



Between the digital world and *Built-in Orderly Organized Knowledge*

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Abstract:

The author is on the borderline of two generations: digital natives and digital immigrants. Thus, this paper presents the autoethnographic perspective of these two worlds as experienced by her. The first one, as Umberto Eco said, is a *Built-in Orderly Organized Knowledge* world and is the analogue world of the book (**BOOK**). It is close to the author because of the fact of her educational experiences related to her childhood and youth. The other one is related to using the digital space or educational mobile applications, and is experienced by the author during didactic and research work at the University as well as during workshops she leads for school teachers of different educational stages.

Combining these two worlds together gives food for thought and critical reflection on possibilities that are hidden in each of them as well as signaling the potential risks they both pose.

1. Introduction

To be honest, I came to think all this as I wrote—writing as inquiry. I wrote these thoughts into being. I was thinking and constructing as I was writing.

Carolyn Ellis

The presented text is an attempt at creating a space for a dialogue in the area of what is widely understood as education. The threads taken up in it are very personal, in that they take the form of the author's diary. The aim of the collected considerations is to describe my own experiences related to experiencing the disorienting dilemma, which was introduced by Jack Mezirow (2000) and which has a duality of character. On the one hand, the disorienting dilemma involves experiencing difficulties when affiliating myself to a particular generation, and this was revealed as a consequence of studying foreign works in which authors describe people born between 1980 and 1994 as the Y Generation (also called the Millennials) (Lombard, 2009; Cantelmi, 2015). According to these classifications, I should be affiliated to this generation. However, further descriptions of this specific group of people indicate characteristics that contradict my own experiences. The facts the authors emphasise are the growing tendency to become acquainted with modern information and communication technologies and the deep immersion of these generations in the social networks of the Internet (Lombard, 2009; Cantelmi, 2015). These tendencies are probably driven by socio-economic conditions and the cultural context of the country or region that a person was born into. However, these descriptions are very



far from my own experiences. In my case, I tried to get used to the Internet as well as information and communication technologies in the period of my higher education. Who am I, then, in the sense of placing myself in a given generation?

On the other hand, the dilemma I mentioned is visible in diverging personal and professional experiences. School, as I remember, was based on the solid and traditional concept of cultural transmission (Kohlberg, Mayer, 1972) and discipline in the field of both education and upbringing. Also, University education resembled the reproduction of encyclopaedic knowledge rather than reflective learning as introduced by John Dewey (Kohlberg, Mayer, 1972).

Conversely, in the professional sphere, my interests are closer to considering the digital space as the one that can trigger learning amongst students. In my case, University practice during class involves merging elements of digital technology with traditional methods of learning during class; whereas University research is based on studying the world experienced by students who participate in the learning process actively using the digital space. I also sometimes conduct workshops for teachers at different stages of education on modern tools available online. For me, combining both the analogue and the digital worlds is a specific way of learning the language of digital natives and becoming one of them.

There is also a third dimension to this story. It is related to the concept of critical reflection on the everyday didactic and research activities in the area of the digital space. It is also the result of the disorienting dilemma (Mezirow, 2000) that I experienced. Therefore, in the last part of this text, I have focused on my current considerations relating to the digital reality, school, and educational mobile applications. I have referred to texts that had once moved me, including amongst others, an article concerning Facebook and social constructions of narcissism written by Zbyszko Melosik (2013), issues connected with the digital dementia of the modern generation introduced by Manfred Spitzer (2016), and also my newest 'reading discoveries'. These were essays from the last book of Umberto Eco (2016) and a few threads from the 'Black Mirror' television series.

In the manuscript, I have referred to evocative auto-ethnography, introduced, amongst others, by Carolyn Ellis (2004; Kafar, Ellis, 2014). In addition, I have presented the considerations of Anna Kacperczyk (2014), who made an attempt to describe the practical applications of autoethnography and to organize the terminology of this research practice. A. Kacperczyk (2014) considered autoethnography as: i) the intellectual (mental) process, as a result of which a human being initiates self-reflection and self-analysis; ii) the effect and final product of this process in a form of narrator's personal writing; iii) the technique for collecting empirical material that will be analyzed over time by the author; iv) a strategy and a research method based on scheduled and directed self-observation, self-reflection as well as auto-narration; and finally as v) the new trend of conducting both – humanistic and social research (Kacperczyk, 2014). Especially noteworthy from the perspective of considerations included in this text is the evocative autoethnography, which was defined by Kacperczyk as narrative writing. This means an act of writing own experiences down and presenting them as a consistent story (Kacperczyk, 2014). The author referred to the original works of foreign researchers: Carolyn Ellis and Arthur Bochner, who emphasised the essence of the evocative-oriented autoethnography. It is therefore all about evocation, so establishing a dialogue with interlocutors regardless of the form the research report is presented. It may be an article, a book, an essay, a press item, a story or an acting performance. C. Ellis explained it, more specifically. She stressed that autoethnographers using evocation:

First they look through an ethnographic wide angle lens, focusing outward on social and cultural aspects of their personal experience; then, they look inward, exposing a vulnerable self that is moved by and may move through, refract, and resist cultural interpretation (...) (Kafar, Ellis, 2014, p. 136, as cited in: Ellis, 2004, p. 37-38¹).

Ellis clearly stated that the work of autoethnographers is not something that is done at certain, official hours. Their lives and work are combined, merged, due to the fact that their work involves writing about their lives (Kafar, Ellis, 2014). Describing your own life and experiences may be guided by a conviction or, as Stacy Holman Jones (2014) said, by the belief that autoethnographic description may support achieving a goal which is changing reality (Jones, 2014). It should be added here that S. H. Jones's texts are closer to performative autoethnography (Jones, 2014). However, I personally think that her letter to the deceased grandfather included both – performative as well as evocative elements.

¹ The article is a transcript of the conversation between Marcin Kafar and Carolyn Ellis while they were having a walk in Warsaw.



The presented text had not been written according to a specific plan. I believe that the thoughts that were spilled onto paper appeared in my mind as I was looking back on my childhood and youth memories, and referring to present experiences. That is why, at the beginning of the manuscript, I cited Carolyn Ellis, who said: 'To be honest, I came to think all this as I wrote—writing as inquiry. I wrote these thoughts into being. I was thinking and constructing as I was writing' (Kafar, Ellis, 2014, p. 128).

2. I am (not) a digital immigrant/native...

... on the borderline of two generations

In most studies dedicated to analyses of different generations, there is a clear division, which indicates separate interests and age limits for each generation. They are called by specific names ascribed to them as a result of grouping the properties of their representatives, like age range and similar experiences. That kind of conventional approach in generation analyses makes me struggle with placing myself as a representative of one or another formation. However, I am able to indicate which generation my mother represents without any problem. She is a representative of the Baby Boomers generation (Cantelmi, 2015). She was born in the mid-fifties of the twentieth century and she took great pride in her work. I remember in the early nineties when I was a child, we could hear the sounds of the cassette player at home. She listened to songs by The Beatles. They might have reminded her of the rock 'n' roll years of her adolescence. It is different with me. I was born in 1986. I therefore belong to the Millennials or the Y Generation (Lombard, 2009; Cantelmi, 2015). Other authors argue that these formations should be known as the Net Generation (Tapscott, 2009) or the Digital Natives (Prensky, 2001). Generally, their representatives grew up in a reality dominated by information and communication technologies and are somehow natural users of the language of games, computers, and the Internet (Prensky, 2001). This is definitely not the world that I know. The only right thing here is the age range. I was born more or less when children in the Western world began having access to the Internet and computers. In Poland, the course of information and communication technologies development was much slower. Not without significance here is the fact that Poland had long been under the influence of the communist ideology. In some way, I fit into the X Generation that was raised in an environment dominated by McDonald's burgers and video games. I remember very well when the first McDonald restaurant opened in our town in the early 1990's. All of my classmates wanted to go there. I attempted to persuade my mother to go there but only after passing my piano exam at music school. Subsequently, we did not visit the cinema often. We had a video game system (console) at home. It was called *Pegasus*. We played two video games on it – one, called *Mario Bros*, was a very popular game at that time. Earlier, there was one more game with less advanced graphics, which name I am not able to recall right now. I have never played video games since that time. Then, it really was "something else". Reverting to issues related with the X Generation, I am definitely not a representative of this formation as well. It is said that its representatives were born between 1960 and 1980 (Cantelmi, 2015). Again, that is not me. Who am I then?

2.1. School...

I recently read a column by Umberto Eco (2016), entitled: *Did we really invent so much?* I was really interested in the advertisement that was sent to the author via e-mail. The announcement was about a new product – a book. Abbreviation BOOK means: Built-in Orderly Organized Knowledge device. The product distinguished itself from others, as Eco emphasised, by its mobility, compactness, lack of batteries and switches. In addition, it includes 'a list of contents' tool, due to which we are immediately able to find the fragment we are interested in, scan it with the use of our eyesight, and save it in our heads. The additional option is a bookmark that may be purchased for the product. Thanks to this, we may mark the most recently read part of our BOOK. I am perfectly familiar with that product. Of course, I do not think it is 'super' new, however I do understand the message Umberto Eco tries to convey. For the youngest generation of people who, according to Howard Gardner and Katie Davis should be called the App Generation (Gardner, Davis, 2013), an encounter with a traditional book seems to be like a new experience or may be treated on par with encountering a tablet.



Personally, the bibliophily² notion is closer to my experiences. I have always loved the books. There were so many of them on the shelves in my family home, starting with Polish and foreign classics and ending with albums, encyclopaedias and guides³. At school, we were given specific texts to read as required by a teacher or the class curriculum, always with a fixed reading deadline and with the threat of being checked on one's knowledge of the book's story line and characters portrayed (although some sly students could pretend they knew both). Anyway, I read both obligatory and extra texts, such as background readings that I could discuss later with my dad when we travelled by car to my grandma's village. In junior high school, besides the set reading list, my Polish teacher allowed the students to choose some background reading. The students' task was to go to the library, search the library catalogue and then to suggest to the whole class what the most interesting books were, in their opinion. Later, we all selected a few that everyone would read. It was a great experience, with unforgettable discussions that lasted even for an entire didactic hour. The young people decided for themselves what they would read and why they thought that was important. I remember that the class decided to read a book that I had proposed. I do not remember the title of it now. It was almost 20 years ago. I only remember that a schoolmate, who sat in the same desk with me at school, suggested, in opposition to my proposal, reading Tolkien's *'Hobbit'* and we had a very long discussion why it was worth considering my or his choice. It was a real lesson during which we could learn how to discuss, respect each other, and how to construct convincing arguments. I would call it a real school. Then, the thought of digitalized reading or audio-books never entered anyone's mind. The Polish publishing market at that time was not yet prepared for the arrival of digital books. Even computer classes were cumbersome to me then. I not only didn't have a computer at home at that time but also did not have one for a long time after. Hence, I could not be a representative of the Millennials.

3. The charm of the digital space – personal and professional experiences

While doing my doctoral studies, I read a book by Howard Gardner and Katie Davis entitled *'The App Generation. How today's youth navigate identity, intimacy, and imagination in a digital world'*. It was a fairly recent report from research conducted in the USA. It turned out that the App Generation is a group of people who were born at the end of 20th and at the beginning of the 21st century. They are natural users of the language of the latest technologies, the latest software and mobile applications. According to the authors, the modern generation is radically different from its predecessors, especially in three areas, which are: identity, intimacy and imagination (Gardner, Davis, 2013). I delivered a presentation on this topic at the first scientific conference that I went to. I did not know at the time that reading this book would be the beginning of an adventure with the digital world in my research and didactic work at the University. For a year or so, I was intensively looking for an area that I could deal with in my doctoral thesis. One day I had classes with University students in the room where we could not connect to the University WiFi network. We really needed the Internet connection so one of the students from the group showed me how I can easily make my own smartphone function as a router. Literally speaking, he showed me how to share a hot spot from my own mobile phone. This was probably the crucial moment. I understood then that I was dealing with people who were less than 10 years younger than me, and at the same time they were completely different than I was. I also realised how great in scope the dynamics of inter generational change can be. It was a completely different generation of people (*SIC!*). Since then, I have been trying to be innovative in my didactic classes with students.

3.1. Educational-goaled discussion groups in the social media

First of all, we establish (together with students) educational-goaled discussion groups in the social media (most often we use Facebook or Edmodo platforms) in the frame of subjects that I conduct for them. The groups are mainly used for information, communication and educational purposes. We set up a library of

² The word 'bibliophily' was used by Umberto Eco in his essay, entitled 'Touching books'. I understand it as the author, so as a love for books, for their specific editions, covers, pages.

³ My dad read a lot; he bound a large part of the books from our home library with blue canvas. He did it, e.g., with Henryk Sienkiewicz's trilogy, Adam Mickiewicz's *'Dziady'*, and for sure Juliusz Słowacki's *'Balladyna'*. He did not decide to bind Stanisław Lem's works, I do not know why. They always stood on the shelves in their original covers.



learning materials in an electronic version (it is a virtual shelf with PDF texts that we need for classes), we provide videos, other links and information about changes in the class schedule, etc. The group gives an opportunity to discuss the materials posted there. Sometimes it really “buzzes” there, with the consideration of various views and opinions shared. Students are usually very surprised by the fact of my active participation in such a group. I definitely engage in this initiative and reflect on what is happening in each group (Bieliniś, 2017). I also often comment on posts, and I share learning materials myself. Students write on the group wall or to themselves/to me individually. Sometimes they write late at night, sometimes very early in the morning. Thanks to an application loaded onto my smartphone and the appropriate settings, I decide when I check the messages from the social networking site and at the same time I give them the opportunity to consult me online in a completely different form than the standard contact via e-mail.

3.2. Digitized sketchnotes and electronic mind maps

One day, I invited Stanisław Czachorowski, a professor of biology, to our Faculty. I was inspired by his column on the edunews.pl portal (Czachorowski, 2016). The professor talked about sketch noting and ‘thoughtography’. Generally speaking, sketchnoting is a combination of drawing and thinking, and ‘thoughtography’ is a sum of thinking and graphics. They represent alternative forms of student noting during University education. They both result in a piece of paper, e.g. a piece of paper on which the most important information from the lecture, speech and presentation was drawn (Czachorowski, 2016). I really liked this form of noting. I especially liked the fact that I could take such sketchnotes home, see how students thought during classes, and whether they did anything at all. Students could also take their sketchnotes home and send them to me in an electronic form (after scanning or taking pictures of them). Such a digitized drawing can be an interesting learning material. It is usually colourful, personal and contains the most important words or associations that can refer our brains to readings, texts, movies, and so on. Students usually report problems with understanding different sociological, psychological or pedagogical theories. I remember the case when the difficult language of Michel Foucault’s concept of power/knowledge was developed graphically. I have not yet had the opportunity to look at the results of working with sketchnotes in university classes from the point of view of its

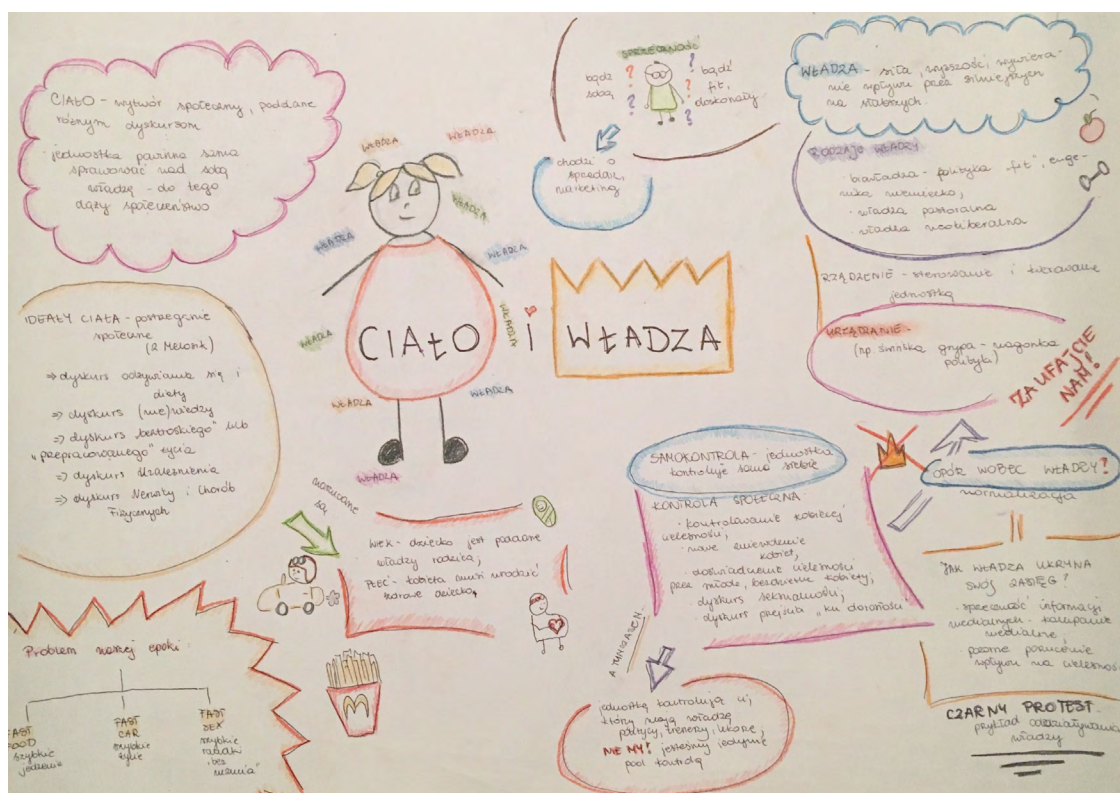


Figure 1. Sketchnote elaboration (in the frame of General Pedagogy subject): students of Pedagogy, Faculty of Social Sciences, University of Warmia and Mazury in Olsztyn, 2017.

effectiveness in constructing reflective knowledge. It means that I cannot quote any research that would testify to the effectiveness of this form of work. However, on the occasion of an oral exam with another lecturer, students reported to him on this way of learning. They also declared that thanks to this method they understand the language of Foucault's theory. It was a big surprise for me. I also felt contentment and joy. Such sketchnotes can be stored in an electronic version in our library in the educational-goaled discussion group. Students can have access to them at any time of day or night, anywhere in the world. Below, there is an example of a drawing prepared by students of Pedagogy.

Instead of a traditional test, I recently proposed to students that they create a mind map in electronic form. I found free software called Mindmeister that allows a teacher to invite an unlimited number of people to edit a shared map. Participants can bring with them all the materials they need to use during the revision (traditional notes, sketchnotes, books, articles, smartphones, and laptops). They are divided into small teams (there are usually four or five people in each team) and work on the issues I have assigned to them as a repetition of the last few lessons. The team needs one laptop and a network connection. Each participant can see on a current basis what other teams are currently placing on the map. Map creators' can add colours, change fonts, post links, add PDF documents and personal, reflective comments. My experience showed that students liked this form of work very much. Of course, also due to the fact that they could work in teams and use all kinds of materials. They did not come 'learnt by heart', but were rather focused on collaboration during the process of constructing the knowledge. This form of work requires a special commitment from the teacher. The reflective essays that I asked the students to write showed that despite the many advantages of such work I should have prepared a tutorial on the use of this tool before applying it to the classroom and to ensure a well-equipped room with a good WiFi connection. In spite of some critical remarks, the reconstructed statements of students indicated that thanks to the form of work they were offered during the classes, they learnt to cooperate and, as a result, they could learn better. Someone even wrote that it is: knowledge in a nutshell. Indeed, the material they developed can be saved to a PDF file, which is an interesting form of the note (Bielini, 2018).

3.3. The exam session in a 'digital' style

As a result of participating in the workshops during one of the conferences that took place in Olsztyn, I also learnt how to use several educational mobile applications for the repetition of the material, quizzes and tests. I use one of them (its name is Plickers) regularly during student tests or exams⁴. When we used this method of examination for the first time with a colleague from the Department I work in, we were so excited that we decided to collect the statements of students participating in this form of passing the exam and of other lecturers, whom we helped to conduct the exam in this form. The collected research material indicated that all participants of the exam (both students and lecturers) initially experienced anxiety associated with the use of a new tool; however, it disappeared as they were getting familiarised with the application. In addition, it turned out that if technical difficulties were minimized, i.e. the lecturers would choose a properly lighted room while students and lecturers would master the ability to use the application, then the Plickers application would positively influence the assessment process and make it more transparent for the participants. Moreover, thanks to reflection on the action we undertook, we believed that the introduction of mobile applications into the education area at the University was justified and minimised the distance between the world of young adults (Strelau, 2003) and the world of lecturers (Maciejewska, Bielini, 2017).

3.4. Educational mobile applications – workshops for teachers

I also happen to be invited to lead workshops for teachers of various educational levels. I usually prepare some interesting digital tools, as it seems to me, and show participants how they work. The feedback varies greatly.

⁴ Instead of pens and test cards, students received a square answer card from us (with a print resembling QR code). Each card had its own number – previously assigned to a specific person and four letters (a, b, c, d) on the sides of the card. Questions were displayed from the projector; students chose the correct answer and lifted up the side of the card with the answer they have chosen, i.e. letter A. My smartphone scanned their choices and saved them in the system. A moment after the end of the test or quiz we were able to check the results of individual students, and even find out which questions were the most problematic to the participants, see the group average, etc.



There are educators who from the very beginning have been yearning for information and communication technology skills, who look forward to future meetings and are also willing to participate in discussions about the possibilities of combining traditional and digital forms of learning in didactics. There are also people who are not interested in it at all. They probably attend only because of a need to certify their participation in the training or workshop. Some expect to be shown specific applications that they can use in their lessons and have a very pragmatic attitude to the workshop. Others are so interested that they write e-mails long after the end of our meetings and invite me to conferences. I usually show the practical usage of the applications for quizzes, tests and homework, such as the already mentioned Plickers, Kahoot or Quizizz. I also try to show tools that can help them collect student reflections about classes. The Mentimeter application is a great solution for creating word clouds, writing reflective comments or collecting opinions, etc. They also learn how to set up classes or groups with students in social media. In addition to Facebook, teachers usually respond well to the Edmodo portal. This is a typically educational software that allows setting up a class, asking for homework, creating a library of electronic files, discussing, sending and receiving messages.

Sometimes, I also search for interesting websites that fit the curricula of particular subjects. It also allows these teachers to find something interesting for them, which will perhaps be used at least once during a lesson. Recently, I did some work at a Primary School with teachers who conducted classes from the first up to the eighth grade. It was not easy to prepare a workshop in such a way that all the participants could work together all the time. One of the ladies at our meetings caused me a lot of bother from their very beginning. She was constantly talking with her friend and could not handle the computer. The work went very slowly, and she constantly complained that it was too difficult for her or that it all made no sense. I wondered what I could do, how I could help her, and how much her attitude towards our meetings and me was caused by the fact that she was much older than me and probably had more experience of teaching. I decided not to react to her taunts and interruptions (though at times I did get hot under the collar). I simply focused on helping her when she asked for assistance. An individual approach, tailor-made to her, with time and patience, resulted in her being the one person who, in this group, most sincerely thanked me at the end of the workshop. She later shared her experience related to the use of mobile applications for lessons. She told me that since she had prepared material revisions using the Plickers app, the children constantly asked her to use 'Snickers' app at following lessons as well. It is worth knowing that something good can happen in school lessons as a result of these meetings.

4. 'Digital sliding on the surface' – some unfavourable remarks about the digital school and the world

4.1. Social media and online image

The Netflix online movie and TV rental company has broadcasted four seasons of the 'Black Mirror' series in the last few years. Each episode is a separate story, taking place in an alternative reality or in the near future. The series presents negative consequences of using modern technology by the public. In one episode we were able to watch the story of a young girl, called Lacie, who lived in the world of 'stars' scored by accidentally or intentionally encountered people. The creators of the episode offered a world in which we cannot only admire their photos or videos via social networks and comment on them or react to them via emoticons. This time, the meeting with another person resulted in scoring him or her a certain number of stars (of course, the more stars the person received, the better it was for his or her reputation). Ordinary jogging in the park or in the suburbs or the accidental meeting of the neighbour ended with the rating of the second person, which the index of his or her popularity was built on. The higher the person's rating was, the more amenities he or she could count on. For example, a person had the right to buy a ticket for the next flight in case of previous cancellation. Lacie very consistently collected good scores and was almost able to join the group of people reminiscent of VIPs in this created world. However, at some point something went wrong. Expressing real emotions, like anger, dissatisfaction or excessive joy, caused other users of the application to begin rating Lacie low. Her ranking significantly decreased, and that meant that she lost the possibility of renting an apartment in the dreamy district, and could not even be a bridesmaid at a friend's wedding because her overall rating was too low. How close is the imagined story of Lacie when we consider the near future?



A few years ago, I read with interest an article by Zbyszko Melosik (2013) entitled 'Facebook and social constructions of narcissism (some remarks on identity closed in the cell of image)'. In the first part, the author introduced Paul Gilbert's social rank theory (Melosik, 2013). According to him, the feeling of low social position is associated with the feeling of a lack of positive evaluation from other people. As a consequence, people experience fear and anxiety about their position in the world. Today, however, you can build your position, status or 'liking' online. Social networks provide a platform for two contrasting self-presentation strategies: exposing yourself to the extreme and idealizing your image (Melosik, 2013, as cited in: Kim, Lee, 2011, p. 359-360). This second strategy could have been an inspiration for such scenarios as the ones proposed by the creators of the 'Black Mirror' series. Social media, like Facebook, give us an incredible opportunity to appear in an alternative world, governed by completely different laws than in the traditional analogue world that we know so well. It is a world that we can turn off when we no longer like it. It is a world where people do not have to look into each other's eyes in order to communicate anything of importance. It is a world from which we can escape and to which we can come back as many times as we wish. It is also a world that affords opportunities to communicate with and to meet, see, and interact with others in real time (at the press of a button), which is not possible in the analogue world; it is a space in which you can learn, just as my students do. How, then, can we use this world to trigger good things, and not to close our identity in a prison cell of our own popularity or of acceptance by others?

4.2. Education

There are many works of authors who deal with the issues of the digital space and the possibilities it offers for educational purposes. Earlier, I mentioned personal and professional experiences that showed how contact with a new generation of people created the need to incorporate elements of the digital world into the educational process, at both school level and higher education. It was a great surprise for me to read Manfred Spitzer's book entitled 'Digital Dementia'. The author presents a number of arguments, corroborated by results of scientific research, which prove that the Internet and digital media has a negative impact on the learning process of pupils (Spitzer, 2016). It was about the so-called 'sliding on the surface' instead of exploring the material we wanted to learn. A number of scientific studies, which Spitzer quotes, support his thesis concerning the lack of positive influence of digital media on the improvement of learning outcomes. On the contrary, it turned out that in some cases they had a negative impact on the learning process. There were arguments related to the use of computers only for entertainment purposes, the lack of adequate equipment at schools, difficulties associated with software updates in the equipment, and shallow information processing by students (Spitzer, 2016). However, the author admits that he also received reports describing the positive impact of using computers on college students (Spitzer, 2016, p. 80). It puzzled me. It may be worth looking at the digital space and its applicability in the education of adults who are at different stages of cognitive and emotional development than school children or adolescents are.

In another U. Eco's essay (2016), the author referred in its title to a question that was once asked in a school. As Eco describes it, the student asked the teacher in an insolent way: 'Professor, we live in the Internet era, so what are you doing here?' This question could be justified nowadays. Today, we can get most information from the Internet. We may even know a little bit more than our teachers and look beyond school textbook knowledge. At the same time, I do not think that in the upcoming years the Internet will be able to select information contained in it in such a way as to teach critical thinking and the verification of information contained therein. The Internet will not teach us to be close to another person, to meet him or her, and to conduct a skillful dialogue in which we will be able to confront our beliefs, opinions and thoughts. It seems to me that authentic and personal meetings in the analogue world will still serve this purpose. The digital space can be a starting point for further learning. At least I think so, and I will be sticking to this opinion. It is 'set' on the basis of two important questions that were posed in the book 'The App Generation' written by H. Gardner and K. Davis. The authors asked, on the one hand, 'To what extent did we become dependent on mobile applications today?' On the other hand, they wondered 'In which areas could mobile applications be used in a liberating way, for example in learning (note L B.)?'

If, therefore, we would treat the digital space as a tool for broadening the spectrum of the world we are recognising and experiencing, it would not only make our students appreciate the value that the Internet



offers them, but also the value of meeting other people. There are several didactic models that introduced mixed learning models. These are: Blended Learning (Bonk, Graham, 2004), Flipped Classroom (Dylak, 2013) or Pre-Training Strategy (Dylak, 2013).

5. Disorienting dilemma – the summary

At the beginning of this text, I mentioned the disorienting dilemma concept introduced by Jack Mezirow in the theory of transformative learning (Mezirow, 2000; Pleskot-Makulska, 2007). It is based on an attempt to understand emerging new information about the world and an attempt to provide new meaning where the old ways of interpreting the world are insufficient or have disappointed. Experiencing a disorienting dilemma leads to a critical reflection on current assumptions. I believe that I have experienced such contradictions through my own personal and professional development. On the one hand, I was brought up in the spirit of Built-in Orderly Organized Knowledge, an analogue world of books. On the other hand, my professional (didactic and research) experience is based on the exploration of the digital world, in which I find myself improving every day. Who am I in this contradictory world? Am I a digital native or maybe a digital immigrant? It seems to me that ultimately this question is not well constructed. I am neither one nor the other, and it does not really matter much from the point of view of these considerations. I think that in the course of writing this text, the analysis of my own experiences has emerged to be more significant and has shown the process of critical reflection regarding the opportunities and threats hidden in both worlds. I noticed something very important on the basis of collected and described experiences gained when using the digital space in the learning process of adults (students, teachers, myself). Overall, the skillful combination of the two worlds, digital and analogue, can facilitate the creation of conditions for the authentic learning of all subjects within education. This approach relates to the discourse of perfection described by Henryk Mizerek (2012). This type of discourse stands in opposition to the market discourse and seems to allude to the English word *enabling*, which means creating appropriate conditions for the development of skills. H. Gardner and K. Davies (2013) paid particular attention to this word when they considered the possibility of using mobile applications by the new generation.

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