of inductive, deductive and abductive reasoning. Abductive reasoning generates new ideas, deduction conducts to the logical consequences, predicting their outcomes and testing them in practice, while inductive reasoning helps generalizing from the results. This cycle generates learning which in turn contribute to other new ideas and the process can start again[19].

Brown (2008) from IDEO – a design company - suggests that the process of design thinking is a system of overlapping phases and each phase comprises a series of related activities[20]. The three phases, Inspiration, Ideation and Implementation form the continuum of innovation. The inspiration phase implies a deep empathy with the final user achieved through active listening and observation of the user's behaviours. This phase represents an active exploration which leads to new learnings and insights from the user and, therefore, to the creation of new ideas. During ideation, ideas are generated, developed and tested,

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[15] T. Brown, "Design Thinking", *Harvard Business Review*, 2008, no. June, p.84-92.

[16] R. Martin, *The design of business,* USA, Harvard Business Press, 2009, p.57-78

[17] R. Razzouk & V. Shute, "What Is Design Thinking and Why Is It Important?", *Review of Educational Research*, 2012, no.82(3), p.330-348

[18] A. Hatchuel & Weil, "C-K Theory: An Advanced Formulation." *Research in Engineering Design*, 2009, no. 19(4), p.181–92.

[19] D. Dunne & R. Martin, "Design thinking and how it will change management education: An interview and discussion", *Academy of Management Learning and Education,* 2006, no.5(4), p.512-523.

[20] T. Brown, "Design Thinking", *Harvard Business Review*, 2008, no. June, p.84-92.

while the implementation phase focuses on the transformation of the idea into a product/service/solution ready for marketability. Projects will move back and forth more than once through these phases while the ideas are refined, and new actions taken[21].

Although iterability is a common feature in the literature about design thinking, Stanford Design School (Stanford d.School) suggests a more sequential approach for didactical reasons, with phases categorized in two spaces: problem space and solution space[22]. The problem space includes three phases:

- understand – in which is built a common understanding of the problem and is agreed upon a first definition of the challenge which starts the design thinking project;
- observe – the first challenge is partially clear, so observation (in the form of field or academic research) is required, for a better understanding of the problem and for building insights;
- point of view – in this phase the problem is specified in detail and user's needs and the insights previously gathered are being expressed through a so-called "how might we" question. This question represents the starting point for the generation of possible solutions and marks the passage to the solution space.

The solution space includes, according to Stanford d.School, another three phases:

- ideation – this phase implies generating as many ideas as possible, even if not realistic. A subsequent brainstorming session will allow to choose the most viable one;
- prototyping – in this phase, low fidelity materials are used to make an idea physically tangible. This first prototype serves as basis for tests with users and feedback gathering.
- test – prototypes are tested with users and new learnings are gathered. Prototyping and test are repeated few times to

[21] A. Efeoglu, C. Møller, M. Sérié & H. Boer, "Design Thinking: Characteristics and Promises", *Proceedings 14th International CINet Conference on Business Development and Co-creation*, 2013, p.241-256.

[22] d.school, *Bootcamp Bootleg*, Stanford University, 2010, download at: https://dschool.stanford.edu/resources/the-bootcamp-bootleg

gradually improve the product/service and till the solution is ready for implementation[23].

Comparing and contrasting Brown's and d.School models of design thinking process, we observe that they are quite similar, complementing each other. The d.School model splits Brown's inspiration phase into sub-phases which refer to research methods (observation and understanding) and challenge definition. For both approaches these phases belong to the problem space, and the difference is only a matter of term definition: while for Brown, empathizing and challenge definition are methods of action, for d.School they are differentiated steps of a process. As for the ideation phase, both Brown and d.School consider it part of the solution space as it implies generating ideas through the brainstorming method. However, for Brown, the last two phases - prototyping and test – are situated in an overlapping zone between ideation and implementation, while in the d.School view, these 2 phases precede the final implementation. Still, both models are based on the iterative character of the design thinking process.

Bauer & Eagen analyze the thinking style which is employed in each phase of the design thinking process. During understand and observe, or empathize phase, as called by IDEO, a divergent thinking is employed. This means open-minded to new learnings, which will eventually lead to the formulation of insights. The point of view or define phase employs a convergent thinking as insights are narrowed till one "How might we…" question which will represent the new challenge to work-on in the phases to follow. Ideation gives space to a divergent thinking as it is focused on the generation of as many solution-ideas as possible. Prototype and test, two highly iterative phases which imply creating tangible concepts, inquire for a narrowing of the field of the ideas previously produced, and, therefore, employ a convergent type of thinking[24].

[23] A. Efeoglu, C. Møller, M. Sérié & H. Boer, "Design Thinking: Characteristics and Promises", *Proceedings 14th International CINet Conference on Business Development and Co-creation*, 2013, p.241-256.

[24] R. Bauer & W. Eagan, "Design Thinking: Epistemic Plurality in Management and Organization." *Aesthesis*, 2008, no.2(3), p.64–74.

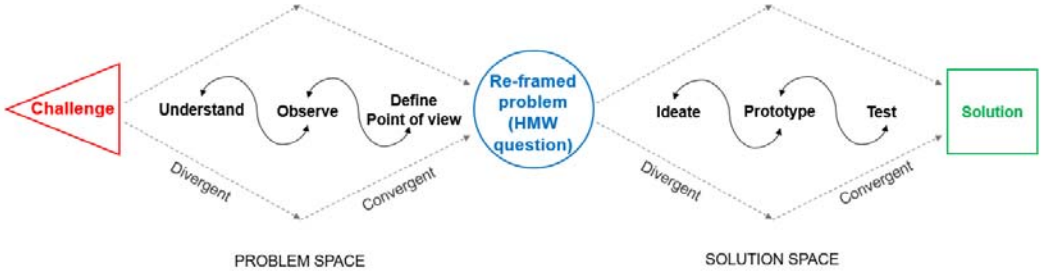

Figure 1 - Design Thinking phases and reasoning
Derived from Tim Brown, IDEO and d.School models

The role of Design Thinking in the organizations

The demand for innovation is greater now than ever before since organizations, public or private, increasingly must handle with indeterminate problems and perform within a continually changing multi-stakeholder environment. This is why organizations need to find and to apply new methodologies to innovate their processes, products and services and to deliver specific user experiences[25]. As we have previously seen, design thinking approach offers an integrating framework that puts together both creative and analytic modes of reasoning[26], supplemented by a process and set of tools and techniques[27], and, therefore, it may help create such experiences for their customers/users[28].

If well applied, design thinking methods contribute to more flexible decision-making processes, reduce risks of duplications and inconsistencies and increases organisational innovative capacity[29]. Being a human-centred approach, it puts discovery of the tacit and highly

[25] J. Liedka, "Perspective: Linking Design Thinking with innovation outcomes through cognitive bias reduction", *Journal of Product Innovation Management*, 2015, no.32(6), p.925-938.

[26] T. Brown & R. Martin, "Design for action", *Harvard Business Review*, 2015, no. September, p. 56-64.

[27] S. Pandey, "Proto Design Practice: translating design thinking practices to organizational settings", *Interaction Design and Architecture(s) Journal*, 2015, no.27, p.129-158.

[28] H.N.J. Schifferstein, M.S. Kleinsmann & E.J. Jepma, "Towards a conceptual framework for experience driven innovation", *Proceedings of 8th International Design & Emotion Conference*, 2012, no. September, p.11-14.

[29] S. Beckman & M. Barry, "Innovation as a learning process: Embedding design thinking", *California Management Review*, 2007, no.50(1), p.25-56.

nuanced user-needs at the forefront of the innovation process[30]. Design thinking recognizes the value of motivated people and of creative processes and therefore, stresses the need of rethinking the organisational design in order to facilitate people's contribution to processes and the collaboration between functions[31]. This means that people are the element pushing the other organisational components (like strategy, structures, processes, technologies) towards innovation. We can therefore assert, that design thinking starts both from people inside the organization – who shape processes, cross-collaboration and organisational culture – and from people outside the organization, the users/customers – who force the organization to act, adapt and change in order to better respond to their needs.

Applying design thinking to an organization (from private or public sector) means using the user/customer journey as the reference frame when designing a product or service, rather than the process workflow. For instance, focusing on the user experience, his behaviour and his journey since the identification of a potential need till its fulfilling through acquiring and/or using the product or service, rather than commencing with the design of the sale/distribution strategy.[32] The fundament of the design thinking process is the primacy of the user experience and a design of the products/services and of the organisational processes which enables a compelling experience for the user, rather than the other way around. This is the reason why design thinking implies co-design with users and the cross-collaboration between organisational functions and/or between people with various background skills[33]. Therefore, the advantage of adopting design thinking is that the organization looks to the external environment through the lenses of the end-user, transforming his/her needs into opportunities[34].

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[30] M. Gruber, N. de Leon, G. George & p. Thompson, "Managing by design", *Academy of Management Journal*, 2015, no. 58, p.1-7.

[31] S. Beckman & M. Barry, "Innovation as a learning process: Embedding design thinking", *California Management Review*, 2007, no. 50(1), p.25-56.

[32] J. Buijs, "Modeling product innovation processes, from linear logic to circular chaos", *Creativity and Innovation Management*, 2003, no.12(2), p.76-93.

[33] S. Beckman & M. Barry, "Innovation as a learning process: Embedding design thinking", *California Management Review*, 2007, no. 50(1), p.25-56.

[34] H.N.J. Schifferstein, M.S. Kleinsmann & E.J. Jepma, "Towards a conceptual framework for experience driven innovation", *Proceedings of 8th International Design & Emotion Conference*, 2012, no. September, p.11-14.

Design thinking is both a way of creating meaning, as it implies creating multi-disciplinary teams which use various skills to develop products and services, and a strategy as it opens up the fixed mindset which normally develops in people due to day-to-day routine of jobs. As design thinking asks for openness for diversity in terms of unknown knowledge, research and knowledge sharing across structures, it promotes and develops engagement, trust and creativity, and therefore innovative capacity in the organizations[35].

How to introduce design thinking in organizations - the case of Romanian public libraries

Public libraries from Romania have been the subject of a large grant in terms of technology and training provided within 2009-2015 by the Biblionet program funded by the Bill and Melinda Gates Foundation with 26.9 million USD[36], as part of a larger investment in the world libraries under the program Global Libraries[37]. The involvement of such major donors has started in Romania a robust movement of library development, beyond the initial envisaged changes - technology and IT training. The effort has been both locally driven but also by initiatives at global scale. For instance, the Gates Foundation has commissioned IDEO to create a Toolkit for libraries, which adapted the human centered design approach for public libraries across the world[38]. The Biblionet program in Romania attempted in 2014 the first adaptation of the design thinking methodology in Romania and the process involved librarians from the Metropolitan Library of Bucharest and the National Library of Romania[39]. The phases of the Design Thinking Methodology proposed by IDEO have been: empathize, define, ideate, prototype and test. A structure similar to the ones proposed by both Brown[40] and the Stanford Design School[41]. At the same time, a similar attempt of piloting the Toolkit performed by DOKK 1 library from Aarhus, Denmark and Chicago Public Library

[35] A. Efeoglu, C. Møller, M. Sérié & H. Boer, "Design Thinking: Characteristics and Promises", *Proceedings 14th International CINet Conference on Business Development and Co-creation*, 2013, p.241-256.

[36] http://www.biblionet.ro/despre.htm

[37] https://www.gatesfoundation.org/What-We-Do/Global-Development/Global-Libraries

[38] http://designthinkingforlibraries.com

[39] http://designthinkingforlibraries.com/about/

[40] T. Brown, "Design Thinking", *Harvard Business Review*, 2008, no. June, p.84-92.

[41] d.school, *Bootcamp Bootleg*, Stanford University, 2010, download at: https://dschool.stanford.edu/resources/the-bootcamp-bootleg

emphasized that the mindset one needs to have in a process when one introduces design thinking as a tool in the library work needs to encompass the following attitudes: Creativity, Empathy, Diversity, Take action!, Fail faster – and learn from it, Do lots of iterations, Be optimistic!

As part of the piloting in Romania, we have conducted a series of interviews with the potential participants but also with representatives of public libraries - a phase called training needs analysis (TNA), a compulsory phase prior to any learning event[42]. In our findings it was clear to us that we ought to include in the training phase one particular session where participants understand the meaning of the concepts needed to be used. As a result, we have decided to include a pre-work session where we have showed participants movies with design thinking in action, i.e. the shopping cart challenge[43]. Another challenge resulted from the TNA was the attitude some of our participants had towards innovation. Although the Biblionet program has managed to introduce technology into public libraries and change basic skills, most of librarians still viewed their job as connected to books and delivering services to the public as regulated by the law, while some of them have not perceived themselves as providers of public services in response to community needs. Such attitude change seemed to us important to achieve prior to any implementation. Prior to having the user involved in the service design process it was important that the librarians not only ceased to address their users as readers but also recognize their importance as know-how providers. As a result, we have understood quite early in the piloting process that our success in producing innovation in the Romanian librarians had to include the change of the mindset as regards simple attitudes, answers the basic questions: why should we call our readers users or public? why should we care about their opinions? why should the opinions of the users form a legitimate basis for the library services design? It was clear that unless these issues are addressed, the whole process of training would be, in the end, futile, because it would not address the most pressing concerns[44]. It was also clear to us that although the Toolkit has been designed to be a very useful tool for advanced countries, in the case of Romania, where libraries were just

[42] Bee, F. and R. Bee, *Learning Need Analysis and Evaluation,* Chartered Institute of Personnel and Development, CIPD House, London, UK., 2003.

[43] https://www.youtube.com/watch?v=M66ZU2PCIcM

[44] Rae, L., *Planning and Designing Training Programmes*, Gower Publishing Ltd., Aldershot, UK, 1997.

experiencing a new role in the society - as community centers and less and less book lenders, the toolkit needed a series of adjustments. Another potential issue was that, in order to have a successful implemented program, we needed to use interdisciplinary teams - and this presented a serious challenge, due to the fact that most participants in our pilot have been librarians, and had no additional competencies needed in the process: - i.e. research skills (the toolkit involves conducting interviews, focus groups or brainstorming sessions, or *painstorming* sessions as Martin, (2011)[45] calls them), while some of our participants had clerical jobs and had never spoken with members of the public before. This was another variable we had to take into account when designing the course format.

Based on some observed behaviours and the participants input made during interviews conducted as part of the TNA, we made the decision to create a pre-course session where the issues mentioned before to be addressed. Namely, we decided that the pre-training objectives should be: to allow participants understand the specific terms used in design thinking, like: iteration, user itinerary, prototyping, touch points - not only as a glossary of terms but as active usage. At the same time, it was needed to create a positive attitude towards, innovation - to bring forth discussions about values and *raison d'être* for public libraries. Last, but not least, we needed to create empathy and direct contact with the potential users - as a result, we decided to include a service safari, where librarians were experiencing what it means to be a client in a hotel or a nice coffee shop, in a nice bookstore or at the Romanian fiscal office. They were noting their feelings in an emotion map and had to explain why they felt like that and who or what the trigger for a certain emotion. The realization that it was both the people and the space which had a certain effect on their mood and happiness, while being provided a service or buying a product, has produced for a lot of participants the needed open-mind attitude for willing to move the discussion further. Our contention, at the end of the pre-training session was that, unless people *feel*, through empathy, that a change is needed in their work environment they would never accept arguments for using design thinking in the way they perform their work. The chances of acceptance are even lower when people perceive design thinking as a threat, based on the fact that they don't understand what the concept means.

[45] Martin, L.R., The Innovation Catalysts, *Harvard Business Review*, June 2011.

Our exploratory research needs further empirical confirmation, from more cultural spaces and in a variety of domains. We would especially be interested in those organizations and institutions where innovation is not at the core of the business interests or in the case of publicly subsidized institutions where the concern for the well-being of the public is not a priority, but exercising the activity in accordance to the law.

REFERENCES

Badke-Schaub, P.N.F.M. Roozenburg and C. Cardoso, (2010), Design thinking: a paradigm on its way from dilution to meaninglessness, *Proceedings of the 8th Design Thinking Research Symposium*, University of Technology, Sydney, pp. 39-49.

Bauer, R., & Eagen, W., (2008), Design thinking: Epistemic plurality in management and organization. *Aesthesis: International Journal of Art and Aesthetics in Management and Organizational Life*, *2*(3), 568–596.

Beckman, S.L.S., & Barry, M., (2007), Innovation as a Learning Process: embedding design thinking. *California Management Review*, *50*(1), 25–56.

Bee, F. and R. Bee, (2003), *Learning Need Analysis and Evaluation,* Chartered Institute of Personnel and Development, CIPD House, London, UK.

Biblionet program, n.d. available at http://www.biblionet.ro/despre.htm viewed on December 2nd, 2017.

Bill and Melinda Gates Foundation, n.d. available at https://www.gatesfoundation.org/What-We-Do/Global-Development/Global-Libraries, viewed on December 2nd, 2017.

Brown, T., (2008), Design Thinking. *Harvard Business Review*, (June), 85–92.

Buijs, J., (2003), Modeling product innovation processes, from linear logic to circular chaos, *Creativity and Innovation Management*, 12(2), 76-93.

Cross, N. (2004). Expertise in design: An overview" *Design Studies*, 2004, 25(5), p.427-441.

d.school, (2010), *Bootcamp Bootleg*, Stanford University, available at: https://dschool.stanford.edu/resources/the-bootcamp-bootleg, viewed in December 2nd, 2017.

Dunne, D. & Martin, R., (2006), Design thinking and how it will change management education: An interview and discussion, *Academy of Management Learning and Education*, 5(4), 512-523.

Efeoglu, A., Møller, C., Sérié, M., Boer, H., (2013), Design Thinking: Characteristics and Promises. *Proceedings 14th International CINet Conference on Business Development and Co-creation,* 241-256.

Gruber, M., de Leon, N., George, G. & Thompson, P., (2015), Managing by design, *Academy of Management Journal*, 58, 1-7.

Hatchuel, A. and Weill, B., (2003), A New Approach of Innovative Design: An Introduction to C-K Theory. *International Conference of Engineering Design*, Stockholm, Sweden.

Kimbell, L., (2009), Design practices in design thinking. *Design*, May(July), 1–24.

Lawson, B., (2006), *How designers think: The design process demystified*, Routledge, London.

Leidtka, J. and Ogilvie, T., (2012), Helping Business Managers Discover their Appetite for Design Thinking. *Design Management Review*, 23, 6–13.

Lindberg, T., Gumienny, R., Jobst, B. and Meinel, C., (2010), Is there a need for a design thinking process?. *Proceedings of the 8th Design Thinking Research Symposium*, 243-254.

Martin, R., (2009), *The design of business. Why design thinking is the next competitive advantage.* Harvard Business Press, USA.

Martin, L.R., (2011), The Innovation Catalysts, *Harvard Business Review*, June 2011.

Pandey, S., (2015), Proto Design Practice: translating design thinking practices to organisational settings, *Interaction design and architecture(s) Journal,* 27, 129-158.

Razzouk, R., & Shute, V., (2012), What Is Design Thinking and Why Is It Important?. *Review of Educational Research*, 82(3), 330-348.

Rae, L., (1997), Planning and Designing Training Programmes, Gower Publishing Ltd., Aldershot, UK.

Rittel, H. & Webber, M., (1973), Dilemmas in a general theory of planning, *Policy Sciences*, 4, 155-169.

Rylander, B.A., (2009), Design Thinking as Knowledge Work: Epistemological Foundations and Practical Implications. *Journal of Design Management*, 4(1), 7-19.

Sanders, E. B.-N., & Stappers, P.J., (2008), Co-creation and the new landscapes of design. *CoDesign*, *4*(1), 5–18.

Schifferstein, H.N.J., Kleinsmann, M.S. & Jepma, E.J., (2012), Towards a conceptual framework for experience driven innovation, *Proceedings of 8th International Design & Emotion Conference*, September, 11-14.

Shamiyeh, M., (2010), *Creating desired futures: How design thinking innovates business*. Basel: Birkhäuser.

Toolkit for libraries, n.d. available at

http://designthinkingforlibraries.com, viewed on December 2nd, 2017.

Von Hippen, E., (1988), *The sources of innovation*, Oxford University Press, New York.