



Educators of Future: a Study Based on Effective Qualities of 21st Century's Contemporary Educators

Mesut Duman¹

Abstract

In the 21st Century's first quarter we've encountered the beginning of the "Industrialization 4.0" and increasing importance of the terms innovation, networking, globalization, elimination of borders in all fields, financial improvements, new perspectives in education. With these changes the need for an updated perspective on education became crucial. Qualities and standards of the students of this age has changed, thus the qualities and the standards of the teachers are expected to be updated to fulfill the needs of the future of education. In this study effective educator qualities are defined and discussed by using the examples from an institution which awarded the most innovational institution of the year 2015 in Turkey with more than 100 science projects and successes including degrees in Intel International Science and Engineering Fair (Intel ISEF).

As education advances with the help of technology, it becomes very clear that the modern day classroom needs are very different from the conventional classroom needs. Students are open and able to reach the information via numerous ways. Moreover they are characteristically different. They are "generation z". In the past, the classroom was the only place to acquire new information and the teacher was the only resource of it. However, today schools are full of students who are fed by various resources. Besides, the schools have been equipped with innovative appliances. The educators of this generation must be multifunctional and versatile. They must update their features in terms of profession, personal qualities and innovation. Needed contemporary teachers of the 21st century, with regard to social and environmental aspects , social at the school , cultural, and should take an active role in preparing the sporting event , specifying the deficiencies in must ensure coordination among other institutions, schools and the education system must be able to propose solutions.

Consequently, as the educators adapt themselves to the innovations of the world and improve their professional and personal qualities, the schools will never lose their importance. Students who are members of generation z will be astonished by their pioneer teachers. Creativity and productivity of the next generations will be available upon this kind of preparation. Future of education is under the hands of teachers.



Fig.1. Traditional education and modern education.

1. Introduction

In the 21st Century's first quarter we've encountered the beginning of the "Industrialization 4.0" and increasing importance of the terms innovation, networking, globalization, elimination of borders in all fields, financial improvements, new perspectives in education. With these changes the need for an updated perspective on education became crucial. Qualities and standards of the students of this age has changed, thus the qualities and the standards of the teachers are expected to be updated to fulfill the needs of the future of education. In this study effective educator qualities are defined and

¹ Yildiz Technical University, Işiklar Air Force High School, Turkey



discussed by using the examples from an institution which awarded the most innovational institution of the year 2015 in Turkey with more than 100 science projects and successes including degrees in Intel International Science and Engineering Fair (Intel ISEF).

2. 21st Century and education

Industry 4.0, Industrie 4.0 or the fourth industrial revolution, is a collective term embracing a number of contemporary automation, data exchange and manufacturing technologies. It had been defined as 'a collective term for technologies and concepts of value chain organization' which draws together Cyber-Physical Systems, the Internet of Things and the Internet of Services. Industry 4.0 facilitates the vision and execution of a "Smart Factory". Within the modular structured Smart Factories of Industry 4.0, cyber-physical systems monitor physical processes, create a virtual copy of the physical world and make decentralized decisions. Over the Internet of Things, cyber-physical systems communicate and cooperate with each other and with humans in real time, and via the Internet of Services, both internal and cross-organizational services are offered and utilized by participants of the value chain [1].

Generation Z, those born in 2000 and later called [2]. The biggest is 16 years old. They like to use the Internet and mobile technologies. Today, common smart phones, iPads or tablet computers active in all areas. In particular, they prefer to socialize via the Internet. Unlike other generations, it is called they were born with the Internet and technology. They accounted for 17% of the country [2]. iPad instead of toys they play with and grow with technology. This is why a generation consumed quickly. But they are more internet cheek by jowl with the same time is expected to develop the ability to deal with multiple issues [1]. It said this ability also commonly seen in practice than generation Y and may focus on this single issue. The best example of this was witnessed in the recently held a conference to one. The majority while the speaker talk Generation Y has Commenting on the students of the conference as some simultaneous listeners of the Twitter page, some take a picture of the scene with the iPad Facebook were sharing on social networks like Twitter. Of course, the busy while they were listening to them talk. At the same time listening to comments, pictures, videos, etc. publishing / sharing ability must have been a wonderful thing ... But he thinks that talking face looking at X-residents it "disrespectful" can also be described. Already it is happening in danger or disputes in question at this point.

Teacher is one of the most important elements of an education system. Students will be trained in all the elements that constitute the system to increase the qualifications required to be more creative and productive. Therefore, the more qualified teachers more contemporary curriculum in a better environment, a better quality management and more than willing to students' needs. Each part of the process of the system and affect the result, lowers the efficiency of the lack of volume [3]. Efforts to improve the education system should be considered versatile. Especially in efforts to increase the quality of teachers believe teachers should be provided on this subject.

3. Qualities of teachers of future

The Ministry of Education in raising the qualifications of teachers and universities have made to work together from time to time. In 1999, the Ministry of Education's Research and Development Department of Education, "Contemporary Teacher Profile" the study says, Contemporary Teachers;

- Present to respond to training needs in the 21st century's information technology society sufficient to prepare students for the future,
- Dominate their subject areas,
- Students have the ability to recognize,
- Courses can plan their activities,
- Able to use teaching methods and techniques will be taught according to the subject property,
- Students can establish communication with healthy, can adapt to the learning environment of students and characteristics of the subject, capable of providing the active participation of students in classes,
- Professional development of teachers defined as in contemporary responsibilities and personal rights, laws related to the profession, regulations and by laws, information society as people who know the place and importance[4]. Contemporary teachers also;

Social and environmental aspects related to social, cultural and sporting events should take an active role in preparing, should ensure the coordination between schools and other institutions, and should be able to propose solutions by identifying deficiencies in the education system.



- Contemporary teachers should pay attention to wear harnesses should be able to generate new ideas should not be prejudiced, must develop itself constantly, and children should love the profession.
- 21st century to contemporary teacher should respect human rights and democratic values[4].

The teacher brought to the desired level of the profession, teachers are participated by 6003 people in this study to indicate that there is a difference between the quality of existing teachers with the qualifications of the teachers working in Turkey so that they can become qualified (teachers, students, school administrators, provincial and sub-provincial directors of education , inspectors, parents, unions, foundations and associations, representatives and employees of the university lecturers in teacher training departments).

According to the findings obtained from the study, teachers themselves often; to dominate the subject area, student development, teaching planning, teaching strategies, scientific process skills, classroom management and classroom activities, professional development, they find social environmental aspects and personal characteristics in terms of very passable [5].

At the end of 2000, Ministry of Education General Directorate of Teacher Training and Education Coordinator at (Ministry of Education and University) titled "Teacher Competencies" are given below in summary as guidelines:

I. Education - Teaching Competencies

- a. Student recognition,
- b. Instructional planning,
- c. Material development,
- d. Performing teaching,
- e. Managing education,
- f. Draft measurement and evaluation
- g. Making guidance,
- h. Basic skills development,
- i. Serving students who need special education,
- j. Educating adults
- k. Engage in extra-curricular activities
- l. Self-development
- m. School development
- n. School teacher dealt into 14 sub-headings develop environmental education and teaching qualifications are described relations with 195 indicators.

II. General Cultural Knowledge and Skills

1. Event and explain the concept of using different discipline cases, to define.
2. Establish the bond with the subject of the information related to different disciplines.
3. Prepare students for the course in the teaching process, motivation.
4. Sampling in the teaching process, to make them benefit from the knowledge of other disciplines-discrimination-synthesis.
5. Encourage students to improve their overall cultural life.

III. Special Areas of Knowledge and Skills

1. Basic information, concepts, principles description in various forms.
2. Different views, theories, research and investigation methods to explain learning paths.
3. Teaching resources and teaching materials evaluation and selection.
4. Doing research to produce knowledge in the field.
5. Get the students to ask questions about it, use programs to promote ideas to produce and visual information from a different perspective and encouragement.
6. Creating interdisciplinary educational experience that enables students to associate necessary knowledge and skills with other areas.
7. Recognition problems related to the field search solutions, choose the most appropriate solution, implementation and evaluation.

At the beginning of 2001, the Ministry of Education to expect from this type of university teachers described, university teaching programs from the eyes of Higher Education was asked to reconsider terms of qualifications [6].



Besides the help of the given programs teachers of the future need to be sophisticated enough to response the requirements inside and outside the school. Following the competitions and preparing the students for the activities outside the classroom is one of the most impressive path to be on. As given in the introduction part, Isıklar Air Force High School of Turkey started a campaign for successes in national and international races. In 6 years period students and teachers produced more than 400 science projects some of which have taken place in the contests like Intel-ISEF, Genius Olympiad, Google Science Fair resulting with the first degrees. Moreover, in the science Olympics and sport Olympics there has been lots of degrees in contests like European Orienteering races and gun-shooting and so on.



Fig.2. Glory after a tournament. Teachers and students of Isıklar Air Force High School.

4. Validity of the Program

Studies on teacher education component of the Ministry of Education were given to the General Directorate of Teacher Training and Education. In this context, it established a commission on coordination of foreign experts to create the outline of the general directorate of teacher competence started to work and commission the teaching profession in the context of the adequacy of 6 main competencies, 38 sub-sufficiency based on these competencies and 251 performance indicators of all stakeholders by identifying (the faculties of education, primary school inspectors, teachers, civil society organizations) to get their support and to open critical debate "Draft Generic Teacher Competencies" has been prepared [7].

The draft is currently selected as pilot 6 working lecturers at Faculty of Education in the province under consideration (Ankara, Bolu, Bursa, Istanbul, Van) inspectors in the pilot provinces, teachers and civil society are taken feedback introduced to the organization.

The teaching profession in general qualifications and special qualifications of the main task of the teacher in the draft, "adopting national and universal values and producing solutions to problems of national education and transform the behavior of the objectives of the relevant course the area, individuals learning to learn is to train and taking into account the needs of each individual" was described.

Studies conducted in recent years indicate that the training of teachers and improving their quality have been increased. Three space concepts to be included in a teacher shows the great teacher definition. First of these is domain knowledge which means professional awareness. The second is the knowledge of the teaching profession, pedagogical knowledge. The third is general cultural knowledge; so a teacher in actuality will be aware of the contemporary affairs in the world and in Turkey therefore he or she will have an intellectual spectacle. [8] The teachers in education and training to be successful, it is necessary to have adequate equipment. But education cannot be the responsibility of all teachers. The helpful staff will support teachers when needed. System programs for the healthy development, testing and evaluation, special education, guidance, training



management, arts education and so on. Personnel working with the teacher who have expertise in the field is extremely important. This issue should not be ignored in determining the competence of teacher competence should be emphasized that the main task of the teacher.

Consequently, as the educators adapt themselves to the innovations of the world and improve their professional and personal qualities, the schools will never lose their importance. Students who are members of generation z will be astonished by their pioneer teachers. Creativity and productivity of the next generations will be available upon this kind of preparation. Future of education is under the hands of teachers.

References

- [1] Hermann, Pentek, Otto, 2015: Design Principles for Industrie 4.0 Scenarios, accessed on 3 February 2015
- [2] <http://www.acikbilim.com/2013/09/dosyalar/nesiller-ayriliyor-x-y-ve-z-nesilleri.html>, accessed on 10 February 2016
- [3] Ihan, Ayşe Çakır "21.Yüzyılda Öğretmen Yeterlilikleri" Bilim ve Aklın Aydınlığında Eğitim sayı: 2005, 58. s: 55-58. Ankara.
- [4] MEB.Çağdaş Öğretmen Profili.(2001).MEB:EARGED.ME Basımevi.Ankara
- [5] DPT, Okul Öncesi Eğitim, İlköğretim, Özel Eğitim, Özel İhtisas Komisyonu Raporu, Sekizinci Beş Yıllık Kalkınma Planı, 2001, Ankara
- [6] Tezbaşaran,A. "Öğretmen Yetiştirme ve Eğitim Bilimleri Paneli."Yayına Hız:K.Karakütük.A.Ü.Eğitim Bilimleri Fakültesi Yayınları.No:185.Ankara. (2001), 37-53
- [7] MEB:Öğretmen Mesleğinin Genel Yeterlilikleri ve Özel Alan Yeterlilikleri Taslakları (2004). Öğretmen Yetiştirme ve Eğitimi Genel Müdürlüğü .Ankara
- [8] DPT.Yükseköğretim .Özel İhtisas Komisyonu Raporu.(2000).Sekizinci Beş Yıllık Kalkınma Planı.Yayın No DPT:2534. Ankara