The Development of Future Competences – A Challenge for the Educational System

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Abstract: *At present, the educational systems are faced with a great challenge: how to prepare the people for an unknown future? A few questions arise: what will the labour market look like in the future? What kind of competences will be necessary in the future?*

The documents of educational policy (UNESCO, 2015; IBE, 2018) underline the idea that education must be rethought from the perspective of the specific competences of the 21st century: design thinking, innovation, self-agency, collaboration in a complex context. Social changes are transforming the nature and the role of competences in people's everyday lives: the cognitive competences are more complex and involve not only the capacity of problem resolve but also of critical thinking. Cognitive competences in future society mean thinking design, innovation and metacognition. Social competences are redefined according to social trends – a new social ethic, a new culture of human relationships. This article is focus on research in students' perception regarding the future competences and the way which these competences are trained in school. The research was embedded in a constructivist-interpretivist paradigm, which employed both quantitative and qualitative methods for data collection. This study included a number of 209 participants, students from the bachelor and master degree levels from Transilvania University from Brasov. Conclusion: The students as future employees need to develop future competences, but in a practical and real way. They need to see in their teachers the 21st century competences – critical thinking, collaboration, social activism, self-agency, etc.

Keywords: *future competences; critical thinking; social competences; meta-competences.*

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1. Introduction

One of the important challenges of our educational system is the orientation towards developing future competences. For this, educational actors from leaders to parents, teachers and students must change their perspective regarding education.

A lot of recent educational policy documents (UNESCO 2015, OECD 2018) underline that we need a new mindset, because our world is changing in a complex way. For example, we need to abandon a lot of the notion about resources which can be exploited, about labour-market, about educational system, etc. and we need to develop social responsibility and social well-being. We need develop creativity, too, because we need new jobs, new learning styles and new life-styles. But, to prepare people for the future we should design new curricula a redesign the teacher system, which are able to develop the 21st century competences.

2. A new model of competences?

In the future, in an uncertain world, people (who are students now) should have mental flexibility and emotional balance. The development of deep human feelings and awareness, responsibility and empathy becomes a priority of any educational system in the world, because otherwise we would be “down-graded people who use wrong up-graded computers with devastating effects on themselves and the world” (Harari, 2018:82)

We have to rethinking the future competences according the new social demands. For example, 2000, Andy Hargreaves has underlined the need to reshape the competences because in the postmodern school age “teachers face great emotional and intellectual demands as they extended their work beyond the classroom” (2000, p.173)

A few competences are always, in any society, useful, but in the future these competences must be developed at a high level: the cognitive competences like analysis, synthesis, critical thinking, problem solving must be transformed into meta-analysis, meta-synthesis, metacognition and design thinking.

The same thing is happening to the social competences. According to the classical social theory, people cooperate easily with people who are sharing the same values, the same characteristics and the same culture. Today, in a globalized society, the diversity of values, culture and customs is a dominant characteristic.

In the future it is important to collaborate with others who are different from a lot of points of view. The social competences will be defined through the capacity to balance the dilemmas, to find innovative solutions for the human beings, to harmonize different trends. The relations between students, teachers, parents and community will be redefined from a new social ethic – prosocial cooperation, active citizenship, social awareness. This means that the social competences in the future will involve the passage from an ego culture, “my well-being” to an authentic “we culture” or social well-being.

For instance, Marope (2017, 2018) shows that the key competences for the 21st century are: life-long learning, multi-literateness, trans-disciplinarity, self-agency, interacting with others and interacting in and with the world. We would like to pay attention to two last competences, which mean more than collaboration and cooperation. These competences should be develop new attitudes regarding future society (a complex, globalization and digitized society): a new meaning of world peace, a new meaning of personal and social responsibility.

These competences affect not only the educational system or the social relationships, but all the aspect of an individual's life must be redefined, even the concept of identity must be re-evaluated. Today's generations have developed a new identity – the digital one. (Ohler, 2010). In this context, the people develop a new community feeling, which involve a deep meaning of awareness and commitment. Even it is a virtual community, people act and react in real and human way. The evolution of technology must be accompanied by moral and emotional development. Students have to learn how to use technology as a useful instrument for human development.

In other words, we need new competences, which are based on our transformative capacity or our transformative learning ability, according to Mezirow theory (2014).

OECD in *Education 2030 project* has identified "Transformative Competencies":

- Creating new value,
- Reconciling tensions and dilemmas,
- Taking responsibility (OECD, 2018:5)

We think that the transformative competencies are a solution for future society and future educational system.

Therefore, teachers of the future society should change their mindset, expectations and roles. They should learning a new way to interact with students and “us strategies of positive politeness” (Turculet, 2018).

Moreover, they have to assume the digital citizenship and use the technology as a tool for personal and professional development. There are studies which underline the links between teachers' beliefs, knowledge, confidence and openness for technology (Ertmer & Ottenbreit-Lefwich, 2010; Ertmer et al., 2012).

Educational specialists, policy makers and all educational actors agree that teachers should possess the personal qualities, competences and capacities to promote a new kind of learning, a transformative learning. Recent studies (Hattie, 2014; Senge, 2016) and our research (Voinea, Palasan, 2014; Voinea, Bota, 2015) on teachers' beliefs demonstrate that the teachers can change the educational practice if they change their mentalities and expectations about their professional identity. The teachers must be helped to change their beliefs, through a transformative training which different perspective are involved (Kroth, Cranton, 2014).

In that way, they become 21st century teachers, agents of sustainable education.

3. Research questions, goals and methods

This study addresses two research questions: What kind of competences are necessary for a sustainable education, in the students' point of view?

How could the teachers develop the competences of the future?

The aim of this study is to analyze the students' perceptions regarding the future competences which are observed in their teachers' behaviour.

The present study was conducted in a mixt methods structure, embedded in a constructivist-interpretivist research paradigm (Patton, 2002).

This study included a number of 209 participants, students from Transilvania University from Brasov County, Romania.

A questionnaire regarding students' perceptions on future teachers' future competences and values and focus-groups with students were used. The questionnaire addressing the students' perceptions included 10 items, on a 5-point Likert-scale (ranging from 1= least important, to 5 = most important), related to teachers' values or competences "visible" for students (Ex: "My teacher develops critical thinking").

4. Results and Discussion

The analysis of the results of the questionnaires revealed the following: firstly, students believe that the skills/competences needed in the

future are cooperation, life-long learning, creativity, critical thinking. These competences can be noticed in teachers' behaviours. We can see a connection between students' perceptions and teachers' behaviour.

Secondly, students see their teachers as having an important role in promoting the future competences or values, but important future competences or values (entrepreneurship, prosocial behaviour, self-determination) are not visible in teachers' behaviour for students, as you can see in the table below.

Table 1. The characteristics of teachers' behaviour in students' perceptions

Teachers behavior in students' perceptions	Frequency	Mean
Cooperation	158	3.58
Critical thinking	98	3.28
Creativity	127	3.24
Entrepreneurship	52	2.12
Respect for differences	63	2.49
Empathy	89	2.83
Prosocial behaviour	36	3.06
Rightness	112	3.43
Self determination	32	3.34
Life-long learning	81	3.10
Sense of humor	109	2.08
Flexibility	89	2.02

This fact can be explained by the fact that teachers have a modern style of interaction. They are "digital immigrants", with modern not postmodern beliefs about education and students.

Even if students declare that they need an entrepreneurial model, that they want a teacher to encourage them, to develop their creativity, teachers are not perceived as a model for the future society. Entrepreneurship, as a future social value is "the least important" for a teacher, in student's perception, as you see in figure no.1.

We think the traditional image of the teacher and school is still dominant in student's mindsets.

Fig.1 Students' perceptions regarding teachers' entrepreneurship competence

Another important future competences is critical thinking. According to Lai (2011) critical thinking involves both cognitive skills and dispositions (curiosity, flexibility, etc). In the future, students will need to use critical thinking in unknown and complex context. They need to develop and exercise this cognitive skills and dispositions every day. They need to see model of critical thinker in their teachers.

This competence are visible for students and they consider this competence most important, as you can see in figure no.2.

We consider that teachers can be a model of critical thinker for their students.

Fig.2 Students' perceptions regarding teachers' critical thinking competence

The analysis of the focus group with students revealed that students appreciate the teachers who use the new technologies as a useful tool for improve their professional activities, who promote collaboration, creativity and critical thinking. Teachers who can maximize the technological advantages in teaching, who have sense of humour and are involved in social projects are social models for students.

The students' perception regarding teachers behaviour can be summarized into a model of 21st century teachers:

- Interest for novelty (new educational theory, new methods, new didactical materials);
- Critical thinking;
- Openness for human being (sense of humour, empathy);
- Collaboration, cooperation with colleagues, manager and other specialists;
- Life –long learning.

We consider that the collected data help to design a training programme for teachers according to future society demands.

A limit of this research is that were analysed only students' perceptions.

It is useful to continue to do research on how teachers perceive themselves, their competences for 21st school/society.

5. Conclusions

The practical conclusions of this study is that teachers should be training in a transformative approach for to be a model of future competences for their students. They have to develop a new pedagogical practice and professional identity. For developing future competences, any educational system needs a new definition of a “good” teacher. Furthermore, students need to “own” the new definition. Students as future employees and citizens need to develop future competences, but in a practical and real way, in a transformative way. They need to see in their teachers the 21st century competences – critical thinking, collaboration, social activism, self-agency, etc.

Therefore, teachers should develop their own future competences, because they can't teach what they don't possess.

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