Culture,
Education
& Technologies

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i   Introduction

Elżbieta Perzycka

Modern times involve creating strong ties between digital technologies and workplaces, education, and broadly understood cultures. A popular saying in China says that "the gates of the school may be closed for some reason, but the gates of learning will never be". And this book is proof of that saying. It consists of texts written by both young and experienced researchers participating in the international seminar of young researchers organized periodically under the supervision of editors Elżbieta Perzycka and Aleksandra Łukaszewicz- Alkaraz.

As a result of the worldwide COVID-19 pandemic and with limited possibilities of meetings in real life, the venue for the seminar has become a digital platform. However, the exchange of views and sharing of scientific knowledge proceeds. Travel restrictions and maintaining a social distance contributed to the strengthening of the activity in the space of digital reality.

Digital technologies undoubtedly have great potential to improve communication. They can support thinking only if they are in good harmony with the cognitive system of meeting participants. In the known three-part model of communication, all parts are important – the sender, the recipient, and the message. Specific intentions are assigned to the sender – striving to convey the message properly, causing the recipient to change the quantity and quality of the content conveyed. Conditions for the recipient to have a specific change in the quantity and quality of information (messages), behaviour, or emotional states are created. The recipient is expected to be receptive, distinguished, understand the message, and react in accordance with the intention of the sender. The message – in the form of a scientific text – is expected to be cognitive, pragmatic, aesthetic, and ethical if it is recognized as such through a review.

Elements of real life embedded in the tradition of social communication intertwine with elements of life in digital spaces, each with enormous power to influence the other. At the same time, digital communication is treated as a source of interaction, a visual exchange, which makes the interaction of entities through the transmission of thoughts, desires, and knowledge understandable by all sides in the communication. The differences resulting from the experience of the technique and the so-called invisible thread dividing people into "ear communities" can be noticed. By triggering tribalism, after Maffesoli (2008, p. 11), people try to gather not only individuals but also groups and even entire scientific communities. Technology has repeatedly played the most important role in the advancement of humankind in all areas of life, giving people the tools and the power to control the environment more and more effectively and on an increasing scale. Viewing the situation positively, it can be said that the time has come to improve technical competences, which would improve cooperation in science even more.

The authors of this study undertook an extremely important task – to indicate the development of technology for the needs of everyday life. Deliberating on the meaning and importance of the use of technology in education, science, and culture, they were guided by reason, behind which are curiosity and research concerns.

The collection of a dozen or so substantive texts, prepared by many kinds of authors, the result of their individual and team reflections on the subject, may arouse recognition and lead to discussion. This is due, inter alia, to the fact that on the basis of reading a dozen or so texts for their research, authors

usually deal with at least two mechanisms. The first is related to attempts to answer the typical question whether the text corresponds to its content while the second manifests in the form of searching for the legitimacy of the relationship between the source materials used by the author and their cognitive theoretical attitude. Aiming at ordering the subject discourse within the thoughts conveyed by the authors of the threads, attempts were made to distinguish two parts. The chapters are intended to be situated on the plane of substantially related issues. From the point of view of the expectations of both the participants of the collective discussion and the readers, the issues of subject considerations in this monograph focus on the most widely understood media education. The first part covers issues related to the technical environment and culture, and the second part covers education from the perspective of digital reality. It is worth noting that both an approach with theoretical and empirical values was taken and practical educational solutions that provide interesting content of a substantive nature found, and some methodological approaches and methodological proposals were made. In the diversity of the content of texts and approaches in the form of a cultivated style of scientific writing and didactic attitude, this book presents a valuable study that may become important in improving the scientific and research workshop of not only young researchers.

This study is not a closed part; it is part of a larger whole in progress as the seminars are held cyclically, with more and more participants sharing their research findings in and views of theoretical and methodological studies. This book is an announcement of the texts that are being prepared for the next volumes.

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Technological Envoronment and Culture

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Teens' Multimedia Stories

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Introduction

The intensive development of new media began a visual turn in culture. A contemporary person is using image as a form of expression more and more often, especially teenagers, who document almost every moment of their lives. Portable devices such as smartphones allow them to capture the places and people important to them and share expressions of their creative work. The generation we call the millennials have grown up with digital cameras, cell phones, and video games. The digital world has created tools for communication, expression, and information creation. As Sherry Turkle (2012, online) suggested, we use technology to define ourselves by sharing our thoughts and feelings. "These days, those phones in our pockets are changing our minds and hearts because they offer us three gratifying fantasies. One, that we can put our attention wherever we want it to be; two, that we will always be heard; and three, that we will never have to be alone" (Turkle, 2012, online).

The making of autobiographical stories with the use of photographs or video materials has become more common. As Krzysztof Konecki (2012, p. 13) puts it: "Subjectivity is often visually expressed, identities and social areas are also often built using visual means". There are millions of photographs shared every day on social networks or blogs. Dariusz Kubinowski (2011, p. 255) points out that "photography and film (video) create new possibilities for the construction of alternative data representations". The visual layer gives researchers new opportunities to learn. Both photographic and video materials become a reason for personal reflection on various topics; as Marianna Michałowska puts it, "defining oneself as a witness who reports events, and at the same time, presentations about these events of their own thoughts" (2012, s. 12). Visual materials create the opportunity to talk about the world and help recognize its meaning.

Therefore, as part of our research project, which founded the basis of my PhD dissertation, I asked a question: What multimedia stories do teenagers construct in blogs and for what purpose? A blog is a personal online journal with reflections, comments, and often hyperlinks provided by the writer. It requires planning, practice, and experimentation. Blogs allow students to create their own stories. They can choose words, pictures, music, and sound effects to tell a story about themselves or talk about a topic about which they feel passionate. "In the classroom, blogs are highly effective communication tools that create a variety of authentic writing experiences for students and teachers" (Mullen, Wedwick, 2008, p. 69). I was interested in both the subjects and forms of digital means of expression as well as self-presentation strategies.

When reviewing the literature on the blogosphere, I got the impression that the phenomenon is most often considered in the context of marketing, sociology, cultural anthropology, or psychology. However, there is a lack of pedagogical research on youth blogs. Danuta Lalak and Aneta Ostaszewska note that "teenship diaries", especially those about personal issues, are not only a valuable source material for biographical research but also "a completely new way of self-presentation and communication" (Lalak, Ostaszewska, 2016, p. 209). Analysis of the visual data included in blogs helps to enrich the knowledge about the world of teenagers.

The subject of qualitative research and data analysis strategies

The main subject of the research in my project is the multimedia stories in teenagers' blogs. According to Nod Miller (2003, p. 122), multimedia authored stories are e-constructs based on a presentation of events and experiences that lead to a form of narration (narrative about yourself and the world). In her view, the narrative can also take the form of multimedia. Stories of this type are a way of understanding (perceiving) yourself and others, a form of interest "in life, self, and also the sense that such people give to their experience". I decided to do qualitative research, aiming to describe reality and capture the unique shape of the phenomenon. I like Bogusław Śliwerski's thought (2012, p. 86) that as educators "we deal with what is immeasurable, which leaves us alone with the unrecognizability of people and events determined not only by what is measurable but also what is referred to as the humanistic factor, by transcendence and fate".

I set two exploratory objectives: cognitive and practical. The cognitive one was the analysis and interpretation of multimedia teenage stories; the practical was about paying attention to the problems occurring in juvenescence, often signalized by the teenagers themselves. These can become valuable indicators for pedagogical work. They may also extend the range of theoretical talk on the role of narrative stories in the process of learning to build an identity by modern juveniles.

In order to specify my research, I decided to focus on the question: **What kind of multimedia stories do teenagers blog and what do they want to communicate?** assuming that the multimedia story is a form of narration that consists of „presentation (a generally understood representation of the world) and auto-presentation (the introduction of the subject itself) using digital means of expression (Burzyńska, 2008, p. 27). The term "auto-presentation" is defined as „a deliberate action to generate a desired self-image by an individual in a social environment" (Szmajke, 2002, p. 124). To narrow the range of interests, I also formed a few detailed questions:

1. What topics do teenagers choose for multimedia stories?

2. What strategies of auto-presentation do they use in their blogs?

3. What forms of expression, means of communication, and multimedia techniques are present in those stories?

In the classic understanding, expression means „a conscious act of expressing oneself" (one's thoughts, experiences, and feelings) by using real and symbolic signs (Wirkus-Babicka, 2015, p. 55). In forms of expression we can include motional-mimical, verbal, musical, and artistic.

In my research approach enters the interpretive paradigm, which, in contrast to other paradigms in social science, „is interested in understanding a subjective human experience" (Rubacha 2003, p. 62). Such a perspective is close to the hermeneutic tradition where the source of knowing a person lies in their texts and creative pieces. Hermeneutically understood narration puts emphasis on the aspects of the story that aim for understanding a person and their experiences. In this research project, I decided to choose teenagers' autographic blogs and analyse their visual and audio-visual materials such as photographs and video recordings.

In the project, I made use of research strategies that allowed the analysis of photographs with quality data. I focused on the pictures and video materials that illustrate several posts published by teenagers. In the photographs studied, I relied on hermeneutic interpretation (individual senses) and semiotic interpretation, which relates to cultural means. I wanted to recognize the subjective meanings of what had been written by the authors of the photographs. Simultaneously, I wanted to place them in a cultural context. For this reason, I used connotative procedures distinguished by Roland Barthes. Furthermore, during the audio-visual material interpretations, I checked compositional analysis as suggested by Gillian Rose.

According to the researcher, moving pictures can be put into categories such as mise-en-scène, editing, sound, and narrative structure. When analysing, one should take into consideration three dimensions: production, recipient, and the picture itself. This means that „the interest given to the author should connect with the attention paid to the audience of the visual piece and reflection on the image itself" (Rose 2016). The measurement of production is strictly connected to the outer photography context (circumstances of inception, technical measurement). I also analysed the elements that construct the multimedia stories in teenage blogs such as graphic design, name and page headline, and visual auto-presentations. For this reason, I used a visual-verbal analysis method from Günther Kress and Theo van Leeuwen's (1996) point of view.

While analysing the blogs, I made use of various data analysis techniques. At this point, I am only summing up the chosen ones. Meanwhile, for storing

and organizing research materials, I used a computer setup analysis of quality data. Programs such as CAQDAS make the process of categorizing data and organizing research materials easier. Following Earl Babbie's suggestion (2004, p. 411), I also used a note compilation technique (a.k.a. memoing), which I added to the research report later. There were many theoretical (intuition, reflections, interpretations) and methodological (concerning research proceedings) notes. I was interested in the content of the movies and photographs (topics, values, main characters, gestures, and accessories) and technical parameters (types of movies and photos, trick effects, means of artistic expression, and applied photo or video techniques).

For my project I selected twelve teenage blogs that had been singled out in a prestigious competition „The Blog of the Year" run by online informational platform O*NET in 2014 and 2015. I analysed the published materials between 2015 and 2017. The authors of the blogs favoured in the competition The Blog of 2014 (girls) and 2015 (boys) were in the 14 to 19 age group. As their personal data was available online (name, last name, age), the choice of blogs officially announced for competition didn't require confirmation of their authenticity. In another case, these data would have to be confirmed.

Blog research may be conducted by various methods, including direct contact with their authors (interviews, for example). Albeit the main point of my research was analysis of the visual and verbal data, I contacted randomly selected authors to find out more about the matters I was interested in. From an ethical point of view, it is crucial to get the author's permission to use their work in scientific research. In this case, the bloggers voluntarily applied for assessment in the competition. Thanks to this, their content was available to the public.

The world of teenagers in blogs – presentation of qualitative research results

The analysis of research material in relation to published posts gave me the basis for marking out the subject fields of multimedia stories. These were related not only to the person (their dreams, plans, successes, anxieties, and addictions) but also to the surrounding world (altruism, xenophobia, stereotypes, biases, media, and fame). In answer to the question: "What topics do teenagers choose in their multimedia stories?", I drew the following conclusions:

1. The blogs researched include multimedia biographies in which life stories twine with everyday reflections on life and social issues.

2. In the researched blogs, teenagers focus on their own problems and emotions though there were significant exceptions in topics about the problems of adolescence, relationships with others, and the search for happiness.

When it comes to video materials, teenage blogs present the following forms:

- **Video:** reviews of cosmetics and technological products

- **Guide:** instructions on how to deal with various life situations (meal preparation, styling, DIY – handmade items)

- **Auto-presentation films:** videos that display teenagers' interests and character features

- **Digital life maps:** (a.k.a. draw your life) – recordings where teenagers talk about their childhood memories (kindergarten, primary school)

The most popular type of multimedia story is one in which the author tells of their personal experiences. These stories usually revolve around significant events in life and are personally meaningful to the author. My research shows that teenagers describe every detail of their lives. Blogs are visual diaries, digital autobiographies. Teens talk about travel, school, and favourite books and movies. They write book recommendations and discuss current events. The girls like talking about feelings. They give advice to their peers. They want to even become a moral inspiration for others, to be a kind of coach. The boys show technology skills using green screens or playing games. They share photos, videos, and movies. Many blogs include personal stories or deal with life's adventures and challenges, and recovery (Sylvester, Greenidge, 2009, p. 284). As Alexios Brailas has explained, "digital storytelling in formal education allows students to become active producers of multimodal digital stories, while the way they consume stories made by others changes dramatically: students become digital-literate and content-critical about what is narrated in social media and presented as an unquestionable truth" (Brailas, 2017, p. 17-18).

In the case of visual data, photographs were shown of nature, relationships with animals, and culture (new media, leisure time, trips). Interesting topical areas featured photos of the teenagers' passions and hobbies (horse riding,

books, mountain trips) and self-portraits. These served auto-presentation purposes and became a showcase for the young people. In this case the main topic was their body (hairstyle, tattoos, sweatshirt logos). The boys showed their tattoos of important religious quotes and symbols. The girls presented their multimedia accessories such as smartphones and watches, which are signs of social status.

Clothing filled a symbolic role as well. Colourful sneakers, hats, and striped jeans create a vivid teenage look – that of a vagabond. The scenery where the pictures were taken emphasizes it too – old yards, streets, pavements and scuffed walls or graffiti in the background. Here the street space suggests the wilderness and jiggy freedom. The characters want to look casual so they can get close to their audience. Perhaps that is why they take pictures when sitting on piles of bricks and curbs. In the photos published by the authors there is a recurring pattern of travel and searching for one's life path. Both make a symbolic reference to adolescence.

As far as the teenagers' presentation is concerned, the authors of blogs show up as brave, communicative, and competent people in a specified field. In their presentations, self-promotion based on displaying positive traits of character such as diligence and discipline is very important. The authors of the researched blogs also presented themselves in a context of chosen social roles (student, volunteer, blogger). Both groups, girls and boys, showed several aspects of their lives characteristic for online exhibitionism. The teenagers revealed intimate details about their lives in order to form an emotional connection with their audiences. They also used exaggeration to endear the audience. As an example we can point out online competitions and awarding the winners. In the blogs researched, I noticed a strategy of self-irony through the use of multimedia techniques. The teenagers presented themselves as relaxed, spontaneous, and funny. They used different multimedia techniques (photo filters, for example) to display their image in grotesque-caricature contexts.

In answer to the question: „What forms of expression, means of communication, and multimedia techniques are present in teenage blogs?", I came to the following conclusions:

1. Teenage blogs include forms of expression such as mimical-kinesthetic, musical, artistic, photographic, and visual (video). In the case of minimal expression, there are scenic elements, whatever helps in self-creation.

2. The authors of the researched blogs published photos of handmade products such as earrings, common objects (stuffed toys, bags, lanterns), and colourful paintings.

3. The bloggers used several multimedia techniques, including collage, animation, and special effects in form of writings and transitions

4. in digital video editing.

The stories in the researched blogs displayed a collage theme, connecting words, music, and images in one piece. Moreover, the structure in their stories represents a development of elements known from narration in current TV and online content (commercials, music videos, TV shows). The bloggers referred to topics borrowed from pop culture texts. There were stories in the form of music videos, movie trailers, stand ups, and programmes such as reality shows.

The blogs have many common features on a compositional level. Typical elements are: 1) using multimedia and graphic text design, 2) publishing a series of photographs, and 3) using music and acoustic effects to comments on the events presented.

Important forms of expression were digital photographs and video recordings. The teenagers made their own movies in which they used effective transitions and various film editing techniques (freeze-frame, video speed-up, or putting one image over another) in order to enrich the narration. And so, the photos in sepia talk about events from the past or conceive seriousness and reflection whereas video speed-up shows the laps and changes occurring in the surroundings.

In an attempt to answer the question of what multimedia stories are being built in teenage blogs, I distinguished specific types of narration with regards to the style of reporting life events, author communication, and means of expression. The analysis of research materials enabled me to extract specific types of multimedia stories in the blogs. The authors of them produced:

- **Confessional stories** – reporting on personal life, revealing intimate details on one's affairs, narrating in a form of monologue and confession.

- **Contemplative stories** – focus on sharing one's experiences and thoughts of a philosophical nature, like recapturing thought-provoking stories.

- **Moralistic stories** – showing how to lead by example. The characteristics are educating, morals, and evoking real life stories to call for sympathy where second-person narration takes place.

- **Challenge stories** – maintained in a form of programmes such as reality shows. The characteristics are exerting short and catchy slogans, using provocation, irony, and sarcasm. The main function here is supplying entertainment to recipients by organizing competitions, challenges, and quizzes.

- **Motivational stories** – maintained in the style of a motivational trainer (language of success, second-person narration). The characteristic forms include persuading, urging to change behaviour, determining ways to achieving personal and professional satisfaction.

I was interested in not only what types of stories teenagers blog but also what meaning they wish to give them. It turns out that blogging plays an important role in adolescence. The authors of the researched blogs believe that they became braver and more communicative. Due to their blogging activity they stopped being anonymous. They managed to get to know interesting people. Their computer and multimedia skills improved. Blogging also contributed to developing passions such as photography and film editing.

The e-constructions I analysed in the teenagers' blogs are primarily stories about oneself, and to a lesser degree about surrounding reality. Referring to diary writing and metaphors, it is fair to say that the teenagers' blogs are like mirrors into which they can look every day. Selected narrations show that blogs may be not only a mirror but also a window to the world.

Summary and conclusions from the research

New media are an important part of teens' lives. A simple look through their digital photos or movies shows what they value most. It is a window into their souls and the moments they keep close to their hearts. Blogs show that young people want to share their stories and experiences with others. I believe that the technological revolution is changing the face of learning and giving everyone a voice. Making multimedia stories plays an important role in teenagers' lives. Furthermore, the activity: 1) teaches how to express an opinion and challenge others' thoughts; 2) assists in activity planning and setting specific goals; 3) increases one's level of contemplation; and 4) helps body acceptance during adolescence.

The content analysis of teenage blogs enabled me to achieve the aim set for this project. The cognitive objective assumed in the analysis and interpretation of the teenagers' multimedia stories is presented above. The practical aim of the research project was to pay attention to problems faced during adolescence, signalized by the teenagers themselves. The results may become valuable guidelines for pedagogical work and broaden the range of theoretical perspectives on the role of multimedia stories in the processes of learning and identity building by modern juveniles.

The research claims that blogs could be a mine of information for teachers on their students' development, interests, and problems. They supply information on how to support a young person. Here is an opportunity for teachers to help teenagers develop their talents in various life areas (culture, art, history, nature) and deepen their sensibilities in the surrounding world. Ruth Sylvester and Wendy-lou Greenidge (2009, p. 284) point out that "media literacy requires the composer of multiple texts to select graphics, moving images, narration, and music that complement the multimedia project".

Technology has given teachers many valuable tools to use in the classroom and created new possibilities of storytelling for the everyday computer user. Rebecca Mullen and Linda Wedwick (2008, p. 69) point out that "blogs can be used to create limitless, unique, and meaningful writing opportunities for students worldwide". Digital storytelling offers children more control of the learning experience. "The literate of the twenty-first century must be able to download, upload, rip, burn, chat, save, blog, Skype" (Mullen, Wedwick, 2008, p. 67). In our technological world, we need new types of skills, such as:

- Technology literacy – the ability to use computers and other technology to improve learning.

- Visual literacy – the ability to understand, produce, and communicate through visual images.

- Information literacy – the ability to find, evaluate, and synthesize information.

- Digital literacy – the ability to communicate with people to discuss issues, gather information, and seek help (Robin 2008, p. 224).

According to Prof Henry Jenkins (2008, online) "Today, the ability to navigate social networks, play games, or participate in online conversations affects the way young people present themselves to the world. By interacting with their virtual environment, children form opinions and concepts about the world".

It's important to shape a creative attitude towards the media. Dorota Siemieniecka (2015, p. 40) writes: „From pedagogical point of view, the most effective reception is deep and oriented, that leans on deliberate content choice included in media and ability to comprehensive and critical analysis. Such as reception requires emotional and intellectual engagement". Blogs are not only an important tool for interaction but may also play a therapeutic role that strengthens self-esteem. "It is also important that teachers learn effective ways to motivate their students to become more engaged in learning new content with the help of multimedia technologies" (Sylvester, Greenidge, 2009, p. 227).

Discovering individual talents or sharing forms of self-expression on blogs may help teenagers to believe in themselves more and open up to others. It allows them to increase their motivation, engagement, critical thinking, and technology skills. However, one should stay vigilant that blogging does not become an escape from reality and remains an additional form of uncovering one's potential.

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Adriana Górka – a graduate of psychology at the University of Lodz in Poland with clinical and rehabilitation specialization. Qualified mediator and negotiator and life coach with an ACSTH (Approved Coach Specific Training Hours) diploma. Also graduated Social Sexology at PUNO. She gained experience in Poland working with mentally ill and mentally challenged people. For years, she has been working with children and school youth, conducting psychoeducational workshops for youth and adults. Since 2015, as a researcher at PUNO, she coordinates postgraduate studies in Coaching and Applied Psychology and works with students. In May 2017 she was appointed the Head of the Applied Psychology Unit at PUNO, where she also became a PhD student in 2018. Her scientific interests include anxiety and loneliness. She is currently researching the level of loneliness resulting from emigration and its emotional consequences.

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Loneliness in the Times of Virtual Social Networks

Adriana Górka

Introduction

The technological development of the modern world in the first twenty years of the twenty-first century was rapid, which led to the improvement of work and communication. It definitely turned the world economy on. The world suddenly accelerated and at the same time seemed to become smaller. People all over the world can communicate with each other at any time, in both professional and private matters, where the only limitation is internet speed or time zone differences. In this way, a large part of business and private life has moved onto the Internet. Since then, life has split into online and off-line, and although society is getting better at online reality, the constant changes cause some people to feel lost or lonely in the off-line reality. People are social creatures and even though sometimes everyone needs silence or to be alone, humans need contact with other humans. People may like other people more or less, or do not need constant contact with them, but people can only function as an independent entity for a short

time. Therefore, deprived of contact with other people, they become more alienated, egocentric, deprived of positive emotional states. One of the main consequences of loneliness is depression, or even suicide attempts. Thus, the Internet has become salutary for people who are lonely and hungry for contact with others but hide behind their complexes, shyness, and introversion.

In modern society lives are fast-paced; we find less time for social meetings or contact with loved ones. Many more people live in large cities these days where a career that will lead to more money, self-satisfaction, and social promotion is important. Family life has taken a back seat. Young people graduate from high school, then university, and then do internships to reach a satisfactory level in their lives. The present generation of millennials starts their adult lives at least five years later than their parents' generation. It is good if they can reconcile this with creating relationships and friendships or starting a family. Sometimes they deliberately give these things up, but often they just don't have time for them. Unfortunately, with age, it is often more difficult to make new friendships or relationships. Childhood friendships often turn out to be the most enduring. Once broken, they may prove impossible to rebuild, and the years spent in a constant rush, in pursuit of a career, make it difficult to maintain old relationships or build new ones. A lonely person acquires new habits and loses the social skills they acquired earlier. Sometimes it seems almost impossible to build a relationship with another person when the last years have been spent in solitude.

Social media, although not able to offer physical proximity, has become a substitute for emotional closeness, a chance for contact when the other party is far away. Technological development has brought many positives that cannot be denied but, like everything else, it also has a dark side. The development of computers, the Internet, and thus social networking sites have weakened the quality of social contacts. People are so choked with the Internet that they spend more and more time there, completely or almost completely forgetting about the real world, the off-line world. It turns out that the Internet can satisfy many human needs, such as the need for belonging, closeness, contact with other people, and the desire to learn about a given topic. The social networking sites themselves have gained such widespread popularity that one can even talk about a real phenomenon. Today, almost everyone has a profile on at least one of them. For young people, it is a chance to watch others, get information, or just

be entertained. It is becoming easier to get the impression that today's young society cannot be bored, and that hanging out on the Internet kills boredom. For older people, the sites facilitate contacting people they lost contact a long time before, meeting new people, or belonging to groups with similar interests. And all this is very attractive and useful, but the too-frequent and long hours that participants spend on the Internet make them lose touch with reality.

Social networks, which are intended to unite people from different parts of the world, have resulted in the reduction of off-line contacts. There is no way that a day can be stretched so time is still the same, and by devoting a significant amount of it to online life, people have significantly less time for what happens outside of it. This could have far-reaching consequences. We can already observe a deepening corrosion in human relations. It is easier to hide behind a computer screen, where you can create your image, introduce yourself as you would like to be, than to make an effort and face the judgement of others. This can result in a withdrawal from social life, a low self-esteem, and even depression.

So is the internet, and hence social media, an ally or enemy of modern society? Is it degrading social relations and driving humanity into loneliness? Or is it the other way around – is it an indispensable ally and a salvation for those affected by loneliness?

History of social media development

The development of the Internet in the 1990s fuelled the mass emergence of social networks and the enormous interest in them. The first blog was launched by Swarthmore college student Justin Hall in the first half of the '90s. In 1995 classmates.com appeared, also popular in Poland and known as Nasza Klasa (Our Class). At the beginning of the 21st century, there was a rash of enormously popular social media, including MySpace, Tweeter, Instagram, and the most popular, created in 2004, Facebook. The great popularity of social networking sites is evidenced by the number of their users and the sums collected by their owners. In mid-2017, the number of Facebook users was almost 2 billion, of which 1.3 billion people used it daily. This, according to the Forbes ranking of 2018, placed Mark Zuckerberg in fifth place among the richest people in the world (spidersweb.com). Undoubtedly, the constantly emerging social networking sites have become great business

for their originators and have irretrievably revolutionized contact between people. People born in the era of digitization find it hard to imagine a world without computers, smartphones, and the Internet.

With the rise of the Internet in the United States, the first online dating sites emerged, moving from newspaper pages to the Internet. The first such portals were registered in the United States in 1994 and 1995. A year later, 16 of them were registered all over the United States (spidersweb.com). In the ensuing 20 years or so, their popularity has not faded; in contrast, new platforms are appearing. In the Western world, nearly everyone now has an account on at least one social networking site, and this does not only apply to the younger generation. Today, even members of the older generation have set up accounts on social networks. It is impossible to resist the impression that the values of modern societies have changed along with technological development. There is a belief that if you are not online, then you are not there at all. Observing the lives of some famous people, it is easy to see that they follow the principle that it does not matter what they write about you; what is important is that they write.

As it turns out, people love to watch the lives of others and at the same time show their best side. Nowadays it is more important to have than to be. But blindly believing in what is on the Internet can significantly affect mood and have a destructive impact, especially on the youngest participants of social networking sites whose self-esteem can be easily shaken. It is easy to forget that not all information contained therein is true.

What makes the Internet so attractive? – unlimited access to information and being able to contact anyone anywhere in the world, escape everyday problems, and kill boredom. In addition, social networks give us the opportunity to show ourselves as we want to be and allow us to observe the lives of others.

Research review

The results of research on the influence of the Internet and social networks on the quality of social relations are not clear. There are no uniform criteria that would clearly indicate abuse of and dependence on social networks. Some researchers point to the detrimental effect of network abuse. One of the first researchers to investigate the Internet and its impact on mental well-being was Robert Kraut and his colleagues (Kraut R. et al. 1985). They

showed that after just one year of using the Internet, increased levels of stress, the first symptoms of depression, and a sense of loneliness were observed. The negative impact of social networking sites on the younger generation is indicated by the research of **Pantic et al. and Lou and Yan**, published in 2012 under the title "Use of social networking sites by youth" (EU NET ADB research). They showed that spending too many hours on the Internet leads to disorders in social functioning, mood drops, and even depression. EU NET ABD research shows that almost 90% of aged 14–17 have at least one profile on a social networking site, usually Facebook and NK. The results show that adolescents who spend at least two hours a day on social networks show more dysfunction than people who spend less time.

Quantitative studies by Karaiskos and colleagues describe a patient who showed the characteristics of addiction, which she paid for by being fired due to too-long Internet time and the neglect of her professional duties. In addition, she was observed as suffering from insomnia and mild anxiety disorders (Karaiskos, Tzavellas, Balta, Paparrigopoulos, 2010).

However, research by Kraut E. et al., published in 2002, indicates that depressive symptoms noticed at the beginning of the experience with the Internet significantly weaken as skill in using the Internet increases (Kraut, et al. 2002). This confirms other research results published in 2001 by LaRose, Eastin, and Gregg. They also make the mental state dependent on the level of experience in using the Internet. Polish researchers Leszczyńska (2006) and Batorski (2004) also confirm the relationship between well-being and experience in using the Internet.

Mood's (2001) research indicated a reduction in the level of social loneliness but an increase in the level of emotional loneliness with an increase in time spent on social portals. As it turns out, time spent on social media has a different effect on people with different personality types. Extroverted people become happier and easily establish new contacts online as the time spent there increases, as opposed to introverts who become even more closed and lonelier the longer they stay online (Kraut, et al. 2002).

Loneliness is not the only reason why people log on to the internet and seek contact with others but it is such an important issue that it is impossible to ignore it. Society has never felt as lonely as it does now. A 2018 study conducted by Feniks, a Polish charity – in cooperation with NHS Lothian in Edinburgh showed that the suicide rate of men of Polish origin is almost twice as high as that of the native Scots. Considering that a huge percentage of Poles

currently live and work in exile, this problem must not be underestimated. Using the internet and social media is one of the ways to protect yourself from loneliness but it may not be enough.

The results of the research by Behrens et al. (2007) and Boase et al. (2006) were based on the fact that using the Internet results in a greater efficiency and speed of operation, and thus a better use of time. It also enables better and faster communication with more people. As it turned out, the use of the Internet and social support positively correlated with relationships in the family system. For people with well-developed social relationships outside the network, the frequent use of social media strengthens these ties. In contrast, for single people with no social support, using social portals often only deepen their loneliness.

Own research

A total of 272 people participated in the survey conducted in February and March 2020, of which 197 (72.43%) were women and the remaining 75 (27.57%) were men. The respondents were all adults, aged 18 and over. The largest percentage (43.91%) of the respondents were aged between 39 and 48, and the smallest percentage (6.64%) were aged 60 and over. The respondents were Poles living in Poland or in Great Britain. A small percentage of the respondents, 6.15%, lived in other European countries. Just over half of the respondents (50.94%) have a higher or postgraduate education. The smallest group have primary or lower secondary education – 1.5%. Most of the respondents (57.14%) were residents of large cities of 100,000 and above. The inhabitants of rural areas accounted for 8.88% of the respondents, small towns 12.36% of the respondents, and 21.62% were inhabitants of medium-sized cities with 10,000 to 100,000 inhabitants.

The study was conducted using a questionnaire consisting of 26 items. The first part consists of 15 questions about demographics and the frequency and reasons for using the Internet. The second part is the De Jong Gierveld scale for testing the sense of loneliness, containing 11 questions with a choice of 1 out of 5 answers.

Theses posed

Taking into account the increase in the level of loneliness in a modern, developed, global society, the study took into account the impact of the problem on Polish migrants in Great Britain compared to their compatriots living and working in their home country.

Considering previous studies and their divergent results, the following research theses were raised:

- Place of residence affects the level of loneliness. Inhabitants of large cities feel lonely more often than those living in small towns and villages.

- People who live in exile often feel more loneliness and the lack of relatives than people living in their homeland.

- People who are not in a relationship use social networks more often than those in a relationship.

Research results

The largest group of respondents, living in Great Britain and using the Internet every day or several times a day, were people aged 39–48 (42.59%) and 29–38 (33.33%). The least frequent use of the Internet was declared by people aged 60 and over (3.7% of the respondents). Surprisingly, young people aged 18–28 declaring daily use of the Internet accounted for only 7.41% of the research group.

The results among Poles living in their home country were similar. In this group, the most frequent users of the Internet were those between 39–48 years of age (39.29%) and those in the age group of 29–38 (30.36%). The smallest age group was people over 60 (5.36%). Similarly, in the youngest group, 18–28 years old, only 8.93% declared a daily use of the Internet.

The three most common reasons for using the internet are checking emails, messages, and social media. As it turns out, 83.27% of the respondents do this every day. The most numerous participants of social networking sites were the middle-aged, i.e., 39–48 years old (42.06%) while the least numerous were the elderly, aged 60 and over (5.61%).
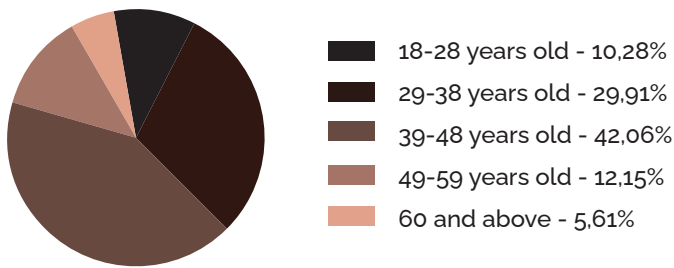
- **Graph 1.** Using social networking sites and the age of the respondents

When examining the marital status of people using the Internet, it was found that among young people aged 18–28, social networking sites are most often used by single people (36.36%) or those in informal relationships (45.45%), much less often those who are married (13.64%).
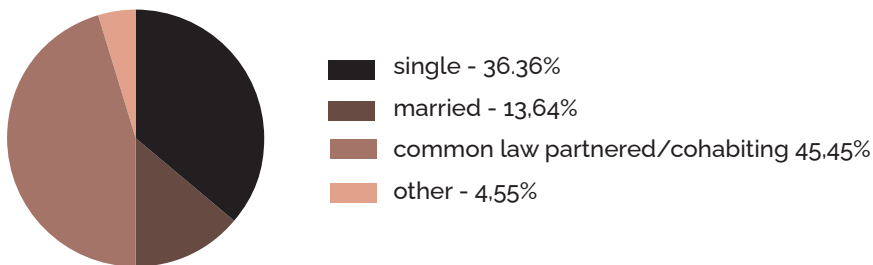
- **Graph 2.** Marital status of people using social networking sites in the age group of 18–28

Among the 29–38-year-olds, most social media users are married couples (39.73%) and those in common-law partnerships (32.88%). People who are not in a relationship use social media much less often (17.81%). People who were separated (1.37%), and then those who were divorced (8.22%) used social media the least.

single - 17,81%
married - 39,37%
common law parnered/cohabiting - 32,88%
divorced - 8,22%
separated - 1,37%
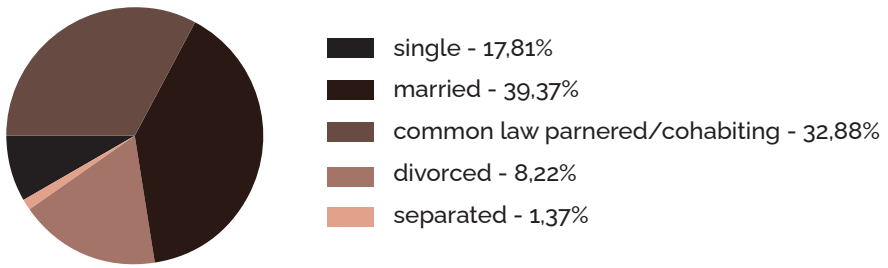
- **Graph 3.** Marital status of people using social networking sites in the 29–38 age group

Among 39–48-year-olds, most participants in social networking sites were married – 60.95% of the respondents, while the second, much smaller, group were in informal relationships (18.1%), followed by single people (10.48%) and the divorced (8%).

single - 10.48%
common law parnered/cohabiting - 18,1%
widow/widower - 1,9%
married - 60,95%
divorced - 8%
other- 1%
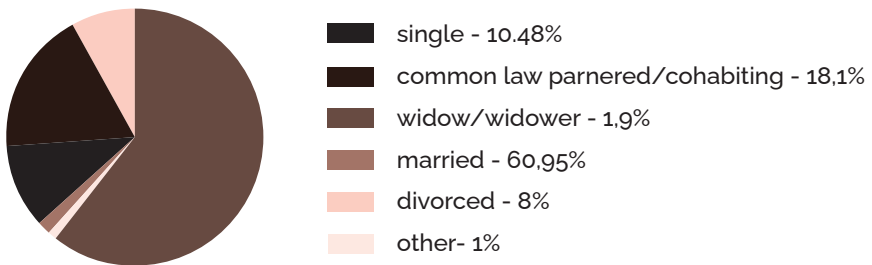
- **Graph 4.** Marital status of people using social networking sites in the 39–48 age group

The next group consisted of 49–58-year-olds. Among them, the users of social networks are mainly married, constituting 44.44% of the respondents, as well as people in informal relationships (25.93%) and divorced (18.52%).

single - 3,7%

married - 44,44%

common law parnered,cohabiting - 25,93%

divorced - 18,52%

separated - 7,41%
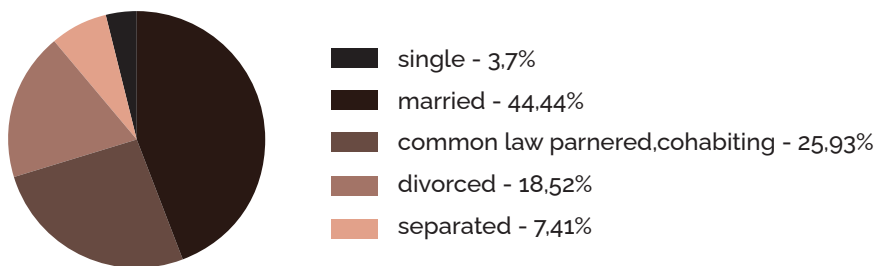
- **Graph 5.** Marital status of people using social networking sites in the 49–58 age group

The oldest users of social media, i.e., those aged 60 and over, are mainly married, constituting 33.33% of the respondents, widowers constituting 26.67% of the respondents, with the divorced constituting 20% of this age group.

single - 13,33%

married - 39,37%

common law parnered/cohabiting - 6,67%

separated - 20,00%

widow/widower - 26,67
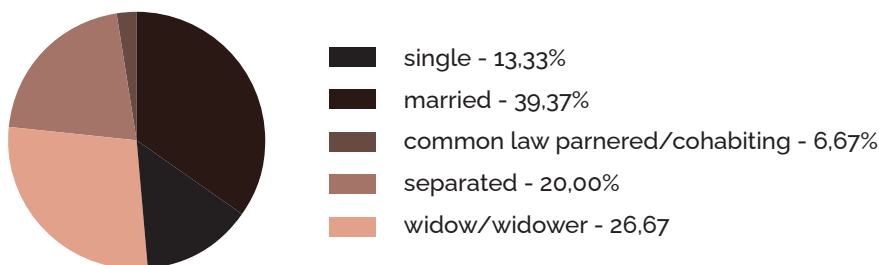
- **Graph 6.** Marital status of people using social networking sites aged 60 and over

The influence of the size of the place of residence on the feeling of emptiness showed the following dependencies. The higher the feeling of emptiness in the respondents, the greater was their place of residence. The least feeling of loneliness was declared by residents of small towns, up to 10,000 inhabitants (11.43%) and inhabitants of rural areas (12.38%), while the inhabitants of large metropolises, those above 1 million inhabitants, constituted 32.29% of the respondents.

32,29%

21,9%

20%

12,38%

11,43%

| rural areas | town up to 10,000 | city up to 100,000 | city up to 1 million | city above 1 million |
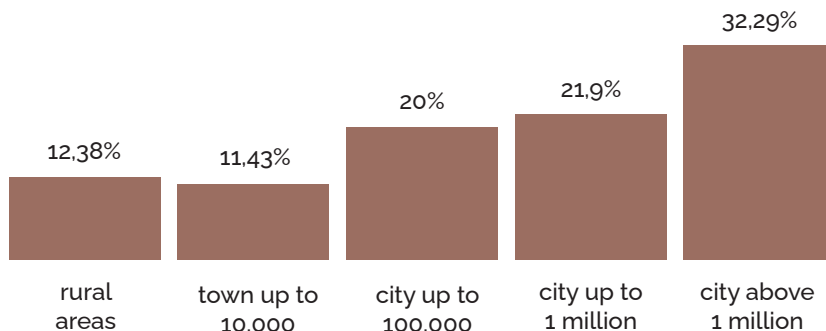
- **Graph 7.** Size of the place of residence and experiencing general emptiness

It turns out that among the respondents living in Poland, the lack of a close friend was declared by 30% of 29–38-year-olds, the same number of 39–48-year-olds, and 15% of 18–28-year-olds and 49–59-year-olds. The smallest percentage of people who feel the lack of a close friend are aged 60 and over.

Among the Polish community living in the UK, those who most often feel the lack of a close friend are the 29–38-year-olds, accounting for 41.67%, and then the 38–49-year-olds (33.33%).

| 18-28 years old | 29-38 years old | 39-48 years old | 49-59 years old | 60 and above |
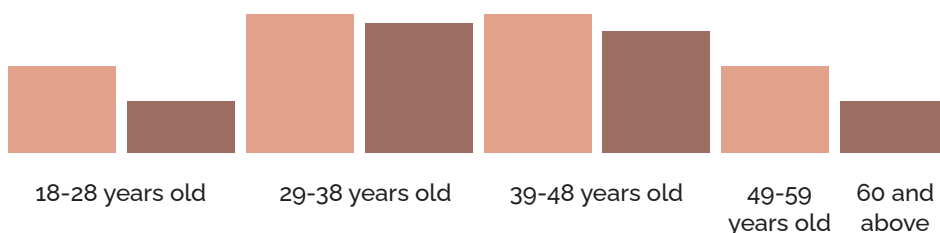
- **Graph 8.** The level of loneliness among Poles living in Poland and Poles living in Great Britain

Comparing the level of **feeling low** in women and men, it turns out that women feel slightly rejected more often than men. To the question: Do I often feel rejected? 14.45% of women and 12.68% of men answered yes or definitely yes. However, there was also a greater percentage of women (69.45%) who gave a negative answer to the question compared to men (60.57%).

69,45%

60,57%

14,45%

12,68%

women
men

definitely yes/ yes
no/ definitely no
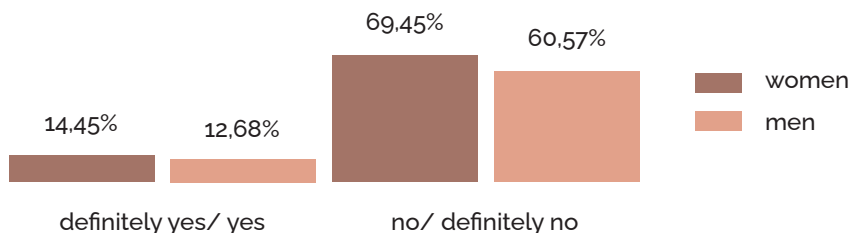
- **Graph 9.** Level of rejection in women and men

Final conclusions

Summarizing the results of the analysed studies in conjunction with my own research, the following conclusions were drawn.

Nowadays, most people (in Poland and Great Britain) use the Internet every day. The most frequent Internet users, regardless of their place of residence, are the young and the middle-aged. The reasons for using the Internet can be very different, such as checking emails, messages, work, boredom, and more. The use of social networks is also one of the leading reasons. They are most often used by people between 29 and 48 years old. Although they are not the dominant age group among social media participants, 5.61% of respondents in the oldest age group also use social networks.

The size of the place of residence affects the feeling of emptiness and loneliness. People in small towns and villages feel the least lonely. They spend less time working and commuting and are more in touch with friends and family who often live locally. For those living in big cities, a large part of the day is consumed by work and commuting. Young people willingly and often move to large metropolises in search of work and a career. This, however, translates into a lack of free time and limited contacts with relatives. Those from large cities with over 1 million inhabitants feel the loneliest. Paradoxically, the greater the population density, the fewer the social contacts and the greater the feeling of loneliness.

When examining the marital status of people using the Internet, most people using social networking sites among the youngest respondents were single or in informal relationships. The slightly older respondents were mainly in informal relationships or married. Among the 40-year-olds, the users of social networks were mainly in informal relationships or single. Slightly older people,

over 50, were mainly in informal relationships or divorced. In the oldest group of respondents, social media users are mainly widowers or divorcees. A large percentage of people using the Internet are people in informal relationships, divorcees, and widowers. This indicates that for this group, having an account on a social networking site is a form of seeking contact with others when they feel lonely.

Among both the inhabitants of Poland and those in exile, the lack of a close friend was most often declared by people aged 29–38 and those aged 39–48. It would seem that these age groups would have families and children around them. On the positive side, it is not the oldest respondents who feel the most alone. Surprisingly, people living in Poland complained about the lack of a friend a bit more often, which indicates a good level of acculturation of Poles living in Great Britain. This did not confirm the thesis that Poles living in exile feel lonelier than Poles living in their home country.

People looking for contact with others spend more of their time on social networks. The frequency depends mainly on age and marital status. As it turns out, the feeling of loneliness is not determined by the country of residence but by the size of the place of residence, which is confirmed by some of the themes presented in the study.

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Homesickness in Relation to Digital Technologies Among Polish Families in London During the Pandemic

Urszula Walczak

Introduction

The coronavirus (COVID-19) pandemic declared by the World Health Organization caused many negative phenomena, conflicts, and global crises and destabilized the existing political, economic, social, and ecological systems. It also led to changes in people's ways of thinking and behaviours in public spaces, increasing the risk of further social atomization. The pandemic and the associated events induced instability in all aspects of human existence. People lost existential security, which caused restlessness, sadness, anger, exhaustion, boredom, and loneliness. They started experiencing more anxiety and depression. The presence of such negative emotions indicates that the pandemic strongly affected psychological and emotional life (The trauma of the coronavirus pandemic among Kraków inhabitants 2020). It forced social isolation, which results in difficulties in building new social relationships, maintaining the existing

ones, and community building (COVID-19, 2020). The concept of cultural trauma by Piotr Sztompka describes the current situation in the world well. According to Sztompka, cultural trauma can affect three areas of human life. It has an impact on the biological area (demographical), which presents itself in the form of biological degradation – more illnesses, mental disorders, hunger, and mortality, and a decrease in reproduction. The trauma can also affect the social structure, which results in damaging or breaking existing relationships and overturning the current hierarchy. The trauma also causes the distortion of a given culture by affecting the cultural tissue of the society (Sztompka, 2000, p. 28). In consequence, people may experience nostalgia, described as a return to the past and a longing for the days gone by. In fact, nostalgia is a common reaction to suffering and plays an adaptive role, which helps us to emotionally survive circumstances like the ones we find ourselves in now (Using nostalgia to cope with COVID 2020).

When the perception of the link between the past and the present is distorted by the pandemic, nostalgia can counterbalance the distortion by emphasizing the continuity of life. Pleasant memories and significant experiences establish a link with the past and strengthen peoples' existential sphere. The feeling of nostalgia among Polish families in London helps alleviate or combat "the existential threat", enabling them to return to important experiences from the past, which strengthens the perception of their meaning in the present (Routledge 2016). Many Polish families use digital technologies, which help counteract the disruptions caused by the pandemic. Information technologies enable contact with relatives, allow for nostalgic memories, and help stressed families cope with the present. They tend to alleviate nostalgia with a pleasant dose of dopamine (Why the pandemic has made us so nostalgic for nostalgia, 2020). Emigrants also experience an increase in positive emotional states, family bonds, social bonds, and a sense of meaning of life and self-esteem. On one hand, nostalgia in relation to digital technologies promotes positive emotional states among Polish families in London in the pandemic. On the other hand, it controls the negative emotional states and fights loneliness, granting access to pleasant experiences and memories from the past. The richer the past of a family, the stronger the nostalgia they experience.
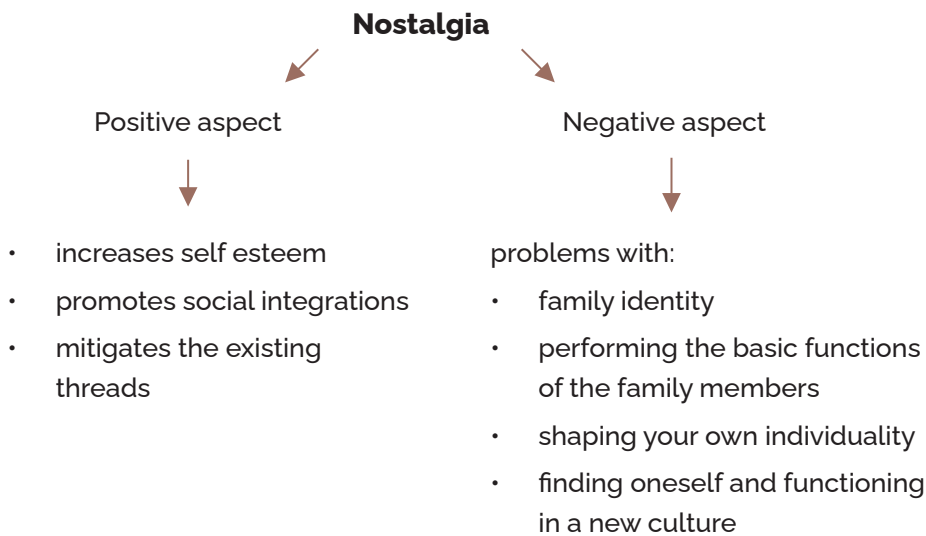
Nostalgia of Polish families in London

The modern world is undergoing dynamic socio-cultural, economic, and technological changes, which means that the nostalgia among Polish families residing in London is important and valid. Regarded as a disease until not long ago, nostalgia is currently considered an important psychological resource which allows people to return to their memories. The world "nostalgia" derives from two Greek words: *nostos* meaning "homecoming" and *algia* meaning "pain". Nostalgia is therefore literally an affliction caused by constant homesickness. It is a strong feeling of missing one's homeland, longing for something from the past which we remember or imagine in our dreams. The term "nostalgia" was first used in the 17th century by a Swiss doctor, Johannes Hofer, who described it as an affliction caused by a desire to return to one's homeland. He wanted to name the adverse symptoms presented by the Swiss servants of European monarchs (Hofer, 1934, pp. 376–391).

On the other hand, Sedikides and his coworkers claim that nostalgia is a sentimental longing for the past that "builds a bridge between one's past and present self. A longing for something gone by amplifies a positive perception of that period, hence the feeling of continuity and a meaning in life". It is a self-existent, ambivalent (Sedikides, Wildschut, Arndt, Routledge 2008), and social emotion, as most memories have a social context. It is a good old time (Davis, 1979) that floods nostalgic memories with people and places from the past.

The massive emigration of Poles to Great Britain began when Poland joined the European Union. According to the Office of National Statistics, there are currently about one million Poles living in the UK (Office for National Statistics 2017). Mariola Janeta's research among Poles who arrived in London after 1 May 2004 showed that the most often chosen location was north London. Hammersmith and Fulham, Ealing, Acton, Greenford, and Harrow were also very popular, and for this reason they are commonly called Polish London (Janeta, 2012, pp. 5–26).

The homesickness experienced by emigrants, the longing for something that happened in the past, is essential for adjusting to their new environment. Family, understood as an educational unit, with a defined relationship between parents and children, where the parental role concentrates on the realization of norms and values recognized and supported by the parents (Szczepański, 1972, pp. 203–204), plays an important role in the nostalgia

experienced by its members. A lack of the ability to acculturate, personality factors, and the living conditions in exile often weaken the meaning of family, or even cause its destruction. Nostalgia can lead to issues with family identity and the fulfillment of its basic functions. As a result of nostalgia, family members have problems shaping their own distinctness and independence and experience difficulties in their day-to-day existence or finding their place in the host country's culture. Nostalgia also has a positive influence as it increases self-esteem, encourages the social integration of Polish emigrants with British culture, and mitigates the existing threats (Sedikides, Wildschut, Arnd, and Routledge, 2008b, p. 304–307). As a result, a strategy is formed, directed at changing emotions, thoughts, and attitudes, which distracts from danger.

Nostalgia

Positive aspect   Negative aspect

- increases self esteem
- promotes social integrations
- mitigates the existing threads

problems with:
- family identity
- performing the basic functions of the family members
- shaping your own individuality
- finding oneself and functioning in a new culture

- **Figure 1.** Nostalgia – longing for the homeland, for the family home
  Source: Own study based on Sedikides, Wildschut, Arnd, and Routledge, 2008 (b)

Information and communication technologies in an information society

The increasing prevalence, accessibility, and mobility of information and communication technologies and the miniaturization of equipment mean that Poles in exile have a new form of communication with those they left behind in their home country – the Internet on computers, laptops, tablets, smartphones, and other devices (Tomaszewska, 2013, p. 23–37). Information and communication technologies collect, process, and transfer information in electronic form, using digital techniques and all sorts of electronic communication tools. These include tools to search, collect, save, and store information as well as those used for processing, sending, retrieving, presenting: laptops, tablets, telephones, smartphones, and data storage media (Berbeka, Borodako, 2017, p. 5–9). Information and communication technologies have a prominent place in the modern world, playing an important role in establishing and sustaining social interactions (GUS 2012). They indicate the importance of the information society (IS), a new type of society formed in countries where modern telecommunication technologies develop at a very fast pace (Minkowski, Olszewski, 2006, p. 125). Both economically developed and developing countries are transforming into information societies (Moore, 1997, p. 271–272). The term emerged in Europe in 1978; however, the year 1994 is considered the symbolic date of its formation in the European Union (Europe and the Global Information Society 1994). It concerns social, economic, or political phenomena and processes (Nowina-Konopka, 2014, p. 49). It is currently at a development stage where the achieved level of progress of information and communication technologies provides, among others, the technical and educational conditions necessary for the common usage of information in production and services. It provides common access to, and the ability to use, information technologies in social and professional activities to improve qualifications and expand knowledge. It allows access to cultural heritage, health protection, and other services that improve living standards (Information society in figures, 2013, p. 272). The information society is characterized by the ability to prepare the information systems and use them. It is able to use telecommunication services to send and remotely process information (Nowina-Konopka, 2006).

It is important to note that the current civilization transformation is impacting the quality of functioning of family and the changes that

it is undergoing. Modern digital technologies based on the information and communication technologies allow the development and progress of humankind. They allow Polish families in London to stay in touch with loved ones in their home country, where nostalgia may then prevent the feeling of loneliness and allow them to better cope with the problems of emigration. Through their fulfillment of particular and diversified human needs, information and communication technologies impact the quality of life, both objectively and subjectively. Objectively, quality of life concerns living standards measured by objective variables. Subjectively, quality of life is identified with the satisfaction derived from various aspects of life. In this approach, quality of life is the individual's welfare and their satisfaction or dissatisfaction with their existence in a given community (Sienkiewicz, Nowak, 2008, p. 333).

Technologies may concern not only digital resources but also personal resources. A human being, like a hard drive, holds memories from the past, which are created, supported, and cultivated in a specific space and shared through information and communication technologies. Nostalgia in relation to digital technologies may constitute a positive affect repository, which is an exploration of the content and nostalgic relations triggers, as well as an empirical journey to its affective, self-regard, and social functions (Wildschut, Sedikides, Arndt, Routledge, 2006, p. 975–993). The positive affect repository may then refer to a place, London in this case, where Polish families store the resources, skills, needs, or emotional states they experience through digital technologies (information and communication technologies). The positive expression of these families' emotions presents itself through joyful experiences, positive self-esteem, social relations, meaning of life, or sense of security. It prevents loneliness, invokes creativity, increases optimism, and facilitates continuity between the past and the present (Sedikides, Wildschut, Arnd, Routledge, 2008 b, p. 304–307). Nostalgia, therefore, generates positive emotions and constitutes a joyful experience, which invokes a feeling of elation (Kaplan, 1987, p. 465).

Nostalgia

- a joyfull experience
- increases positive self-esteem
- strenghtens social bonds
- strenghtens the sence of meaning in live
- creates a sense of safety
- loved ones become part of the present for a moment
- counreacts loneliness
- stimulates creativity
- increases optimism
- facilitates continuity between the past and the present

Digital technologies
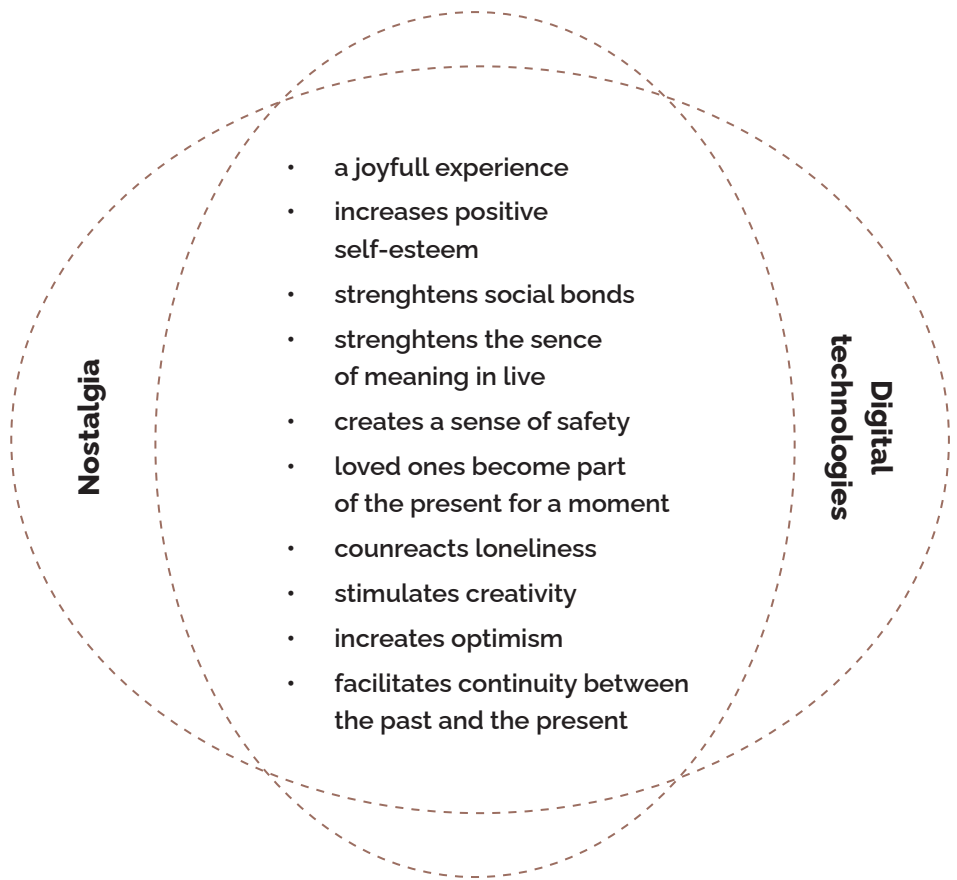
- **Graphics 1.** Repository of positive affect.

  Source: Own study based on Sedikides, Wildschut, Arnd, Routledge, 2008 (b)

Issues and results of own research

In May and June 2020, research was conducted which sought to investigate the relationship between the perceived level of nostalgia in Polish families in London and their usage of digital technologies in the current pandemic situation. The assignment was to check if members of Polish families yearn for their home country in the situation of the COVID-19 pandemic. The following research questions were set: Did the pandemic impact the level of nostalgia among Polish families in London and how? How did the Polish families in London's homesickness affect the usage of digital technologies? The sample was three Polish families based in London. The age range was 40–44 for women and 43–50 for men. All sampled women hold a degree; the sampled men have different levels of education: from vocational training through secondary education to a degree. Two women have lived in the UK since before Poland joined the European Union – seventeen years in London; one woman has lived in the UK since Poland joined the European Union – ten years in London. All of the male participants moved to the UK before Poland joined the European Union – seventeen years in London. Two families identify with the Polish community and keep up to date with English culture. The third family uphold their own national identity and limit their contact with British culture. All respondents are employed permanently and undertake voluntary work. Their level of English varies from basic through intermediate to advanced.

The research consisted of three parts. The first part was a questionnaire with sixteen open questions. Additionally, it was possible for the respondent to write a nostalgic narrative. The second part contained The Southampton Nostalgia Scale by Routledge C., Arndt J., Sedikides C., and Woldschult from the University of Southampton in 2008. The third part asked for demographic data. The questionnaire was distributed online using CAWI (Computer-Assisted Web Interview) to provide anonymity and safety regarding restrictions due to the pandemic. The respondents were informed of the research purpose and assured of confidentiality.

Table 1.

What are your feelings in the current situation of the coronavirus pandemic?

Coronavirus		
feelings	negative:	uncertainty, depression, fear, fear for the health of loved ones in London and in Poland, fear for the family, fear of losing financial stability, fear of losing a job, job insecurity, uncertain sense of safety, uncertain about the future of my family, fear of me and my family getting infected
	positive:	peace, quiet, contentment
	other:	encourage reflection on life, change priorities in life, mobilize to life changes

Source: Study based on own research

In the pandemic, the respondents pointed mostly at negative emotions related to anxiousness, fear of becoming infected, concern for the health of their loved ones both in London and in Poland, and fear of losing their job and financial stability. They mentioned despondency, a lack of a sense of security, and uncertainty of the future holds for their family. However, they also noted tranquillity, peace, and satisfaction with the prevailing situation, and mentioned reflecting on life, changing priorities, and mobilizing for life changes.

Table 2.

What feelings do you have when you think about your home country?

Longing for the homeland	
What feelings do you have at the thought of your home country?	longing, sadness, regret, peace, nostalgia, satisfaction, joy, and powerlessness in terms of direct contact with loved ones in the current situation
Who or what do you miss?	nature, family, family home, places close to me, mother's food, meetings with friends, fishing, mushroom picking, space and nature, friends, that time, life in Poland, childhood places, parents, home in the mountains, family trips to the Polish seaside, barbecues with friends
During what situations do you miss your close ones in your country?	Christmas, Easter, family celebrations, birthdays of family members, state celebrations, free time

Source: Study based on own research

Thoughts about their home country evoked yearning, sadness, regret, and hopelessness as regards direct contact with their loved ones in Poland during the pandemic. The respondents also noted peace, joy, contentment, and a feeling of nostalgia. They mostly missed their families, parents, and grandparents as well as their dear places such as their family home and a house in the mountains; they also missed the wildlife, tranquillity, mum's cooking, time spent mushroom picking, fishing, barbecuing, friends and holidays with family members at the Polish seaside. Homesickness was particularly perceived during holiday seasons, family occasions, national celebrations, and during their free time.

Table 3.

What do you understand by the term "nostalgia"?

"Nostalgia"	
What do you understand by the concept of "nostalgia"?	longing for someone, for something, for the family, for the homeland, for something nice, for parents, siblings, grandparents, and a family home as well as regret, reflection, stopping for a moment in time and returning to the past
What memories from the past make you feel nostalgic?	childhood, carefree childhood time, tastes of childhood, courtyard full of children, summer camps, times of youth, school-high school time, music of the youth period, joint trips with parents on vacation, meetings with old friends, time spent with grandparents, camping with friends
What feelings arise when you think about nostalgia?	happiness, contentment, euphoria, tears of happiness, sadness, regret, depression, sentiment for the past
How often do you experience feelings of nostalgia?	depending on the circumstances, but it happens to me even once a week, several times a week, once a month, several times a month, I don't even know how many times

Source: Study based on own research

The respondents claimed that nostalgia is longing for someone or something, for family (parents, siblings, grandparents), for the homeland, for something nice, for their family home. They pointed out that it was also sorrow, some reflection, and freezing time for a moment to return to the past. Memories that evoked nostalgia in the respondents were related to their childhood when they happily played outside in a courtyard full of children or went to summer camps. These memories also concerned the time

of youth, school years, music from their youth, holidays with parents, meetings with old friends, time spent with grandparents, camping with friends. Along with nostalgia, they experienced joy, contentment, and happiness but also became emotional, sad, and regretful, yearning for the times gone by. The respondents experienced nostalgia – depending on circumstances – once a week, a few times a week, several times a month; some found it difficult to tell how often.

Table 4.

What do you understand by the term "digital technologies" (information and communication)?

Digital technologies (information and communication)	
What do you understand by the concept of "digital technologies"?	data transfer, better developed and programmed electronic equipment enabling mutual communication, the possibility of interpersonal contact through various digital communicators, digital communication with others, quick contact using digital devices
What devices did you use before the pandemic? How often? How long?	**telephone, computer, laptop** daily (several times a day), every other day, several times a week, several times a month from approx. 15 minutes to 1.5 hours
What devices do you use during the pandemic? How often? How long?	**telephone, computer, laptop** daily (several times a day), every other day, several times a week, several times a month from approx. 15 minutes to 1.5 hours

Source: Study based on own research

According to the respondents, digital technologies mean data transfer. They are also advanced electronic devices which allow communication with others. Additionally, they offer the possibility to contact others through various digital communicators, which makes it quicker and easier to make a connection and stay in touch with others regardless of their place of residence.

Participants used the same communication tools to contact their families in Poland both before and during the pandemic. These included a telephone, computer, and a laptop. They indicated the same amount of time spent using the devices both before and during the pandemic. Some of them used the devices several times a day, every other day, a few times a week, or a few times a month. They talked from about 15 mins to 1.5 hrs.

Table 5.

What benefits do you see from using digital technologies in relation to the nostalgia you feel?

Digital (information and communication) technologies – nostalgia

Benefits of using digital technologies in relation to the perceived nostalgia	closeness with family, participation in the current life of parents who are in Poland, maintaining contact with family and friends in Poland, minimizing the longing for people in Poland
Benefits of using digital technologies by children in relation to their relatives in Poland	close relationships with grandparents, grandchildren participate in the life of their grandparents on an ongoing basis, share their joys and sorrows with their grandparents, talk about their experiences and plans, practise and develop the skills of speaking Polish

Source: Study based on own research

The benefits of using digital technologies in relation to nostalgia include closeness and maintaining contact with family and friends in Poland and participating in their parents' lives. Participants also indicated a reduction in the longing for those living in Poland. They also mentioned the benefits of their children using a variety of information and communication technologies to contact their loved ones in Poland. They listed, first, the ability to maintain a close relationship with grandparents, participating in their grandparents' lives, and communicating with them in Polish, which they deemed very important in the context of developing the ability to communicate in their native language. The Southampton Nostalgia Scale (by Routledge, Arndt, Sedikides, Woldschult) was used in the research. The scale consists of seven questions relating to the feeling of nostalgia, nostalgic experiences, tendency for nostalgia, and its frequency. Respondents gave answers based on a scale from 1 to 7, where 1 meant 'Not at all' and 7 meant 'Very much', to the following questions: 1. How valuable is nostalgia for you? 2. How important is it for you to bring to mind nostalgic experiences? 3. How significant is it for you to feel nostalgic? and 4. How prone are you to feeling nostalgic?

Respondents gave answers based on a scale from 1 to 7, where 1 meant 'Very rarely' and 7 meant 'Very frequently', to the questions: 5. How often do you experience nostalgia? 6. Generally speaking, how often do you bring to mind nostalgic experience? A chart created with information based on the answers indicates that nostalgia is more important for women than men. Women pay attention to the nostalgic experiences much more frequently than their partners. Women are also more inclined to feel nostalgic than men and invoke nostalgic experiences more often than their spouses.
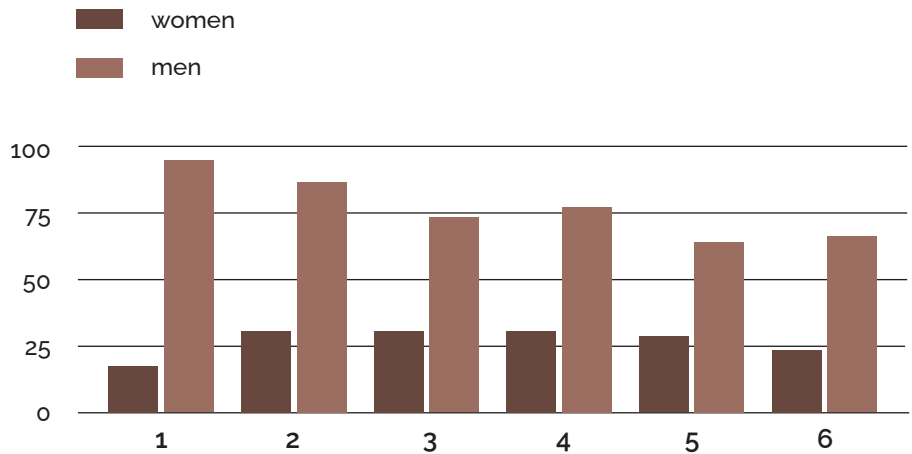
- **Chart 1.** Analysis of the respondents' answers
Source: Study based on own research

For the last question: 7. Specifically, how often do you bring to mind nostalgic experiences?, the respondents were asked to choose one of the following seven options: At least once a day, Three to four times a week, Approximately twice a week, Approximately once a week, Once or twice a month, Once every couple of months, Once or twice a year. The men and women gave identical answers: Approximately twice a week, Once or twice a month, Once every couple of months.

Conclusion

Migration is seldom a solo project and often concerns whole families and circles of friends. Networks linking migrants with their place of origin are crucial in facilitating and sustaining migratory flows. For migrants, maintaining strong links with home may be more important than establishing close relationships in the host country (Recent Polish migrants in London: Social networks, transience and settlement, p. 3). The support received from loved ones in the home country forms an essential part in the strategy of acculturation of Polish families in London. Most of them maintain regular contact with family and friends in Poland through digital technologies.

This kind of remote individual emotional support (Baldassar, 2007, pp. 275–297) often invokes regret, sadness, and yearning for home and loved ones left in Poland, but also joy at the thought of the past and nice moments from childhood or youth.

People leave their home country for various reasons, which are essential in the context of the ability to cope with the emotions related to emigration. The level of ambivalent feelings about emigration is affected by the person's psychological condition and their ability to adapt to the new environment. The current COVID-19 pandemic forced social distancing and limited direct contact with other human beings. The lockdown imposed by the British government may have a negative impact on psychological and physiological aspects of people's lives. A human being deprived of functioning in a social group experiences anxiety, loneliness, or even depression. Modern information and communication technologies play an essential part in providing constant contact with loved ones. Apart from normal telephone conversations, there is contact through writing messages, talking over various chats, including those allowing an audio and video connection on top of messaging, and sending photos and videos. Thanks to that, the distance between Polish families in London and their loved ones in Poland has become less. Even though modern information and communication technologies cannot replace direct contact, they help alleviate the symptoms of nostalgia.

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Why Inner-Direction Could be the Solution for Technological Complexity and Informational Noise in Education in the Globalized and Multicultural World

Leszek Kulaszewicz

Introduction

Most modern narratives of education seem to reinforce the constant new challenges, difficulties, and even threats rapid political, social, and cultural changes bring. Gary Thomas, when writing a summary of education, stated (…) *For as long as I can remember, we have been on the threshold of a revolution in schooling. The critiques I have just reviewed together with the advances in access to knowledge brought by information technology combined to convince many people that school, as an institution, was dying* (Thomas 2013, p. 116).

Fifty years earlier, Gilbert Highet started his book about teaching with the sentence (…) *It is difficult to write a book on the art of teaching, because the subject is constantly changing. There are different ways of teaching in different countries of the world, at any one time. Methods in any one country alter every generation or so, as the structure, and ideals of society alter* (Highet, 1963, p. 3)

This paper is a brief contribution to the discussion, and the intention of the author is to be more solution-oriented than descriptive. It critically evaluates the effect of the ongoing phenomena of globalization and multiculturalism on education.

First I will show a relationship between learning and teaching and how it marks the boundaries of education. Then I will attempt to illustrate the challenges multiculturalism and globalization create and will propose inner-direction as a solution.

Learning

Life is about learning, from the very beginning to the very end. Our successes, failures, fears, decisions, and desires are deeply related to it. Research shows that education, not income, is the best predictor of a long life (Lutz, Kebede, 2018).

It is probably fair to say that there is no generally accepted definition of learning. However, many of the crucial aspects of it can be understood by saying that it is *a relatively permanent change in behaviour as a consequence of experience* (Haselgrove, 2016, p. 2).

Learning is a process where one thing comes after the other, so time is a significant factor. By tomorrow my memory will be storing and manipulating a different number of reflections of past experiences. It can be metaphorically acknowledged that every day I become someone else and I will respond in a different way to the same event.

Incorporating and emphasizing behaviour into the description is also important as behaviour is followed by biological and mental and spiritual adjustments so a "new human" is born. To clearly differentiate this cycle from that in the animal world, it is serviceable to go inside and point to the decision-making process part of it; therefore the behaviour is intentional. When there is an intention, there is desire, which creates the tension of awaiting an environmental outcome.

Learning is often compared to a moor, where there is space for unpredictable, incidental, and uncontrolled growth. Education is more like a journey.

Education

Using the logic in figure 1, the education process, which needs to be predefined and set as a target, starts from Human B and then it approaches the presence – Human A with a plan, tools, and the intention to create Human B out of Human A. That way, education becomes a journey more than a moor because the destination is defined before the process starts.
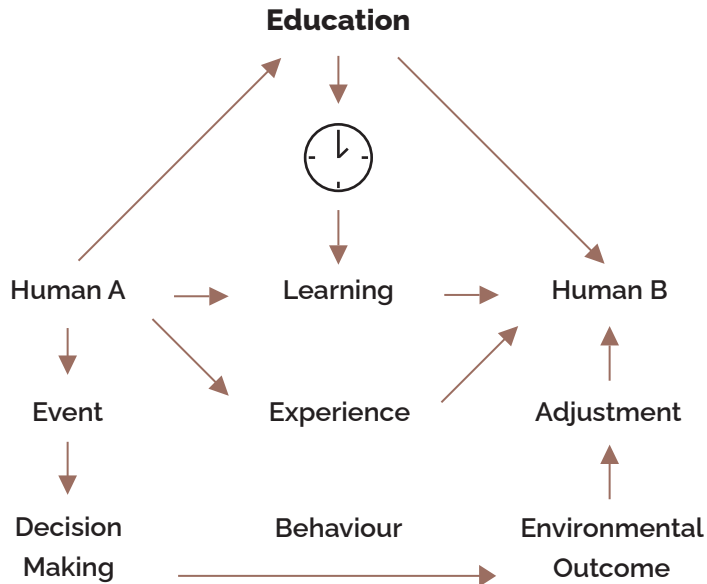
Education

- **Figure 1.** Learning and education
  Source: Graph made by the author

Schools are specialized institutions built nationally for the purpose of education, but it should be remembered that education happens in many forms of communication: parents explaining ideals to their children, friends talking and sharing ideas, people demonstrating skills to each other, skilled craftsfolk apprenticing new colleagues to a trade. Education is semantically broad and obvious, but for the sake of the precision needed in the final conclusions it is practical to list the four elements that transform a learner into a student: targets, content, methods, and teacher (Peterson, 1990).

D. W. Livingstone (2001) suggests a classification of types of education characterized by the teacher and the nature of external guidance received by students: 1) f*ormal education* occurs when a teacher has the authority

to fully conduct the introduction of a curriculum taken from a pre-established body of knowledge, 2) n*on-formal education* (further education) occurs when learners go beyond the institution but still with a teacher who assists their self-determined interests, 3) *informal education* (training), which means any other education without the direct reliance on a teacher or an externally-organized curriculum.

In 2001 Livingstone noticed and expressed the difficulties researchers have in trying to create typologies of education as drawing boundaries between types of learning requires reconciling at least two different knowledge traditions: rational (scientific) and practical (Livingstone 2001). Now, twenty years later, the boundaries are even more vague and less definable for the reasons drawn later in this paper.

Multiculturalism (Interculturalism)

Multiculturalism entered the public discourse in the late 1960s when Australia and Canada started to openly support the concept, providing important clues why and how to embrace the relatively new reality. Immigrants were encouraged to integrate rather than assimilate. Integration simply meant cultural diversity coupled with the equality of opportunities in an atmosphere of mutual tolerance.

There are many types, degrees, and definitions of multiculturalism even if we limit it to West Europe (Rattansi, 2011, pp. 11–41), but it is fair to say that societies that host several nationalities and ethnicities can live together free from ethnic and religious conflict. Canada, for example, manages to allow people of different nationalities to live peacefully side by side. One Canadian definition of multiculturalism is taken as the best by many authors (Maher, Moawad, Shoura, 2017).

The belief that all citizens are equal. Cultural differences make a large contribution to unity and multiculturalism celebrates that contribution. Multiculturalism also ensures that all citizens can maintain their identities, take pride in their ancestry, and have a sense of belonging (Canadian Heritage Leaflet, 2008).

So, multiculturalism is a response to ethnic and cultural diversity, which means that people of different ethnic, races, nationalities, genders, and religions backgrounds come together to form a new community. Diversity is seen as an important issue because it encourages people to experience things different from what they are accustomed to. Therefore, cultural diversity is used with the concept of multiculturalism because multiculturalism recognizes and respects the presence of diverse groups in a society, acknowledges their socio-cultural differences, and encourages their contributions within a society. The point is that multiculturalism emphasizes that acknowledging the existence of ethnic diversity and ensuring the rights of individuals to retain their culture should go hand in hand with enjoying full access to, participation in, and adhesion to constitutional principles and commonly shared values prevailing in the society (Maher, Moawad, Shoura, 2017).

Multiculturalism offers chances but also brings challenges. The coexistence of diverse cultures, where culture includes racial, religious, national, and other culturally distinguished groups, is manifested in customary behaviours, specific assumptions and values, patterns of thinking, and communicative styles. Living in a multicultural society is a challenge because it is more than understanding and accepting the different cultures existing next to mine – it means also allowing the changes in my life on many levels, including the axiological.

The challenge has recently become a serious matter and many world leaders have reflected on the problem and formed bold conclusions; for example, in October 2010 the German Chancellor Angela Merkel declared that multiculturalism had "utterly failed" (Rattansi, 2011, p. 36). It is clear that a policy and ideological shift has taken place throughout Europe. Moving away from multiculturalism is not an option but a transformational change is fact. We seem to be moving towards interculturalism – a term that has already made its appearance in official discourses and which has been particularly popular in Germany.

The key point is that instead of a mere celebration of diversity and different cultures, interculturalism is the encouragement of encounters between different ethnic and faith groups and the setting up of dialogues and joint activities. At some point, the British government even suggested to local councils that they should not fund single-community projects, concentrating their resources instead only on projects that brought communities together,

but this proposal was dropped as imposing too rigid a requirement. Instead, it was recognized that such funding decisions should be made at local levels (Rattansi, 2011, pp. 151–152).

Multiculturalism needs to be viewed as something more than a physical connection and direct interaction between cultures because cultures can no longer insulate themselves against the influences of signifiers (a good example of a signifier is globally-transmitted products, whether it is a fashion product [blue jeans], music product [an album by Jennifer Lopez], or marketable individuals, such as athletes [Lionel Messi]), which in a globalized environment are ever-present and ever-influential. The impact of global signifiers is one of the major influences on the life of the individual social actor within contemporary social structure (see Oliver 2005). Localized social actors are enabled to be aware of events on a larger scale, and that is one of the important features of globalization.

Globalization

Globalization is another term on which not only do scholars hold different views regarding proper definition but they also disagree on its scale, causation, chronology, impact, trajectories, and policy outcomes (Steger 2017, p. 13). Despite such differences we should consider two influential definitions of globalization. The first is by David Held, professor of Politics and International Relations at Durham University. Globalization may be thought of as a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transactions – assessed in terms of their extensity, intensity, velocity, and impact – generating transcontinental or interregional flows and networks of activity, interaction, and the exercise of power.

The second definition is proposed by Roland Robertson, Emeritus professor of Sociology at the University of Aberdeen: Globalization as a concept refers both to the compression of the world and the intensification of consciousness of the world as a whole. The definitions clearly suggest that the world has indeed become a global village, and there are positive and negative impacts to this. However, for the purpose of the logic of this text, instead of discussing them, we want to stress that globalization is about *growing worldwide interconnectivity* (Steger, 2017, pp. 15–17).

Technology granted us access to so many options that making a choice is now rather a difficult task and comes at great cost, especially as we are subject to professional encouragement in the form of commercial business projects – advertisements personalized in an advanced way using date collected and organized by modern companies like Google, Facebook, Amazon, and many others. Their digital systems with advanced algorithms are able to identify people with particular interests, needs, and problems, and of course this is potentially highly profitable.

Something that fifty years ago was available only for the somewhat wealthy or territorially privileged is now available for almost anyone. On the other hand, globalization has enabled individuals to communicate on a scale that had previously not even been contemplated. Technology started a chain reaction, radically changing the way we learn. Anyone can create and successfully spread ideas, products, and educational offers. This has in many ways resulted in the democratization and relativization of knowledge, so we have an epistemological issue here. When so many diverse organizations and individuals can gain access to electronic communication via the internet, then it becomes difficult to gain and recognize authority and it is much more difficult now to formulate comparisons in terms of the hypothesized validity of knowledge and to settle a claim to truth. As Oliver (2005, p. 12) puts it, "In a relativized and globalized world, everyone is an expert at the same time. Knowledge belongs to everyone simultaneously".
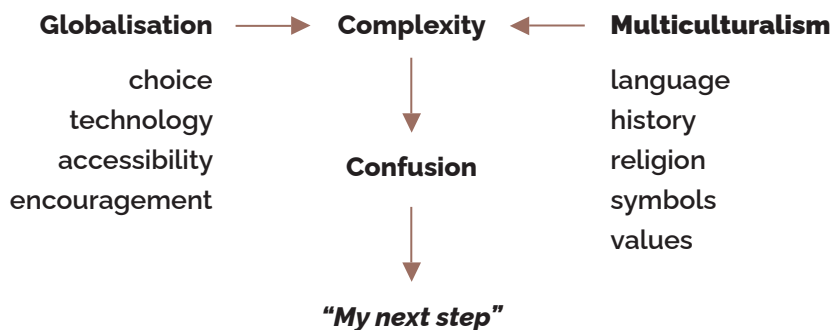
- **Figure 2.** Implications of multiculturalism and globalization
  Source: Graph made by the author

The amorphism of education

Multiculturalism and *globalization* are closely related and they create a lot of *complexity. Education* is meant and prepared to deal with complexity but the number, nature, and volume of the changes seem to challenge or even exhaust the system. Without constant updates of targets and content, formal education becomes a waste of money. The methods need to express not only the demands of today but also those of tomorrow. We must remember that we are educating our children to enter the workforce for jobs that don't currently exist, and in some instances can't even be imagined. Making sure that the style of *guidance* teachers provide will serve the whole group without harming their individual relationships with students seems to be critical.

The complicated reality caused by multiculturalism and globalization brings a series of obstacles and invites confusion. The classic and clearly defined distinction between learning and education has deteriorated and the borders between the three types of education are blurred.

Learning ～～～ targets — Multiculturalism
content
methods
teacher

intentionality   Globalisation   Education
managment
validation

Inner-direction ← Amorphism ← formal
non-formal
informal
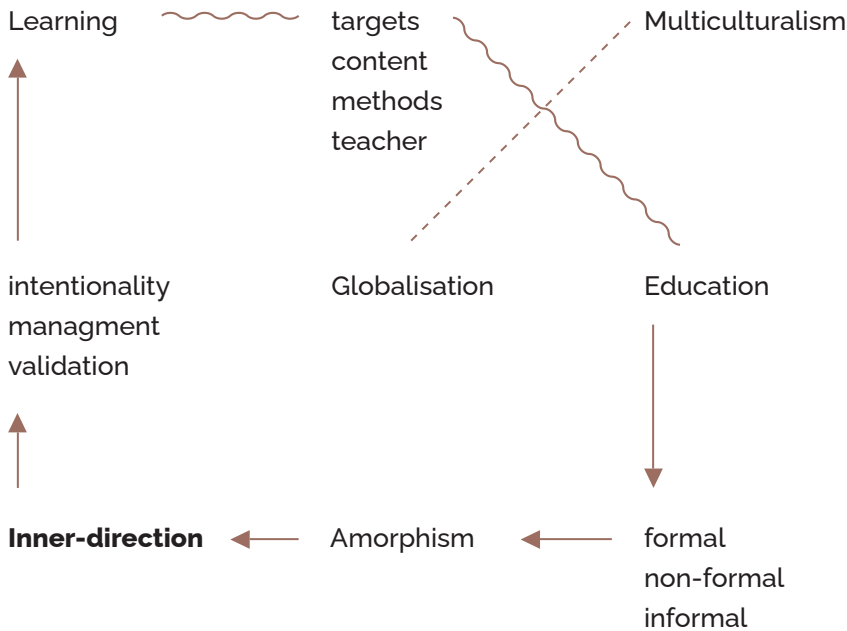
- **Figure 3.** The function of inner-direction
  Source: Graph made by the author

The long hard work to make learning structured, organized, and controlled needs to be not only continued but also intensified as the process is in danger of reversing. On the theoretical level, education can soon become amorphic. Some of the ideas of the most recent thinkers and researchers seem to already be outdated. With the internet, English language, and current convenience of travel, the value of formal education is being questioned. The structure, timing, and curriculum schools and universities implement are only some of the options, and they are increasingly not the ones perceived as best, especially when it comes to business and leadership.

If learning can be compared to a moor and education to a journey, then we could follow that coding and say that multiculturalism and globalization have used the most recent technologies to build a new window in the classroom. The window is open and there are many loud voices coming from outside. Some of the voices make so much sense that they are tempting, even for the teacher. Some of them are delusional, ugly, and even dangerous, but the most consequential danger is the volume itself because the noise may be overstimulating the students' nervous systems and the teacher's guidance becomes only one of the voices.

Naturally, there are questions that need to be answered urgently: How do we protect the learner? What is a priority here? Should we close the window? Should we condition the students' attention? Should we deal with the voices outside? Even if we manage to soundproof the classroom, what happens learners are between the lessons, when they are "out there"?

The answers should contain short and long-term strategies. Short-term strategies seem to have more of a defensive character and clarifying the teacher's message (Denton, 2011) or practicing mindfulness (Kerr, et al. 2011) are two evidence-based examples, but education needs a wider picture within which to frame, methodize, and inaugurate a lasting solution based on prevention. It is not only formal education that needs to be contemplated but also any other learning situation where there is a teacher bearing in mind *a safe journey from Human A to Human B.*

From the most general perspective, long-term strategies seem to target the balance between freedom and structure, between the motivation from within and without, between development and formation, and between critical thinking and respect for authority. It is a complex task but worth the challenge considering the urgency of the changes we are barely managing to adapt to.

As much as we need to study the contribution of behaviourism and psychoanalysis, we need to detach from the paradigms suggesting that a human being represents something close to a machine – "a complex system behaving in lawful ways" (Skinner, 1971, p. 202) – or is a crippled mixture of childhood conflicts and biological forces. These two classic viewpoints offer a pessimistic picture of a definable but unchangeable and helpless creature, but newer paradigms have provided evidence that humans are more than that.

Not Skinner, Pavlov, or Freud dealt with an idea we often take for granted today – our potential for growth. The pioneers of the human potential movement suggested that the absence of neurotic or psychotic symptoms is not sufficient to qualify as a healthy personality. Education is successful when it provides growth relevant to both the demands of a good curriculum and students' deep desires. The ideal outcome of education is an individual with a fully mature personality, and growth psychologists attempt to provide an explanation of what this means.

A healthy personality

Gordon Allport created one of the first fully developed and influential theories that contrasted with one-sided behaviourism and psychoanalysis. Other psychologists offer similarly optimistic shifts of responsibility (Schultz, 1977) but Allport is additionally regarded as the father of personality psychology, and for this reason his work will be used as the model of a healthy personality in this paper.

Allport did not believe that mature, healthy persons are controlled and dominated by unconscious forces and their behaviour determined by the demons deep within them. He acknowledged that they are an important influence but only for neurotic adults. Healthy individuals function on a rational and conscious level, fully aware of and able to control the forces that guide them. The outlook of a healthy person is forward, toward contemporary and future events, not backward to childhood. This perspective offers considerably more freedom of choice and action. Adult motives are *functionally autonomous* of childhood – we are pulled ahead by our plans or intentions for the future.

Freud's theory of motivation asserts that human beings are motivated predominantly to reduce tensions. Allport's view was that this tension-

reducing idea is only partially correct – healthy individuals have a continuous need for variety, for new sensations and challenges. They set specific goals and subgoals, taking their vision and will forward. It is exciting and risky but unifies the personality. These tension-producing experiences are the only path to growth (Schultz, 1977, pp. 8–9).

Placing that model in the earlier presented context of education being challenged by multiculturalism, globalization, and technological noise, the learner emerges as very vulnerable, and that is enough to merit an organized discourse about a possible solution.

The wealth of opportunities, diversification of requirements, and noise coming out of the open windows create a situation manageable only for somehow privileged chosen. The vast majority of formal education participants are potentially in need of general guidance and the responsible protection of their freedom and safety during their time outside of the system. This statement appears to be ironic because it implies that one of the major intentions of formal education should be teaching students how to function next to it. In other words, to keep formal education strong and necessary, we should allow or even encourage students to go beyond it. The key here would be the quality of the reasons to do so.

If the healthy personality is rooted in having a specific life goal with supportive subgoals, then the richness of data, options, and voices create real obstacles and confusion. Although there is a place for confusion in education as it can benefit the learning process (Mello, et al. 2012), the big picture relies on clarity. If the students are about to make an autonomous move during times of uncertainty, they need to be able to establish the target and the direction. A good metaphor for that would be the one used by David Riesman – a person needs a *psychological gyroscope* to see farther and clearer (however, he admitted Gardner Murphy had used the metaphor before him in 1947). According to his narrative, one can be equipped with such a gyroscope only at a young age and it is a characteristic of an *inner-directed personality* (Riesman, 2016, pp. 43, 53, 76).

Inner-direction

Riesman undertook the issue of interdependence between a person and their culture by observing and describing the changes in western societies. These changes were particularly meaningful after World War II when

Americans started being more empathetic but also unsure about their goals; they became increasingly anxious – for not obvious reasons – and seeking acceptance and approval became common. The author of *The Lonely Crowd* called them *outer-directed.*

Inner-directed personalities, in contrast, are guided by generalized but long-term goals rooted in the values and beliefs established in childhood (Riesman, 2016, p. 41). With time, the meaning detached from the originally offered historical context and now *inner-direction* is commonly understood as an attitude of being guided by one's own conscience and values rather than external pressures to conform (Collins, 2014).

A learner with this set of characteristics would be ready to face the confusion coming out of a possible and more frequent temporary absence of direction, management, and supervision in education. An inner-directed student will survive because of their goal-oriented thinking, self-management, and self-validation.

Conclusion

The conclusion of this essay is that *inner-direction* seems to be the way to "immunize" formal education against the extreme complexity globalization and multiculturalism keep creating. It should become one of the earliest and prioritized *goals* of education as it would be of significant support for both the teachers and the students by providing *clarity*.

Confusion is education's most dangerous enemy – it slows the learning down and complicates the relationship between the learner and the teacher. It can even break the whole construct of long-term growth because the vision of the *next step* is no longer clear. When we are confused, we stop doing what is essential, or at least we stop knowing what the essential thing in a given situation is. Greg McKeown wrote a book about essentialism and made a strong point.

Essentialism is not about how to get more things done, it's about how to get the right things done. It doesn't mean just doing less for the sake of less either. It is about making the wisest possible investment of your time and energy in order to operate at your highest point of contribution by doing only what is essential (McKeown, 2014, p. 5).

How to structure the introduction of *inner-direction* to early and late education would be a subject of separate projects and would need supplementary empirical efforts, but current evidence seems to be enough to make it a substantial indication for the future of effective formal education.

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Historical assessment of digitization and digitalization in Kenya: Opportunities, challenges, and concerns for musical arts education in Kenya

Priscilla Nyawira Gitonga

Introduction

Digitization is the state of converting raw analogue data and documents to a digital format. In digitization, the original data doesn't change; it is only transferred into a digital form. However, it is much more than a conversion process. It comprises transitioning, adapting, and mainstreaming all the operations of an organization into a digital model. Digitization, therefore, is a process within digitalization. Digitalization is dependent on digital technology. These processes are the basis of the digital evolution shaping the future of society and economic development.

In Kenya, like many places in the world, the digital evolution is a lifeline for many sectors. As a matter of fact, Kenya is one of the countries in Africa that has reached considerable milestones in digital advancement (Makori, Mauti, 2016). This has been made possible by the setting up of good

information communication technology (ICT) systems and the information revolution. Some of the earliest evidence for digitization can be seen as early as the 1940s when the Kenya News Agency (KNA) established a digital library dedicated to the documentation of Kenyan history from the time of the state's emergence to independence in photographs (ICT Authority, 2020).

This paper explores the opportunities, challenges, and concerns related to the digitization and digitalization of musical arts for education purposes in Kenya. Such an exploration must begin with a historical account of the computerization, internet, digital technologies, and information communication technologies and their capabilities in Kenya as they provide the necessary environments in which digitization and digitalization processes can thrive. The digitization of musical arts entails the transformation of analogue data, which may be in form of audio, physical documents, sound, and artefacts, into digital formats or a digital representation. The result is, therefore, a computer-readable format that makes the material effectively and quickly accessible to users.

Digitization is the first step to digital preservation as digital representations can be accessed for a long time as long as they are migrated into new stable formats as needed (UNESCO 2019). Digital reformatting, the process of converting analogue materials into a digital format as a surrogate of the original, is closely linked to digitization. Reformatting allows for capturing and displaying a broad array of materials with "features and characteristics that are not easily reformatted using other technologies" (Arthur, Byrne, Long, Montori, and Nadler, 2014). Digital reformatting is guided by established best practices to ensure that materials are being converted at the highest quality. Digitization is not only limited to the conversation of paper-based media into digital formats but can also allow the presentation of and easy access to collections in audio, film, and video formats from a single interface (ibid.).

Digitalization encompasses digitization and has to do with the transitioning and mainstreaming of digital technologies to the operations of a music department or school. Relevant digital content, high-tech ICT infrastructure, the Internet, and digital technologies are key requirements. To understand this from the Kenyan perspective, let us first highlight the enabling environments and prevailing factors that have characterized the Kenyan journey of digital evolution in the education sector.

Digital evolution in Kenya

The first mainframe computer in Kenya was installed in the 1960s for the purpose of automating the payroll for government employees and was situated in the Treasury Department (Obondo, 2016). Mobile technology developed alongside computerization. In 2002, the e-Government Secretariat was established to oversee the computerization effort beyond the Treasury. The internet was introduced in Kenya in 1995 through the Kenya Post and Telecommunications Corporation (KP&TC). It was received with suspicion and caution by the political class and therefore controlled and only allowed in the government civil service until 1999 (Mureithi, 2016).

After intensive intervention and activism, the government promulgated the Telecommunication and Postal Sector Policy, which recognized the significance of ICT to development in 1997. In 1999, the government of Kenya passed the Kenya Information and Communication Act, which allowed other sectors to operate the internet in the country, and by so doing, the government publicly recognized the use of the internet in Kenya. In 2006, the plan to migrate from analogue to digital television in Kenya began. However, following a series of court orders, it only became a reality in 2015 (GSMA 2017).

The emergence of cyber cafés, which act as convenient internet access points, was a crucial development in bridging the digital divide in Kenya (Kaigwa 2017). Although electricity access is still limited in many parts of rural Kenya, the phenomenon of cyber cafés is monumental, especially by making services that require access to the internet more accessible. The revolution of mobile phones, which now have faster access to internet, is also worth noting. The availability of computer technology and the internet is also advantegous for institutions charged with the reconstruction and preservation of national heritage, such as national museums. National libraries and museums have now digitized their records and collections. University libraries have also made considerable progress in digitalizing their services. To further this push, the government aims to launch 250 million virtual libraries by 2022 (Kenya News Media 2020).

In the view of the technological revolution taking place in Kenya, the Ministry of Education recognized its significance for teaching and learning processes. As a result, it established the Kenya Education Sector Support Program (KESSP) in 2005, which was key to mainstreaming ICTs into the teaching and learning processes for Kenyan schools and universities (Farrell 2007).

In 2006, the national policy on ICT was promulgated. Its aim was to improve the quality of life of Kenyans by ensuring accessible efficient, reliable, and affordable ICT services (Farrell 2007). The policy targeted four main sections: information technology, broadcasting, telecommunication, and postal services. The information technology section is charged with setting out the objectives and strategies for education and ICT in schools and universities in order to improve teaching and learning (ibid.). The government recognized ICT as a universal tool in education and training, and its main mission was improving its access, learning, and administration (Ministry of Education, Kenya, 2006).

Objectives for the introduction of ICT in education institutions in Kenya

The overall objective of the ICT policy was to strengthen the adoption and use of ICT in the education sector and to meet the education development priorities in Kenya. The objectives were coined from an e-learning perspective. The thrust of the specific objectives can be summarized in a few key areas of focus. The mobilization and promotion of resources to support e-learning through the facilitation of public–private partnerships were crucial. Building reliable ICT infrastructure for all learning institutions to access content and facilitate the dissemination of knowledge and skill on e-learning platforms was also important. Putting together an integrated curriculum to support ICT in education and gathering adequate content to sustain the curriculum were also important. The accessibility of ICT resources, the ease of using ICT, and the integration of e-learning resources with other existing resources were equally vital objectives (Ministry of Education, Kenya, 2006).

Three establishments are of critical importance in overseeing the development and implementation of ICT infrastructure in Kenyan schools and universities (Farrell 2007): the ICT Trust Fund, The Kenya Institute of Education (KIE), and the Non-governmental Organizations Network Initiative for Computers in Education (NICE). The ICT Trust Fund facilitates the mobilization of resources on ICT with schools and communities. KIE is involved in preparing musical arts curriculums, developing digital content, offering in-service training for the teachers with regard to access to and use of digital content, and conducting research on music education matters. It does so in consultation with teachers and other stakeholders

from university and education institutions. NICE provides a coordination and rationalization function through its membership to the ICT Trust Fund by ensuring the needs and the works of its members are known and considered in the fund's decision-making process.

Strategies of rolling out ICT objectives through e-learning

The Ministry of Education, in collaboration with key stakeholders, drafted a set of strategies through which the e-learning objectives could be realized. According to Farrell (2007), the national ICT Strategy for Education and Training was introduced by MOE in 2006. The strategies included the establishment of a policy framework, acquiring digital equipment, establishment connectivity, and network infrastructure, improving technical support, harnessing emerging technologies, developing relevant digital content, integrating ICTs in education, training and capacity building including professional development, boosting research and development, fostering partnerships and resource mobilization, establishing legal and regulatory frameworks, and monitoring and evaluation.

The strategies and objectives of the national policy on ICT were a great gift to musical arts education in Kenya in all levels of learning. While computer technology, as well as the use of internet, is now an integral tool in all aspects of the musician's work, be it composing, concert performing, teaching, recording, browsing the internet, researching, or managing a concert series (Achola, 2007), rolling out e-learning and building an ICT infrastracture and enabling its full capabilities could offer more to teaching, learning, and research in musical arts. However, even though the musical arts education syllabus has been included in the national curriculum for primary and secondary schools in Kenya as a non-compulsory subject, there are challenges regarding the availability of reliable ICT infrastructure that supports music education, and low levels of investment in the provision of resources and equipment, of capacity building, and of time allocation for musical education in schools. As such, regarding music education, the realization of ICT objectives meeting the national educational goals will always be slower and unaccounted for.

The universities design their own curriculum for musical arts education programs. They have their own ICT policies, which are informed by national

educational goals, and also pay attention to the regulations laid down by the Commission of University Education. Although the World Bank summed up the ICT infrastructure in universities as "too little, too expensive and poorly managed" (Farrell, 2007), it is worth acknowledging that most universities have ICT policies in place but lack the infrastructure to implement them. Most universities have forged strong collaborations with the Kenya Education Network (KENET) to "establish sustainable communication and networking among educational institutions in Kenya that will facilitate wide use of internet technology in teaching, research, and sharing of other information resources to the general populace at affordable cost" (Farrell, 2007). However, the burden of developing digital content is borne by the institutions.

Musical Arts Education in relation to the Computer, Internet, and the Digital Revolution

Musical arts generally refer to music making and all the skills that allow that to happen. Music making encompasses composing and reading music, rapping, singing, analysing, arranging, and creating music, and the performance of it. Musical arts education then refers to the tutoring or edification (either in formal or informal contexts) that is geared towards enabling one to make music. Music making, which is seen as a vehicle of economic, social, and cultural empowerment, is central to the creative industry and the creative economy (United Nations 2008).

Music education is taking place formally and informally in Kenya. Formal musical arts education happens in institutions of higher learning, in secondary and primary schools, and in middle-level music schools sponsored by community partnerships and initiatives and religious or liturgical entities. These include the Kenya Conservertoire of Music, the Nairobi Institute of Music and Performing Arts (NIMPA), Kenton College, Nairobi Music Society, and Ghetto Classics, among others. The universities offering musical arts education (with a western music tradition focus or African music focus) include Kenyatta University, Maseno University, and the Technical University of Kenya, among others. The syllabuses offered in these institutions target different aspects of music training. The goal is usually to prepare the learner to play an instrument or sing for self-actualization or enable them to operate in the economy. Most of the institutions focus of western music knowledge

and skills geared towards instilling basic music skills of musicianship and the ability to play an instrument.

Education in musical arts has been considered one of the major steps towards enabling music and related arts to operate maximally in the creative economy (Manyala 2016; United Nations 2008). The Competency Based Curriculum for Kenyan primary and secondary schools recognizes the role of the performing and creative arts in stimulating creativity, imagination, critical thinking, and problem-solving skills in children (Kenya Institute of Curriculum Development (KICD) 2017). These attributes are also central if one is to operate effectively in the creative industry. In adult education, there are many ways education in culture and arts enhance an understanding of society and its functions as well as promote economic empowerment. Education and training institutions are responsible for preparing individuals with relevant competencies and a sense of agency to join the workforce. The input of the creative industry in informing the scope of musical arts education in order to facilitate student's education and build a culturally aware and tolerant population is invaluable (United Nations, 2008).

The application of computer technology in musical arts education programs has gained considerable ground in the world in the recent years. Kenya's educational institutions have also made considerable efforts to keep up with the trend, regardless of the prevailing challenges. The common modern technological tools available to music educators are computers and electronic keyboards, among others (Achola, 2007). Internet access, even though connectivity is unstable, is now available, especially for the institutions of higher education. However, the lack of basic physical structures cannot support the setting up of any kind of ICT infrastructure.

Benefits and Opportunities of Digital Evolution to Music Education

Digitalization creates a global reach for the musical arts via a digital presence. Anything that goes on the internet claims a global outreach as more people have access to it. With digitalization, the musical arts gain a global followership; for instance, songs that hitherto wouldn't have gained a global followership can now do so because of their digital presence. Therefore the songs of a rural musician somewhere in Kenya who has embraced digitalization could be heard anywhere in the world.

Due to digitalization, a music artist, for instance, leveraging on their digital presence and global followership, could gain new perspectives from others outside their primary environment. Constructive feedback from followers could make the music arts better.

Digitization ensures that musical art resources collected through research and community engagements by ethnomusicologists and stored in analogue form are transformed into digital formats, stored safely in the cloud, and made accessible to hundreds of users indefinitely. Digitization offers better data storage and management. Music data can now be easily stored on the cloud and fear it will be damaged is greatly reduced.

Digital platforms are particularly useful in helping introduce young students to music theory. New apps and websites are streamlining content for lessons in interval identification, solfège, chord building, and a vast variety of other music subjects. Free streaming platforms like SoundCloud allow educators to record everything from short musical ideas to longer lesson material and upload the material to an account their students can access. This allows content to be streamed in the classroom as well as a student's home. And the growing roster of digital composition tools is becoming more useful for music educators. These include everything from free smartphone apps to dedicated digital audio workstations (DAWs) like Finale and Sibelius. Even digital tools like Logic now come with notation software aimed at helping producers, songwriters, and students understand music through a theory context (Music & Arts, 2019). Digitalization is also a springboard for creative innovation to boost social development and creative economy. Teachers will also avail content through which the dynamism in African cultures can be captured, studied for research, and preserved for posterity.

Milestones of Digital Evolution regarding Musical Arts Education

The concerted efforts towards protecting the intellectual property of Kenyan musical arts practitioners and recognizing the contribution of the creative economy to social, economic, and cultural empowerment is a remarkable achievement which should position the education system to support the industry better and improve the livelihood of its participants. The introduction of music technology courses in the curriculums of universities and tertiary institutions is a notable milestone.

These courses prepare learners to be sound engineers and technicians for audio recording. There is also an increased use of software for music composition and sharing. However, these courses are only open to those that enroll for the program and pay an additional tuition fee.

There is also an increased availability of research publications, literature, and relevant databases of musical arts (especially for western music) online through the library catalogue (Makori & Mauti, 2016). The increased availability of internet and mobile phones is a plus. The establishment of digital e-learning platforms accessible to both students and academic staff is another good milestone. For instance, the COVID-19 pandemic has presented unique challenges for teaching musical arts online. At the same time, it has stimulated resources that would have otherwise been channelled to other activities to strengthen e-learning in institutions.

Interestingly, the pandemic has not only revealed the disparity of digitization and digitalization of musical content but it has also revealed the lack of content and credible connections to established archives in the world and the lack of exposure of faculty members to the availability and competency of using archived resources. It has also forced institutions to rapidly expand infrastructure that was meant for a small number of students to cater for a larger number of learners through the learning platform.

Challenges to the Digital Evolution in Kenya with regard to Musical Arts Education

One cannot fully comprehend the challenges associated with the status of digitization and digitalization in Kenya without referring to matters of computerization, the internet, connectivity, and relevant policies as well as the available resources.

ICT policies, especially in institutions of higher education and universities, offer guidelines with regard to usage, data protection, procurement procedures, and support systems but give very little consideration to the process of building the content to be used and accessed through the infrastructure. As a matter of fact, most institutions do not have the mechanisms to convert analogue data to digital formats and store it.

The practice of e-learning includes a wide range of ICT applications and strategies for exchanging information and gaining knowledge such as video

conferencing, mobile devices, the internet, and the web as well as electronic resources (Makori and Mauti 2016). Unfortunately, in many of the schools and universities teaching musical arts in Kenya, these are nonexistent. The institutions lack the infrastructure to digitalize and mainstream digital content for teaching and learning. Most universities do not have special labs and audio-visual equipment through which digital material can be accessed in the classroom. With regard to libraries in higher institutions, there is a need for effective planning strategies on the implementation of technological strategies systems, development of the internet of things application, and human resource training (Makori and Mauti, 2016).

More so, the lack of adequate connectivity, electricity, and network infrastructure is a major challenge to the accessibility and utilization of digitalization in Kenyan schools, universities, and colleges today. Most schools in rural areas are in a bad structural state and have no electricity. Generally, there is a limited penetration of the national physical telecommunication infrastructure into rural and low-income areas and schools (Farrell, 2007).

The unavailability of content in digital formats is one of the key challenges to adopting digital technologies and their capabilities in teaching and learning of musical arts in Kenya. This can be attributed to the lack of appropriate equipment and technologies to digitize the heaps of analogue data stuffed in storage in the institutions. This equipment includes enough computers, scanners, and cameras, among others. This challenge is amplified when it comes to generating enough content for African musical arts.

Another prevailing challenge that seems to create a deliberate stumbling block for digitalization in institutions of learning include the lack of good will from influential officials at the policy and resource management levels. As a result, there are many occurrences of unjustified channelling of funding and digital resources to natural sciences and engineering rather than to musical arts disciplines. The lack of resources, such as well-ventilated computer labs, digital equipment, and up-to-date software, is prevalent as well as a lack of technical knowhow on ICT and the mainstreaming of it in classrooms and the research situation (Achola, 2007).

Concerns and dilemmas for the digitization and digitalization of African musical arts in Kenya

The digitization and digitalization of African musical arts for education purposes raise unique concerns. The subject of African musical arts was introduced in schools for reasons such as the propagation of Kenyan traditional culture through education and related activities. It was also intended to benefit the learners by instilling the creativity and life skills that Kenyan traditional approaches to learning and making music embody (Mochere, 2017). Even though it was not initially given the prominence it deserved in all levels of learning, presidential declarations helped build the status of music in the curriculum. Globalization, technological advancement, industrialization, an increasingly youthful population and urbanization are additional factors that compound these concerns.

Kenyan law refers to traditional musical arts as folklore, which means *a literary, musical, or artistic work presumed to have been created within Kenya by an unidentified author which has been passed from one generation to another and constitutes a basic element of the traditional cultural heritage of Kenya* (Copyright Board of Kenya, 2020). It is seen to include folk tales, folk poetry and folk riddles, folk songs and instrumental folk music, folk dances, folk plays, and the production of folk art, in particular drawings, paintings, sculptures, pottery, woodwork, metal ware, jewellery, handicrafts, costumes, and indigenous textiles.

Ethical considerations are key in academic research processes. They should not disempower or intentionally place participants in the way of harm. Research activities should also be able to respect the dignity of the participants, which is embodied in their values and cultural practices (Bryman and Bell, 2007). The content for teaching, learning, and research collected and digitalized for educational purpose is framed through rigorous research processes. Digitization and digitalization, then, naturally raise such concerns as what are the best practices of digitally preserving a living culture? In the absence of policies that empower cultural communities over their own intellectual property, how do institutions start using this valuable resource on a digital platform without considering the communities? How does digital transformation pay attention to the emotions, beliefs, values, identities, and sanctities associated with many of the indigenous practices? How best does digitization capture the aspects of change in a culture that is continually evolving? How can putting a camera in the hands of the community help

build cooperation and active participation between institutions and the communities at the same time as empowering the communities and preserving the dignity of the practices?

Pedagogical concerns also arise with regard to the digitization and digitalization of Kenyan indigenous music. Pedagogical methods associated with African music include imitation and re-contextualization (Mochere, 2017). Learning by imitation promotes creativity and learning through performance, which enhances learning by doing. As such, individuals considered to be cultural masters from the communities are either brought to the institutions to teach the learners for a period of time or the students take on a two-week ethnographic field work to experience training firsthand from the cultural masters in their contexts. There are disadvantages to these approaches, however. First, the cultural masters are removed from other aspects of their community, which would enrich the learning experiences and which the learners are not able to access. Second, challenges arise as result of the re-contextualization of the content and its environs to suit the demands of a formal classroom; for instance, relating and appreciating the real cultural context (Mochere, 2017). It is my argument, therefore, that the lack of firsthand experience of learning African musical arts and an over-reliance on decontextualized knowledge could lead to the extinction of Kenyan cultural practices.

Pedagogical approaches demand rethinking how best the collaboration, participation, and interaction between the cultural masters, learners, and the instructors can be strengthened consistently throughout the digitalization process. This can be achieved through first acknowledging the cultural communities as credible knowledge producers and ensuring their active participation throughout the digitalization and dissemination process. It also means placing digital equipment in the hands of the communities and utilizing live lessons and the consequent storage of the digital format generated in the process. This will then ensure that the dynamic aspects of the cultural material and content are documented as they occur.

Intensive documentation of the learning process is required too. Through research, new pedagogical approaches which forecast the future of African musical arts education in the face of rapidly advancing technology can be developed. In order to achieve the sustainable development of e-learning in higher education, lecturers must become competent in the use of technology and pedagogical aspects for effective teaching and learning to take place.

Conclusion

The digitization and digitalization of musical art for education purposes in Kenya is not a process that should be undertaken in a haphazard way. It must be well thought out and pay attention to the philosophy and dignity of the people involved. However, these processes are possible, and their significance in supporting musical education in Kenya is monumental. Building a reliable ICT infrastructure supported by the availability of essential digital technologies and reliable access mechanisms is paramount. Western musical arts have a considerable bank of digital data. This is because it borrows heavily from already established western traditions that are supported by technologies and archived materials accessible for use in class. However, as Kenyan learners are becoming master practitioners in various musical arts, they are generating educational content that would greatly benefit from the digitization and digitalization processes.

Kenyan indigenous musical culture and the related practices, which existed before the introduction of formal education in the colonial times, are also dominant features of musical arts education in Kenya. In the classroom situation, it is inspired by the real cultural context from which these cultures emanated and are still practised. However, in the face of all the changes occasioned by urbanization, technologies, and globalization among others, it is important to rethink how best we can keep our cultures alive, claim our position in the global scene, and pass the cultural content on to future generations safely through the digital revolution path that we must take.

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Education in digital times

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New Teaching and Learning Model Under Digital Technology — The Double-Edged Sword of Media Education

Chen Chen

Introduction

National authorities around the world responded to the outbreak of COVID-19 by implementing travel bans, lockdowns, and the closure of various facilities. UNESCO reported that schools have been closed on a nationwide or local basis in 172 countries, affecting 98.5% percent of students worldwide (UNESCO 2020). There is a popular saying in China, which goes "The gates of the schools may be closed for some reason, but the gate of learning will never be." Due to the coronavirus epidemic, almost 90% percent of schools in China switched to online classes starting from February. The Chinese Ministry of Education (2020) decided that all schools should stop face-to-face teaching and use internet platforms to carry out long-distance teaching. Shifting teaching beyond physical classrooms is something that has never happened before so it is certainly worth examining the results and implications critically. Distance teaching is sure to transform traditional education.

Teaching-learning spaces, models, and times have all changed in distance learning, as are the attitudes towards online education. This case study is based on this teaching phenomenon and includes findings from observations and interviews. This research was carried out on ten elementary school students, their English teachers, the organizers of online teaching activities, and, finally, parents, who are among the most important figures in children's education. Their beliefs and attitudes influence the quantity and quality of online classes at home during the COVID-19 period.

Teaching in cyberspace vs. Teaching in the classroom

First, let us examine some of the changes that have ensued from online classes (digital education). The most obvious visible change is the different learning space. Learning space refers to the spaces and environment in which learning activities take place. This changed from the classroom to the home, which has always been the place family members educate children privately. Digital education expands the learning space boundary in that schooling not only occurs at schools but is also possible at home with the help of digital media. Elementary school interviewee: "I don't need to enter the classroom that has more than forty seats arranged by the teacher and sit according to the rules." The current appearance and arrangement of classrooms are based on the standards put forward in line with the development of the industrial society a long time ago. Since then, education has been connected with classrooms with standardized seats, such as that is figure one. However, this kind of classroom is being challenged by the technology that allows students to choose where and when to attend online classes. "Sometimes I choose my bedroom to have an online class, sometimes I choose the living room; anyway, I can choose by myself." The learning space can exist everywhere, including the traditional classroom and the virtual one. For students, the biggest difference between classrooms and the family home is that they feel more relaxed at home. The students say that they still try their best to behave well and to make a good impression on teachers, but they do not have to be anxious about whether their behaviour caters to teachers' expectations or not.

- **Fig. 1**. A common classroom with a blackboard and single seats to prevent students from talking to each other.
 **Source:** The photo was provided by one of the teachers in a suburban area.

A learning space is a prerequisite if students are to engage in learning. In traditional education systems, the teaching-learning space exists in classrooms, or laboratories for specific subjects. However, with the development of modern information technology and communication methods, new teaching-learning spaces such as virtual laboratories, electronic libraries, and cloud classrooms have appeared. With the support of such technology, teaching can be continued in times schools are closed.

As for the teachers, they can begin their internet classes wherever they are, and they benefit a lot from this. The teacher who was interviewed had to stay at campus from 7:30 a.m. to 5:30 p.m., no matter whether she had classes or not. Apart from her teaching hours, she also had to oversee students' behaviour; for example, how they eat in the canteen, what kind of uniforms they wear for different days (students wear a uniform every Monday, t-shirts for classes, and sportswear for PE). She said that most of the time, she felt so tired after working the whole day not because of the teaching itself but because of the trivial matters. Now, these trivial matters have disappeared along with the change in the learning space. Not only were students more relaxed but also the teachers, who can pay now more attention to teaching rather than to piles of paperwork.

The question is how to combine online education with the face-to-face approach when students go back to school? Will blended learning occupy an important place in the education systems in the following decades? Technology is pervasive in modern life. Research shows that it is indispensable for content creation, social interaction, information acquisition, collaboration, and communication (Lenhart 2007, 2010). Computers, tablets, mobile phones, social media platforms, and other websites are rapidly permeating classroom spaces. Compared with traditional teaching tools, each new teaching technique changes the space, thus affecting the organization of classroom teaching.

Perhaps the first thing that needs to be done is to change the seating arrangement to transform students from passive knowledge receivers into active learners. The ideal classroom is like that in figure 2 as it allows students to discuss lessons and gain necessary information by themselves. Many schools made an effort to modify their classrooms to be more like that of a seminar but most then gave in to standardized examinations. Right now, teachers are asking themselves many questions. "Can students make use of the internet correctly?" "How can I know what students are doing on the internet?" "How can I maintain authority as a teacher if students already know the things I want to explain?" These are some of the reasons teachers hesitate about using and advocating for digital media during class.

People are connected with each other in different learning spaces, and the learning-teaching relationship is an important part of the learning environment. Goodyear (2014) considers a network as "learning in which ICT is used to promote connections: between one learner and other learners; between learners and tutors; between a learning community and learning resources." Teachers are placed in a position of authority while students are submissive in the class. The relationships between teachers and students are reversed in the integrated teaching space, a decentralized, more open, student-oriented relationship network. The reconstructed learning space breaks through the limitations of physical space and time so that the learning situation is more diversified to meet students' learning needs.
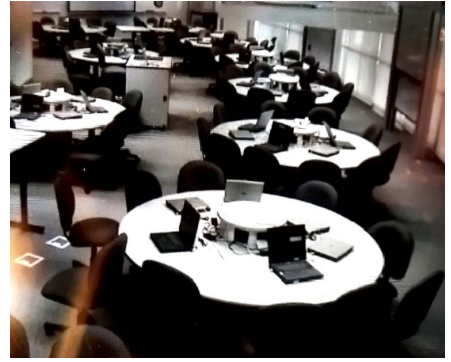
- **Fig. 2. Source:** This photo was taken from a Jiaochuan school in China.

- **Fig. 3. Source:** http://www.habook.com.tw/habook_epaper/2010/20100204_ eTeaching_digest/20100204_eTeaching_digest.htm.

Most of the schools provide teachers with digital devices like that in figure 2, but the seats were only temporarily arranged like this. Ordinarily they would be separate.

The classroom in figure 3 is a special classroom where students can use the internet to do research by themselves. There would be a need to establish media trust between teachers and students if this kind of classroom were used widely.

The seat design of the physical classroom in figure 2 has A4-page sized desks, a blackboard, and movable furniture that can be arranged into different groups for different lessons. There is a PowerPoint application to allow students to work together and connect to the internet. It functions as a stage for students to present their group work to their peers and teachers using the interactive screen. During teaching-learning activities, students should sit on their assigned seats.

Learning is going to transform into a blended space, which refers to the combination of physical and digital spaces such as the arrangement of figure 3. The arrangement of a blended classroom is more like a meeting room that consists of a round table, internet connection, and a laptop for every seat. This allows students to access various online resources, making them available anytime and anywhere. The access to the internet allows students to participate in learning activities outside of the classroom, such as their home or libraries. This does not mean that either of the spaces has an absolute advantage; rather they are independent from each other (Thibaut, 2015).

Online teaching model vs. Off-line teaching model

The topic of children using digital technologies to learn online has been heatedly discussed in the last decade (Aubrey and Dahl, 2008; Ministry of Education, 2012). Some scholars insist that children should not be exposed to digital products because it will affect their health and growth and they will not be socially and emotionally prepared for life (Edwards, Skouteris, Rutherford and Cutter-Mackenzie, 2012). Other scholars claim that online education can help children to have better understanding and be more creative; that it encourages them to be involved in collaborative learning activities (Yelland, 2006).

Before the start of online classes, one interviewee had experienced only the traditional teaching model. He seldom answered questions in the classroom because he was afraid of making mistakes in front of the class, which equalled embarrassment, and did not want to raise his hand even though he knew the right answer. The traditional face-to-face teaching model limited the social interaction between students due to the length of the lessons and the authority of the teachers in the space. Thus, the social interaction of teaching and learning tended to be more hierarchical and teacher-centred (Collin and Halverson, 2010). This is consistent with the research that the blended space allows each student's voice to be heard, reduces the limitation of time and space for students to think about questions, and provides students with opportunities to express themselves (Lazonder, Wilhelm, and Ootes, 2003). One of the interviewees found that he has more chances to express his own ideas and does not need to raise his hand when the teaching model changed into online class. When asked about why he is willing to speak up during the online class and choose to be quiet during the off-line class, he said that having different opinions when speaking during online classes is allowed and he does not need to worry about whether his answers are the same as those of the others. The reason for this is that he can hear many different view points, and students along with the teacher can conclude there is more than one solution for a problem through the online discussion. (The traditional ask-answer tactic was that teachers would prepare a set of answers before the class and ask students to answer until the same one appeared, which ignored the development of creative and critical thinking.)

- **Fig. 4.** Online English class for one of the interviewees.
  Source: The photo was taken when the interviewee attended the class.

Another advantage of the online teaching model is that teaching and learning become more active and attractive. Take English class as an example; what teachers did before was explain the meaning of vocabulary and then write up all the new words the students should know and some grammar exercises. However, it seems that online classes encourage English teachers to make use of songs, gestures, and pictures more frequently while teaching. The photo is figure 4 was taken when a teacher was teaching the English alphabet. She connected letters with special gestures and sound, which made English more attractive to students. The internet provides more resources for teaching-learning activities, and these digital resources abolish the traditional limitations of pen and notebooks in the classrooms by using documents made in word-processor applications, audio recordings, and video files. Students share knowledge, think from different perspectives, and produce output in the class. Knowledge is distributed across students and teachers. For example, when teachers post tasks to be done, students ask many questions. Instead of waiting for a reply from their teachers, students often answer the questions. Not only teachers but also students can share information and knowledge using this kind of teaching model.

Every coin has two sides, however, and this new teaching model has also confused teachers and students. Sometimes teachers don't have any ideas of how to better show the content, so they just scan the textbook; as a result, students feel bored and distracted. If students are distracted in the classroom, the teacher can reprimand them but what can a teacher do if students are distracted in long-distance learning? It is easy to engage in different activities, even trivial ones like playing with a pen instead of listening to the teacher. The lack of face-to-face contact makes it difficult for teachers to control the classroom in the same way as they did before.

Standard learning time vs. Digital learning time

It can be seen from the school timetable in figure 5 that teachers need to stay at school from 8:00 a.m. to 6:00 p.m. so it's difficult to focus on improving the quality of teaching. Students also need to stay in schools for almost 12 hours every day. Long-distance learning brings relief from the endless working hours for both the teachers and the students. Learning time becomes flexible; the schedule can be discussed by teachers and students and times convenient to both can be found. Students experience online learning through the internet with instructors and classmates either in the synchronous or asynchronous environment at convenient times and places (Singh and Thurman, 2019). For example, long-distance classes can be switched to weekends. If somebody is absent from a class for some reason, it is possible to watch the recording and engage in self-study. The drawbacks here are that it is difficult for students to gain satisfaction from a recording, and it is impossible to interact with the teachers. Students are actors in the process of the live online classes; however, they play the role of an audience when watching a video.

Fig. 5. The timetable for students at school. The time for teachers to stay at schools to work is one or two hours longer than the students. They need to arrive earlier and leave later. **Source:** The official website of Zhenhai Primary school (http://www.jcsyxx.cn/webhtml/disp_1_201_10091.shtml)

Another difference in the learning time is that the duration of online classes can be decided according to the difficulty level of the content in contrast to the standard forty-five minutes for each subject at school. For example, an online class may last over an hour because students and the teacher are engaged in a fierce discussion about some problems, or maybe only twenty minutes for some easier questions. Time flexibility can be incorporated into off-line classes; for example, PE or music classes can be shorter so that students enjoy it rather than finding it tiring.

Taking all of this into consideration, it can be said that online classes save a lot of time by giving more freedom to both students and teachers. The reality, however, might be very different because these freedoms come at the great price of increased responsibility. Without proper supervision, there are distractions everywhere, and all the time saved by online teaching can be easily wasted. It requires a great deal of mental prowess to set up clear goals for oneself and avoid the dangers of procrastination. This is why it can be difficult to reap the benefits of online education as far as time management is concerned.

Insights from teachers

When all the schools closed, action was taken to open 24,000 online courses, including 1291 national excellence courses as well as 401 courses of virtual experimental simulations that were supposed to be provided on twenty-two online teaching platforms (Chinese Ministry of Education, 2020). In order to achieve the planned teaching objectives through long-distance learning, teachers needed to take the environment, which is completely different from classrooms, into consideration. What made teachers anxious the most was that they did not have enough time to prepare for, or any experience in, online teaching. At first, students were informed that the winter holidays were going be extended for around two weeks, until the end of February. While students were enjoying their free time, university authorities started to seriously consider implementing online classes. Teachers needed time to prepare their teaching plans and materials, to plan interactive activities during the class, and so on. Because of the lack of face-to-face interaction, teachers needed to make more effort to prepare and design online courses that would attract their students' attention. However, they did not get the chance to attend any training courses about online and media education. Many professors felt like novice teachers when running the online classes.

At the beginning, many teachers took time to figure out how to use the apps, a number of them spending as much as half of the class on figuring out how to share the screen so that everyone could see the presentation. This only perpetuated the problem of students not having access to their textbooks. A great majority of them were stranded in their home villages while their textbooks were left behind in their dormitories. Online e-commerce was also suspended due to the sudden epidemic, so they had no choice but to rely on the resources provided by teachers. Fortunately, publishers reacted quite quickly to this situation and made e-books available for free on their web pages and mobile applications for a couple of months.

There were only a few teachers who had actual experience in running an online class. Some teachers did not adapt well to online teaching at the beginning and did not change their plans and ideas in time to ensure better interaction with students. They just used their usual teaching resources, which were not so suitable for long-distance learning, and as a result they could not keep their students' attention. Teachers are required to change students from passive knowledge receivers to active participants in online learning,

to engage them in problem solving, group discussion, and presentation. Interaction and learning autonomy are important for online classes as they keep the attention from shifting to something else. Students may be distracted by other things rather than focus on the study material. When this happens in the classroom, teachers can reprimand them, but what can they do when the students are distracted in long-distance learning?

Furthermore, it was prohibited to use mobile phones in the classroom but suddenly electronic devices such as smartphones, tablets, and laptops were necessary to attend online courses. Most classrooms had special pockets (Fig. 6.) for phones at the entrance to prevent students from playing with their phones during class but how could teachers ensure that students were focused on learning rather than other things during the online classes? It is inevitable that some students joined the online classroom off camera and without a microphone and then go and do something else unnoticed by the teacher. It is impossible to learn anything without active participation.

- **Fig. 6.** Special pockets in the classroom to collect students' phones before the class. **Source:** Zhenhai School.

Insights from parents

The sudden shift to long-distance learning during the COVID-19 pandemic also presented new opportunities and challenges for parents. On one hand, parents have positive attitudes towards online learning and digital devices because they feel comfortable with their children at home.

"If I leave home five minutes late, I get stuck in the traffic jam for nearly thirty minutes in front of the gate. This is so troublesome," said the mother of one elementary school student. When her son began attending online class, she didn't have to worry about getting stuck in traffic jams. Moreover, long-distance learning makes it possible for parents to be involved in their children's education. Parents can read articles, download texts, and so on.
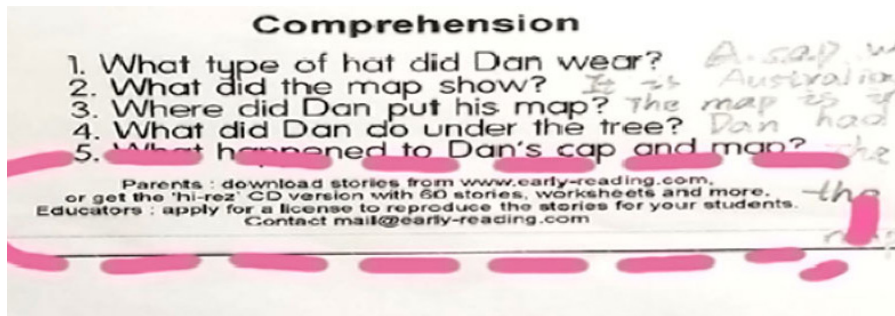
- **Fig. 7.** English learning material for children.
  Source: One of the English teachers.

The learning material in figure 7 is an example of the instructions sent by teachers to parents to prepare a story for children before class. Parents also need to help children complete comprehension questions; for example, parents can read questions for their children or play a recording for them. Parental involvement in their children's learning improve the learning efficiency and the parent-child relationship. It can be seen through the online classes that education is not only the duty of the teachers but also of the parents. In particular, parents believe that children should gain more valuable technical skills and be educated on how to use computers appropriately. Parents believed that due to the rapid development of the technology and increasingly diverse digital landscape, children's learning

competencies, self-expression, and social competencies will be improved (Lepicnin-Vodopive and Same, 2013).

Another aspect in favour of parental involvement is that the internet strengthens the relationship between parents and teachers. Talking face to face is not the only way to communicate; parents can confirm their children's progress through the class chat group with teachers any time. However, this does not mean that face-to-face communication will be replaced one day. Communicating online is convenient and includes as much information as possible, but a face-to-face meeting is more authentic as we can more easily ascertain the feelings of the person we are talking to.

Some parents, on the other hand, scorn digital media because they are uncertain about the content and the information their children are absorbing from the internet.

- "I am worried that my child is playing games when using the computer. I am not sure whether my child can gain proper knowledge from the internet" (Parent 1).

- "Although children can learn through digital platforms, the learning quality is not good" (Parent 2).

- "Children are too young to be self-regulated; they can't focus on online learning for a long time" (Parent 3).

These are the worries of only mother (1) but these sentiments are very common among Chinese parents. They are worried about the impact of digital appliances on their children's health and social development. Some parents set rules for their children on the duration of usage and limitation on how the internet can be accessed at home while ignoring the importance of their role and involvement in guiding children's technological engagement (Hatzigianni and Kalaitzidis, 2018). It is necessary to examine parents' beliefs and attitudes towards online learning in order to increase acceptance and readiness for this drastic shift under the unique circumstance that is the COVID-19 pandemic. Forming media trust is still far off.

Conclusion

During these last months, people have experienced real long-distance learning on a massive scale. At this point it is widely understood that no one can stop or slow down the development of the internet. It has already

infiltrated every aspect of the education system. From this research, I found that we are facing the challenge of building media trust in the digital age as well as learning how to use the internet in a more responsible way. There are still many areas online teaching can be improved, such as employing more advanced ICT and finding new ways to block the distractions and use time more efficiently. The teaching society should examine online learning and re-evaluate its real value. This valuable experience can affect education permanently, even in the post-epidemic period. There might be a strong push for blended classrooms in the future. Not everything is clear about media and online education, and it is difficult to predict the future due to the quick pace at which technological innovations are released but we have been provided with a unique opportunity to do more research and find more feasible online teaching solutions.

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Distance learning of first to third grade primary school students in the pandemic and psychological and social threats

Grażyna Erenc-Grygoruk

Introduction

The unusual situation that is the COVID-19 pandemic has made the use of modern information and communication technologies, including remote learning, compulsory for the youngest students, in grades one to three, of primary school.

There is abundant literature on various forms of distance learning, also in Poland (Wenta, 2013, p. 19, Juszczyk, 2003, Siemieniecki, 2006, Perzycka, 2014, pp. 123–133). Distant learning is not the same as remote learning but any education carried out with the use of the latest information and communication technologies is determined by "a complicated relationship between the teacher, the student and the medium during transmission" (Siemieniecki, 2006, p. 19). The latest research (Pyżalski et al., 2020, Doucet et al., 2020) on the use of modern technologies in remote learning indicates a number of factors influence the final result of teaching-student learning (e.g., psychological, social, didactic, educational, and organizational factors).

However, the youngest participants of the didactic process were not included in the above-mentioned studies. The observations of the author of this study (a longtime practitioner) conducted distance learning with students in grades one to three of primary school during the pandemic and noticed disturbing behaviour in the process. These are a consequence of the psychological and social threats resulting from the use of distance learning.

Based on an analysis of theoretical sources and practical knowledge, these threats were developed around two broadly understood aspects. The first psychological aspect covers issues related to students' maladjustment to a large amount of and quickly "provided" information, media abuse, children experiencing crises in various phases as well as stress, which is not always mobilizing, and the lack of active observation during distance learning. The issues in the second, the sociological, sphere include, among others, student-student and student-teacher relationships, which are expressed in difficulties shaping social competences, support climates, and a community of action, and the failure to motivate to act or failure to provide models to follow.

Remote learning during a pandemic – theoretical context

Remote learning equated with e-learning (in other words, e-education) has been defined as "distance learning using computers and an IT network that enables the learning process to be carried out regardless of place and time (synchronous and asynchronous), where the emotional and volitional sphere is involved" (Tanaś, 2015, p. 237). In other words, remote learning is a modern form of the intentional transfer of knowledge to students by the teacher while shaping their skills using modern information and communication technologies, taking into account the basic links of the educational process (i.e., rules, goals, selected methods and forms, means used, teaching, and control and assessment). Remote learning, like all remotely controlled processes, is subject to many regulations and should meet strict requirements. An important parameter of such education is the general nature of the whole process along with the links (links in the teaching process, but also between students, teachers, and parents), which constitute the basis of its functioning. As part of distance learning, teachers and students can use the Moodle platform, Microsoft Office 365

for education along with MS Teams, the Google Classroom, and other platforms available in schools. The student who is not always able to cope with modern technology becomes an important link in the didactic and educational process. Therefore, a student in grades one to three is faced with psychological and sociological challenges. threats.

Remote teaching and psychological challenges for children/students

A pandemic is an extremely difficult time for society's youngest members as disturbing information about, for example, the threat of the disease or the death of their loved ones can reach them every day. Moreover, compulsory distance learning for primary school students has put them in a learning environment that is difficult for them to understand.

An important threat that occurs when a child comes into contact with electronic media is a biological maladjustment to the excessive pace of information provision during distance learning. A child's senses cannot adjust to the amount and speed of information reaching them.

The results of the online research conducted in a total of thirty-four primary and secondary schools across Poland (from May 12 to June 12, 2020) indicated the disturbing consequences of distance learning for students (Pyżalski et al., 2020, Perzycka, 2021). The authors of the report found that symptoms of digital media abuse in students are visible: fatigue, information overload, reluctance to use the computer and the internet, and irritation due to the constant use of information and communication technologies, the so-called digital overwork.

- A child's 'crises' related to distance learning

The overabundance of information provided at a rapid pace in distance learning can also cause children to experience various types of crises, which then impede specific activities, e.g., learning, playing with their peers, playing sports. According to R. K. James and B. E. Gilliland, a crisis is a reaction to "an obstacle that at this time is insurmountable with the usual methods of solving problems" (James, Gilliland, 2006, p. 25). As a consequence, it is a state of disorganization in which the child experiences a sense of fear, shock, and difficulties related to the experience of a certain situation.

A crisis is therefore not an event **but a child's reaction to an event**. In addition, crises are limited in time and usually last no more than a few weeks. If the child has been overworked they can lead to serious disturbances in the child's behavior, including suicide. In other words, for a child, a crisis is a subjective feeling of an impossible situation, usually accompanied by a sense of pain and suffering.

In distance learning, a student in grades one to three of primary school may experience crises that will result in the loss of their ability to act and to control themself and their life. If the child exceeds the existing ways of coping with difficulties, their life cycle is disturbed and disorganized (Jagiela 2009, pp. 38–45; Perzycka, 2020).

Most often, the beginning of a crisis manifests in the form of growing negative emotions, e.g., fear, uncertainty, and anger. At the same time, adaptive reactions set in, i.e., the child looks for information about the situation that has arisen, looks for support from relatives, or escapes into substitute activities. The next stage of the crisis is the child feeling stuck in an unchanging situation, with stimuli still flowing into them. As a result, they feel helpless and even frustrated. In the third stage of the crisis, discomfort grows in the child, and they reach for extraordinary internal or external measures (playing with blocks, drawing, teasing others, etc.). "If the third stage of the crisis is not eased, it progresses to an acute stage which takes the form of **severe behavioural dysfunction or loss of emotional control.** The fourth phase of coping with the crisis is actually experiencing the consequences of the inability to cope with the existing situation" (Poleszak, Pyżalski, 2020, p. 9). In this case, the child may fall into apathy or helplessness, which in turn manifests itself in depressive thoughts, and emotional instability, manifested in the form of neuroses, phobias, and psychosomatization. This mechanism of creating negative emotions in a child related to the constitution and occurrence of a crisis in remote learning shows the complexity of this problem. When conducting classes in a remote form, the teacher may interpret various stages of the child's crisis, most often, as a reluctance to cooperate or simply laziness. Therefore, the role of the teacher conducting remote learning is invaluable as they should notice the first signs of crisis in the student and counter them (with a nice conversation or various interesting tasks).

- Active observation during distance learning?

When discussing the psychological dangers of distance learning, one more important element should be noted: **active observation**. In traditional teaching conditions, according to J. Piaget's compositions, "knowledge about objects is built only through active observation (the so-called observation by action), then it will allow the child to construct their properties in a meaningful way" (after: Krauze-Sikorska, Kuszak, 2010, p. 105). First the child collects information involuntarily but over time acquires it consciously. In addition, the child's perception of the world, defined as spontaneously directed visual information, consists not only of visual cognition but also of the activation of many sensory experiences, e.g., auditory, taste, olfactory, motor. Therefore, the perception of a student in grades one to three is influenced not only by observation but also by information obtained from the other senses. The perceptive assessment of a child (e.g., of an object or situation) is an assessment shaped by the sum of many perceived "experiences" recorded in their memory. By the way, it should be mentioned that cognitive models of depression assume that the cause of emotional and behavioural discomfort is disturbed cognitive functioning: perception, recognition, attention, reasoning, and evaluation (Beck, 2005). According to Krauze-Sikorska and Kuszak (2010, p. 105) *the empirical analysis of phenomena related to the effective use of the senses in the learning process shows that the lack of basic skills in this area often prevents a child from developing its existing potential. It makes an individual a passive recipient who becomes helpless in the face of stimuli attacking him, is unable to perceive and analyse phenomena, and thus is unable to respond to them according to his own system of values.*

Teachers especially should bear this in mind when providing their students with a rich source of information during distance learning.

- Stress and distance learning

The current situation related to the use of distance learning in the process of educating students is not indifferent to the developing brain. Pupils in grades one to three of primary school may perceive such a situation as a threat and so it becomes a strong stressor – a factor that activates the relevant parts of the hypothalamus and amygdala, or, more broadly, the limbic system. "As a result, their action creates a kind of cognitive filter

that causes states of the nervous system distant from those that favor cognitive activity, motivation or interest" (Kaczmarzyk, 2020, p. 24).

Anxiety related to the lack of the ability to efficiently use modern technology can also cause stress in students in grades one to three. The technology itself – especially the impact of waves on the nervous system of high frequency, the so-called spectrum of light emitted by computer screens – may favour the development of a child's cognitive potential but in excess it can trigger a stress reaction. The possible negative consequences of chronic stress in school children include eating disorders, low self-esteem (lack of self-confidence), withdrawal from social contacts, sleep disturbances (insomnia, constant fatigue, excessive sleepiness), various conflicts, and aggression as well as a deterioration in school performance and a decrease in the commitment to learning. Keeping in mind the negative effects of chronic stress on students, teachers should diversify activities during distance learning – not only "screen tracking" but also involving the student in writing, reading tests, drawing, moulding, and so on.

- Reflective and impulsive style of the student and distance learning

The author's experience shows that during distance learning, some children gave quick answers with a lot of errors. In practice, students can use two styles – the so-called reflexive cognitive style or an impulsive cognitive style. In the case of the former, they need more time to reflect when distance learning and tend to make fewer mistakes than children with impulsive cognitive styles. These individual differences in reflectivity-impulsivity in younger children are related to the maturation of the frontal lobes of the brain responsible for cognitive control. At the same time, stress is a natural enemy of remembering and learning anything for every child. This is one more reason why caring about the teacher-student relationship and understanding both the needs and emotions of each student in distance learning should become the basic principle of teaching action.

Other student/child factors and distance learning

After one remote PE lesson, for which the teacher had prepared with great care, searching the internet for fun age-appropriate exercises,

one of the students said, "Enough of this nonsense!" This statement shows that the reception of distance learning as a form of digitally assisted activities depends not only on the psychophysical characteristics of the child and the maturity but also their health at a given moment (e.g., whether the child is well fed and fully motivated for science). There is no doubt that diagnosing a student's current emotional state – although extremely difficult in distance learning – is extremely important to their learning process.

Remote learning and sociological threats in children/students

The first years of school (E. H. Erikson's theory) is the most important stage not only from the point of view of cognitive development but also the social development of a child. Starting school is associated with significant changes in children's social environment and thus also in the way they function. The nature of the relationships that children establish at this stage of development largely shapes the course of their further life in the context of relationships with other people, the ability to cooperate, and empathy.

- Relationships with peers and teachers

A nationwide study (Pyżalski et al., 2020) found that more than half of the student participants believe that peer relations in the class are better than before the pandemic. In turn, every fifth student spoke about positive relationships with their educators before the pandemic. On the other hand, in the independent report "Thinking about Pedagogy in an Unfolding Pandemic" (Doucet et al., 2020) on distance learning, a basic priority was, among others, meeting the needs related to social relations (Pyżalski, 2020; Pyżalski, Poleszak, 2020). These results show the great importance of the student-student, student-teacher relationships in the process of education in traditional education. To confirm the above thesis, the author of the study quotes his students who during distance learning complained about the "lack of contacts with friends" and "lack of contacts with teachers". One of the third graders said that at first he was glad there would be a little break but after a while he started to miss everyone; behind all the noise at school, he missed his teacher and friends. In addition, the students declared that they felt lonely and that they were overwhelmed by laziness (literally, "laziness has already caught me").

- Relationships only with peers

The rich list of stressors in the sociological sphere includes the aforementioned lack of contact with colleagues. In traditional education, this accompanies relationships with peers – the most important element uniting the group, cooperation, "doing something together"; otherwise, a community of action (Bee, 2004, p. 302). Students are usually deprived of such opportunities to gain experience together during distance learning. At the same time, during their numerous traditional-school interactions with classmates, the students develop social speech. According to J. Piaget (1992, p. 40), a student/child "shares his thoughts with others, informs the interlocutor about something that may interest him and influence his behaviour, or there is a real exchange of thoughts, discussion or even cooperation in pursuit of a common goal". Interactions with peers become for a child "not only a source of satisfaction but also favour the development of a number of social competences, i.e., empathy, compliance with norms, the ability to cooperate and perceive problems from different perspectives or to conduct a discussion" (Kamza 2014, p. 27). Of course, the interactions between the students themselves also begin to create a supportive climate for the participants (Petlák, 2007, p. 14). The feeling of community or isolation and the number and quality of peer contacts largely determine the atmosphere in which the child's various activities are triggered. Moreover, the quality of early peer relationships is a predictor of later developmental achievements in adolescence and adulthood (Karwowska-Struczyk, 2009, p. 367). Thus, for a child in real interaction with other students – in the initial education process – the peer environment becomes important as a reference point for self-evaluation (building self-esteem as per E. Erikson). For students in grades one to three of primary school, the peer group creates an environment for the development of a mentally healthy individual by providing expanded knowledge about the world, creating an axionormative system, and providing patterns of behaviour and a system of rationalization and motivation of a child's own actions as well as satisfying the unavoidable mental and social needs of the individual (Perzycka, 2019, pp. 253-2606; Wysocka, 2007, p. 364).

In traditional teaching, children interact with each other in personal relationships but also learn from each other; they can support each other due to their equality. Within the group, one can also observe the phenomenon of peer learning initiated by children called tutoring. In addition, the peer

group gives the child/student opportunities to develop skills, among which we can distinguish subordination, self-control, and insight into the essence of social relations. Interactions in the traditional classroom provide various opportunities in which to express opinions.

J. Uszyńska-Jarmoc (2007, p. 315) studied how positive child behaviour facilitates social relations in the creative process of primary school students in grades one to three in the opinion of teachers (CBI questionnaire study). The results of the research confirmed the thesis that the constant characteristics of students (high stability of expression, level of kindness, average level of persistence) facilitate social relations in the group. In an interview with the author of the study, the students noted the negative effects of distance learning, including "no motivation and no competition."

Especially in the peer group, the positive reactions of its members (delight, admiration) during the process of creating (work) play an important role in the process of the child/student's socialization, motivation, and healthy competition. This is often more important than the positive reactions of parents or teachers. The flattering reactions of children can contribute to high self-esteem, which in turn will strengthen self-confidence and stimulate the child to further activity. In school conditions, the effectiveness of the support climate for a child depends not only on their social integration with the group but also on the quality of the level of interaction and bonds between group members. In the situation of traditional teaching, support primarily means being next to the other person (student – student, student – teacher). Such contact with another person does not require sacrifice but a reflex of the heart, kind and disinterested help (Gaś, 2003, p. 10). In contrast, remote learning relationships cannot be "real".

- Relationships with teachers only

In turn, the cooperation of the student with the teacher is the basis for the development of the ability to use support. The teacher can stimulate the acquisition of new knowledge (motivate) and shape skills as well as create an opportunity for the child to search for authorities and follow them. In the student-teacher relationships in traditional teaching, it is possible to negotiate positions, rationalize polemics, or seek consensus. Distance learning does not make this possible.

- Positive effects of distance learning?

As well as the negative effects of distance learning on students in grades one to three of primary school, its positive results should also be noticed. In interviews, students declared that remote learning contributes to spending time with parents and family. Another positive aspect is that working "alone" may contribute to students' independence, responsibility, and work planning skills, as well as diligence in cooperation with others. In turn, the developed sense of independence of the student/child should be a valuable resource in adolescence, when there may be a temporary breakdown of faith and hope in one's own abilities. I hope that the new category of people J. Morbitzer called "electronic reclassers" will not grow. "They can use computer devices very well, but they are completely helpless in establishing contacts between people, like camaraderie, friendship, love" (Morbitzer, 2007, p. 316, Tanaś, 2015).

Conclusions

The subject of the considerations herein focused on two aspects of threats related to remote learning, with the theoretical premises enriched by the observations of the author of the study. The first aspect concerned the psychological sphere of students in grades one to three of primary school, and the second concerned their social sphere.

On this basis, it should be stated: 1) the list of threats is quite long and the effects are unpredictable as research in this age group has not yet been undertaken, 2) psychological premises indicate that a child in distance learning:

- may become disobedient (e.g., anxiety), which may be due to a crisis and should not be equated with passivity or laziness;

- is not biologically adapted to the excessive pace of providing information during distance learning, which contributes to stress;

- may become helpless, lose the sense of the ability to act on their own, and may become reluctant to use ICT (the so-called digital exhaustion).

3) As part of the sociological dangers of distance learning, it should be noted that:

- there is no community for action or a supportive climate; there are

difficulties in shaping social competences and there is no model to follow;

- taking care of the student-student, teacher-student relationships and understanding both the needs and emotions of children in distance learning should become the basic principle of teaching activities.

Therefore, knowledge of the laws governing the development of students in contact with remote learning and the dangers awaiting them should be a factor in the classes designed by the teacher.

The considerations presented in the text present only a fragment of the issues related to the dangers of distance learning in the psychological and pedagogical sphere of a student/child in grades one to three of primary school. I hope they will be a trigger for a large-scale study.

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The Use of High Technologies in Educating Children with ASD in Clarendon Primary Centre in London – Case Study

Danuta Włoch

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*The most important "educational technology"
in a school is a teacher.*

Maciej Sysło

Introduction

We are living through a historic period of technological change brought about by the development and the widening application of information and communication technologies (ICTs). This process is both different from, and faster than, anything we have seen before. It has huge potential for wealth creation, higher standards of living, and better services.

ICTs are already an integral part of our daily life, providing us with useful tools and services in our homes, at our workplaces, and everywhere else. The information society is not a society far away in the future but a reality in our daily lives. It is adding a new dimension to society as we know it – a dimension of growing importance. The production of goods as well as services is becoming ever more knowledge-based (European Commission, 1996).

The European Commission wrote enthusiastically and optimistically about the new opportunities and benefits of technological achievements in 1996. Just two decades later, in 2018, the World Health Organization has added addiction to computer games to the list of mental health disorders, and the Health Service in England has opened the first specialized clinic for children and adolescents to treat them[1].

The indisputable fact is that achieving success in both our and our children's lives depends on the skillful application of technological competences, but developing a healthy balance turns out to be a difficult task. In this paper I will focus on the positive aspects resulting from the achievements of modern science and information technology and their application in the education of children with autism spectrum disorder (ASD), taking the example of the Clarendon Primary Centre in London.[2]

I narrow the concept of technology to didactic technology or educational technology and will present ways of using information technology, including the internet, to develop the communication skills and learning of children with whom I work at the Clarendon Primary Centre, and methods of using *high-tech* devices because, when used purposely, they become extremely effective tools in the educational process.

The use of modern technology not only increases students' knowledge and improves their skills in various fields: communicating, presenting knowledge, obtaining the necessary information, or using devices in the field of information technology, but also becomes an effective (if not the only) tool for working in the teaching and learning processes during the global coronavirus pandemic in 2020.

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1   Gaming disorder is defined in the 11th Revision of the International Classification of Diseases (ICD-11) as a pattern of gaming behaviour ("digital-gaming" or "video-gaming") characterized by impaired control over gaming, increasing the priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and the continuation or escalation of gaming despite the occurrence of negative consequences (WHO, 2018).

2   Clarendon is a special day academy for pupils aged 4–16 with moderate learning needs, many of whom have additional complex needs, including autism. There are places for 140 young people (50 primary and 90 secondary), usually in classes of around 12. According to the Ofsted inspections in June 2014 and January 2019, the school remains outstanding. All pupils attending the school have education, health and care plans. Clarendon school is a place of learning for everyone, where all staff and pupils are encouraged to achieve their personal best (Clarendon School, 2021).

Ela – case study [3]

Ela has a diagnosis of ASD as well as severe learning difficulties (SLD). She joined Clarendon in September 2015 and has been receiving weekly input from the speech and language therapy team, including a termly communication programme devised by the SLT and implemented by the school staff. Therapy input has consisted of a combination of group and 1:1 sessions, focusing on developing attention and listening and social interaction skills, as well as building on her use of the Picture Exchange Communication System (PECS) to support expressive communication.

The following report was completed after observations within the classroom setting and during therapy sessions when she started her journey at Clarendon.

Special educational needs

Ela had significant language and communication needs in line with her diagnosis of ASD and SLD.

She was unable to consistently communicate her needs and opinions verbally, which affected her access to the curriculum and her ability to interact with others in her environment.

Ela's comprehension of verbal language was significantly delayed. She was benefiting from language being simplified to an appropriate level (1–2 key words) and supported visually with signing and symbols.

She had difficulty maintaining attention to adult-led activities that are of little interest to her. She also had difficulties attending to a lead adult within a group setting for prolonged periods. She was benefiting from continued support to develop her attention skills in order to complete learning tasks of increasing length independently.

Ela could take turns with a peer with adult guidance during classroom activities of low motivation to her. She was benefiting from support to build on her awareness of her peers and her role within a group through taking on roles and completing shared activities with adult facilitation.

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3 Name has been changed for publication purposes.

She enjoyed engaging in a range of simple pretend play sequences. She usually chose to play alone; however, she was happy to play alongside peers and allowing an adult to join her play. She constantly needed guidance to extend her sequences and add new ideas as well as invite a peer to play for a short period.

Ela was unable to express her feelings verbally using emotional vocabulary. Adults used emotion words or cards to help her describe her feelings throughout the day, as well as the feelings of others in her environment. Ela should be given frequent opportunities to comment on activities and how they made her feel throughout the day (e.g., I feel happy/sad/excited; it's fun/boring/difficult).

Ela's behaviour often impacted her ability to process instructions or carry out what was asked of her (screaming or running from the class).

Ela was making excellent progress with her use of PECS to make requests throughout her daily routine and across a range of activities. She was learning to use 'I see + item' to comment during structured activities (Phase VI); however, she was not able to consistently discriminate between comments and requests.

She had the opportunity to trial high-tech symbol software (Grid 2) in the spring term and responded well to this, building two to three cell symbol sentences in order to make requests during motivating activities.

It opened a new chapter in Ela's learning adventure…

High-tech AAC goals identification to develop communication skills with the Grid 2 software and Proloquo2Go

AAC (augmentative and alternative communication) tools include those electronics that generate speech and are used to supplement or replace conventional conversation. These devices are often referred to as SGDs: speech-generating devices. They are dynamic and respond by speaking or navigating to different vocabulary based upon activations of symbols by the communicator. Furthermore, many high-tech AAC systems include an onboard camera to support the quick capture of personalized memories and images in addition to the option to connect to the internet to send emails, download additional images, and participate in social media (Jenifer, Ganz, 2019).

Ela started working with the Grid 2 software. It was then the only tablet in the school with the AAC program. However, due to the increasing use of technology at the school, iPads were purchased to provide wider access to alternative communication for a larger group of students. So, we moved on from Grid 2 relatively quickly, which was quite sluggish and often crashed, making it time-consuming to use.

The application Proloquo2Go had the ability to take photos and create a communication grid, which significantly simplified the work and allowed for the popularization and use of alternative communication with more nonverbal pupils at school.

Later in my thesis, I only refer to Proloquo2Go (iPad application), especially since Grid2 has been discontinued.

To support Ela's communication it was essential to propose outcomes considering her level of communication and motivation. To start, the following targets were set: 1) Ela will use the iPad to comment using 'I see +' within a structured 1:1 activity with three out of four attempts accuracy. For example, I see a girl, I see a dog; 2) She will use the iPad to comment on/request colours, shapes, or sizes using 'I see/I want + colour/shape/big/little' within a structured 1:1 activity with three out of four opportunities; 3) Ela will request items at snack time using the iPad to construct 'I want + desired item' as food was very motivating for her and showed the immediate benefits of communication; 4) Ela will use the iPad to comment using 'I hear + item' within a structured 1:1 activity.

Ela started using the iPad consistently in most of the lessons and school activities along with the unwavering support of the entire teaching team (teacher, assistants, speech therapists, art/music therapists, etc.). Everyone was obliged to undergo training in order to learn how the software works and to quickly find the necessary symbols (pictures and photos at first). It also required prior preparation for most lessons and checking that the device had the required options/hints and selections.

Ela's list of favourite activities and games gradually grew according to her progress. She began to see the advantages of being able to participate in discussions during the lesson, express her opinion, or ask for something. We also prepared sabotage tasks; for example, a pencil, a ruler, or crayons was missing, and she had to ask for it first.

Ela loved to talk about feelings so the variety of symbols was broadening. Photographic memory allowed Ela quickly find the necessary options and start learning the spelling of words.

Of course, the traditional teaching options were also used, reinforcing the symbols with Makaton[4] gestures; for example, to ask "yes" or "no" when it was not sure whether the suggested answers were the ones Ela needed. Ela was also encouraged to say the words that described the picture (as a rule, the word was always under the symbol but in the initial phase the emphasis was mainly on recognizing the picture).

Ela started displaying verbal behaviours but it was not possible to guess the meaning of the sounds at that time. Each, even the smallest "a" for "apple", was lavishly rewarded with shouts of joy to make her understand that, along with finding the picture in her iPad, we promote sounds/words even more. In addition, we were learning to understand Ela.

There has never been any doubt that, with her enormous number of sounds, she has a good chance of talking when she realizes that this is what is expected of her.

Speech is an extremely complicated process for most students with ASD and it often helps to combine symbols or even an object of reference with the spoken word to make the process more concrete and visual.

Although this paper describes high-tech approaches, there is more than one method that can be used. Usually all available means are used to strengthen communication between the child and many partners, because children with ASD, when they begin to communicate, tend to do so with the person with whom they have established the best relationship.

Sessions of handwriting were also provided although the formation of letters and fine motor skills were challenging for Ela. However, it was an integral part of the overall teaching process and she began to cope with the tasks set for her surprisingly well. After months of hard work and effort by the entire team, a need for new tasks arose.

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4 I am talking about a unique language programme that uses symbols, signs and speech to enable people to communicate. It supports the development of essential communication skills such as attention and listening, comprehension, memory, recall and organisation of language and expression.

Educational programs and interactive devices used in Ela's curriculum

In this part, I will describe the applications and tools most often used in teaching to read, write, count, and develop the imagination.

One of the most common is Clicker. Initially, Clicker 7 was used on a computer connected to an interactive whiteboard, followed by Clicker Connect and Clicker Books operated on the iPad.

This program is especially helpful for learning to spell words/sentences when a child does not have enough hand muscle strength to hold a pencil or pen. Electronic writing is often the only solution (although in many cases the use of a mouse on a computer is impossible and a touchscreen or interactive whiteboard is a good alternative). Ela was no exception.

Clicker 7 is ideal for this because at the beginning of learning, after entering the first letter, it suggests the rest of the word in the bottom box and allows learner to choose this word. At a later stage, we do not provide these hints and the students must try to write the word by themselves. The programme worked well for Ela due to her photographic memory. What is most interesting is that after writing a word or the entire sentence, the program enunciates it in a programmed voice (male or female, with an English or American accent), which is very motivating for children and gives them a way to speak.

Of course, this is just one of the options, and there are many more. In the "Learning Grids" folder, there is a lot of ready-made materials – from learning to write sentences and counting through the seasons to special occasions such as Mother's Day. It is a valuable program that you must have a license to use.

Clicker Books makes it possible to combine photos into a story about activities/games from the previous day or week; we use it when, for example, we want to teach children the concept of the past tense or recall past activities.

Another important tool is the computer program "Doorway Speller", and it is free of charge.

In addition to the selection of materials for learning literature, counting, time, and memory games, it has the spelling option, i.e., first shows the learning word for a few seconds then covers it, and the children must try

to recreate it by themself. This teaches not only how to write but also memory, independent work, and patience. At the end, the results can be printed out, which tells the teacher which words the pupil still needs to practice.

Learning the concept of time in the above program, which we can set ourselves, is also interesting. Another important option is learning to form letters or numbers. First, the program shows how to write a given character with a ball moving over it, and then the child, by touching their finger, moves it by themself. This is a very important skill and Ela genuinely liked the activity. This laid the foundation for handwriting as the hand muscles strengthened.

Another application that strengthens the work of muscles and memory is Glow Draw for which children must develop the ability to plan and execute gross motor skill actions. With handwriting tasks, this motor planning requires muscle groups to work together with the proper force, timing, and actions to produce an acceptable outcome (i.e., legible handwriting).

The act of forming letters requires many steps. The more steps required to complete an action, the higher the levels of motor planning. Research has indicated that children with decreased motor planning skills exhibit poor legibility of handwriting compared to their peers (Tseng & Murray, 1994).

Another extremely useful educational program is Nessy Reading and Spelling, for which a paid license is required. This is an amazing resource, containing hundreds of lessons packed with video strategies, motivating games, and supporting printable worksheets and card games. Each student learns independently and at their own pace, gradually building confidence. The program starts with a fun assessment that identifies exactly where the student needs help then guides them through target lessons. Teachers can adapt the targets and use the program as a supplement for their lessons. Parents can also use Nessy at home to help their children as it does not require a specialist teacher. The incremental structure systemically develops phonemic awareness, phonics, blending and segmentation, sight words, reading fluency, spelling, vocabulary, and comprehension (Nessy Reading and Spelling, 2021).

Twinkl and Busy Things are also extremely popular educational programs among teachers. Both contain myriad excellent educational resources. Twinkl requires a license and is intended for children up to the age of 15, i.e., the end of secondary school (KS4). It is created by teachers and provides ready-made lesson plans. Busy Things, for children under 11 (end of primary

school) and operated by the London Grid for Learning (a school community and local authority), provides schools with secure, high-speed broadband and network services for which a subscription is required.

There are, of course, countless other programs but the above-mentioned ones were used consistently and systematically when working with Ela.

I would like to mention that during the closure of most schools in England during the coronavirus pandemic (special schools remained open), all the programs mentioned above offered a free service for parents. It was a valuable resource for the children's guardians.

Electronic devices used to operate programs

In addition to computers and tablets, interactive whiteboards (IWB) are becoming more popular and an integral part of the equipment of school classes in England. Clarendon School is no exception. The IWB is a screen connecting the projector and the computer so it is possible to use fingers on the board as if it is a touchscreen, use digital pens to annotate, and create digital files of anything that is on the board. This greatly facilitates the work of teaching children with ASD, who are usually very motivated to use them.

New Ofsted requirements (Office for Standards in Education) released in 2017 require that children are introduced to a range of the technologies used in places such as homes and schools. They must identify, select, and use technology. Additionally, children need to explore and play with a wide range of media and materials as well as be provided with opportunities and encouraged to share their thoughts, ideas, and feelings through a variety of activities, including technology (Department for Education, 2017, p.12).

The addition of a touch screen table into Clarendon School is an example of meeting those guidelines and is perfect for individual work as well as for facilitating the cooperation of several (a maximum of four) children.

Conclusion

All the educational programs, computer applications, and electronic tools described in this paper contributed significantly to Ela's above-average

school achievements. According to the Social Partner rank (before words)[5], she has reached the last rank of Language Partner, which means she is now able to: 1) use the language to greet, turn taking, calling out for others; 2) listen and speak to people about something by providing information about immediate, past, or future events; 3) use appropriate body posture and intonation for the context; 4) use a variety of sentence constructions, e.g., I can see..., I would like..., My name is..., The dog is brown, etc. Including writing, however with spelling mistakes and in not clear and eligible letter formation; 5) use language to ask for help or a break; 6) use socially appropriate behaviour strategies; 7) use planning and preparing ahead as a strategy for self-regulating during transitions.

Research results confirm that increasing the effectiveness of using electronic messengers establishes and maintains social contacts and activates speech in children and adults with autism and limited communication skills (Ganz, 2015; Mirenda & Erickson, 2000).

Ela is now a happy teenage girl who sees more benefits of communicating with others (the program lasted five years and this is the year she graduated from primary school and entered Clarendon Secondary). In the final year of primary school, the children of the last year of primary school transfer to secondary school for a trial period of two weeks. Ela passed her life exam with flying colours, scoring the highest number of points of the entire group, even though there was initial stress associated with the change.

It should be noted, however, that this was not only the result of the use of technological achievements of science and technology but also a tremendous effort by the entire team to find the best solutions for motivating Ela and disciplining her, because this was the biggest problem.

Along with technological solutions, traditional observations and low-tech[6] symbols and methods were used to enable Ela to understand what

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5 I am talking about the SCERTS program developed by B. Prizant, A. Wetherby, E. Rubin, and A. Laurent in order to measure the progress of an autistic child when it cannot be done using traditional methods due to communication difficulties. The Clarendon school uses the program when the reading, writing, or numeracy test cannot be used (Prizant, Wetherby, Rubin, and Laurent, 2003).

6 Educational aids with a low technological level that do not require the use of electronics and thus do not generate a voice. These are, for example, gestures, words, or signs that do not require additional equipment
 (Ganz, Simpson, 2019).

was required of her, such as a laminated board with "work first and then play with water" written on it, appealing to her biggest interests. Without it, we would never have moved forward as Ela would often scream (distracting the rest of the class) or run away when she didn't understand the task or avoid it as it was a new challenge[7].

Very often she needed support to face the challenge. Temple Grandin calls it *loving pushes:* "Mother knew that she had to "stretch" and lovingly push me just outside my comfort zone so I could develop to my fullest. She was always urging me to try new things" (Grandin, 2015, p. VII).

There are countless technological achievements used in the education process: computers, tablets, laptops, smart tables, and many educational programs and applications connected to the network, but these are only tools in the hands of the teacher. Ela made outstanding progress due to her teachers' competence and commitment, as well as Ela's interest and motivation to use the tools.

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7   K. Markiewicz writes more about this type of behavior called acting out in the book *Communication Possibilities of Autistic Children.* These behaviors are a kind of discharge, emission of tension outside, when due to limited communication possibilities, it is not understood by the environment. (Markiewicz, 2004).

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The Educational Capabilities of a Mobile Phone

Krzysztof Łuszczek

Introduction

Mobile technologies have changed the way people communicate and work. Being online has become easy and natural. Online education is possible just as it is possible to work anywhere we can connect to the network. The specific manner of developing the global computer network, which has an open architecture, also works in favour of this. The second major revolution for the mobile phone, after its invention in the early 1970s, was its transformation into a smartphone. Apple's presentation of the first iPhone in 2007 foreshadowed this event. It was not only a new design but also a completely new philosophy with new functions and capabilities. The popularity of this device among young users (even though its use may lead to neurotic behaviours) and its increasing capabilities naturally make it a tool that can be used for education. The mobile phone, and especially the smartphone, has become an element of the broad reality

that we call mobile learning. The education process is carried out with the use of mobile devices and platforms that provide broad and convenient access to educational news and content. They also provide communication between teachers and students (Gautam, 2018).

A brief history of technological mobility

The mobile phone did not take the world by storm. It was a rather long and costly process. The traditional telephone was invented by A. G. Bell in 1876 (Levinson, 2004). Over time, attempts were made to make its use more convenient and add new functions to it. However, not all of them were accepted by users and were either abandoned or used to a very limited extent. In 1964, the videophone was introduced to the market but there was no demand for such a telecommunication service (van Dijk, 2010).

Attempts to create prototypes of mobile phones took place in the United States as early as the 1940s and 1950s. Introducing mobile car phones has held back work on cellular telephony for a long period. The Motorola company installed them in the private cars of its customers. They were popularized by films such as *Sabrina* (directed by Wilder, 1954) with an excellent cast (incl. Bogart and Hepburn), whose characters willingly used phones installed in cars.

Some people date the invention of the car telephone to the beginning of the 20th century and associate it with L. M. Ericsson, the founder of a large telecommunications corporation. J. Meurling and R. Jeans believe that he was the first to install a telephone in a car. He retired from active life and settled on a farm in Sweden in 1910. It was there that he constructed a telephone that he installed in his car. However, it was not a classic wireless telephone. In order to make a call, the car had to stop and use wires mounted on special poles to connect to the telephone line along the road (Meurling and Jeans, 1994). Representatives of Ericsson question this story but do confirm that at that time work was carried out concerning such technology and it was available (Agar, 2004). In the United States, experiments were carried out on devices for transmitting or receiving voice calls, and attempts were made to combine such devices. Descriptions of such attempts can be found, for example, in 1920 in the Ohio state press (Novak, 2012).

Mobile car telephony technology developed after World War II and reached its peak of popularity in the 1970s with the development

of networks such as *Autoradiopuhelin*, which took advantage of a car's battery and external antennas. However, there was no smooth signal transition between individual transmitters (Meraj, Kumar 2015). The most advanced research was conducted by Motorola, in competition with AT&T. It had extensive experience in this field in part because of its work preparing telecommunications solutions for US space missions. It is precisely thanks to the work of Motorola that a breakthrough was made on the path to complete high-quality mobility.

Motorola engineer M. Cooper is widely considered to be the constructor of the "modern" mobile phone. He took advantage of his corporate experience in the field of telecommunications solutions, but the images present in popular culture at that time (e.g., those from the 1966 – 1969 series *Star Trek*) were also of great significance. Even though AT&T had already developed the concept of mobile telephony in 1947, it could not compete with Motorola during the 1950s and 1960s. On April 3, 1973, M. Cooper made the first call using a completely new system by calling a colleague from a competing company (Alfred, 2000). Motorola became the leader behind the development of the mobile phone system[8].

However, there was a long way between the first conversation and a wide popularization mostly due to the lack of adequate infrastructure. It took almost a decade for the mobile phone to become generally available to users. However, there were still many problems to overcome. The Motorola DynaTAC 8000X phone, made available in 1983, cost almost USD 4,000. It was also large and its communication capabilities were very limited. The battery lasted for thirty minutes of conversation at most. It took a few years for the mobile phone to become smaller. The Motorola MicroTAC phone was introduced to the market in 1989. It measured almost 23 cm and weighed nearly 400g. The battery lasted for ninety minutes of conversation. Despite a significant improvement in terms of the technical capabilities, the price was still a problem. MicroTAC cost USD 3,000 (Peng, 2019).

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8 Technical descriptions of this first connection with a simultaneous development perspective of the DynaTAC system (Dynamic Adaptive Total Area Coverage) are still available on the company's website at: https://www.motorolasolutions.com/content/dam/msi/docs/en-xw/static_files/history-motorola-demonstrates-portable-telephone-605kb-3.pdf.

Even at the beginning of the 1990s, a mobile phone might have been regarded as an expensive gadget in the United States. In an episode of *Columbo* – "Butterfly in shades of gray" – a mobile phone appears as a kind of technological gadget (Dugan, 1994). In the film, the main character only gets to know the device and considers the possibility of using it to communicate with his wife; there are also echoes of the first discussions concerning the phone's harmful effects.

The 1990s were a good time for the development of mobile telephony. A number of new players appeared on the market, and the competition and technological innovations led to improvements and, above all, lowered prices. One of the most important ones was the Finnish company Nokia. In 1987, it launched the Mobira Cityman phone model. However, the real expansion of Nokia took place from the 1990s to the beginning of the 21st century. Nokia launched an entire series of phones that long set the standard when it comes to mobile phone production (nokiamuseum.org 2021).

When it seemed that the situation in the field of mobile telephony had stabilized, that new functionalities or designs would appear from time to time at most, a real revolution took place. Even though many companies (e.g., BlackBerry and Nokia) tried to experiment with smart phones, the real breakthrough took place on 29 June 2007 with the premiere of the very first iPhone. It was a smartphone that combined the functions of a mobile phone, entertainment platform, and internet messenger. Apple set completely new directions for the development of mobile phones in the following years (Montgomery, Mingis, 2020). The mobile phone became an intelligent platform that can be used for various types of activities as well as storing content. Mobile phone applications became as important as desktop software. Mobile communication began to push the development of social networking sites, e-commerce, and e-administration. Is there a place for educational content on mobile platforms?

Education challenges in the age of COVID-19

The COVID-19 epidemic has had a significant impact on education. What was an educational routine so far has become inadequate. ICT has become not so much a fashion as an educational need. Teachers, pupils, and students are facing a new educational challenge. The education management systems also have to cope with the new reality. At the

peak of the COVID-19 epidemic's first wave, in April 2020, schools in 195 countries around the world were closed, which affected 1.6 billion students. Two months later, 422 million high school students were still not covered by traditional education, which also significantly complicated the examination system worldwide (Chebib, 2020).

We are dealing with a kind of "reopening" or "rebuilding" of the education system. Within its framework, one of the basic skills that became universally required was competency with digital technologies. According to some thinkers, the future of learning consists of combining the capabilities of artificial intelligence (AI) with the personalized needs of people. Personalized learning for students with the use of AI also means more time for teachers for their own training (Amitabh, 2020).

One of the main challenges teachers had to face was keeping in touch with their students. Integrating various ICT functions, such as online learning with online assessment, was a much greater challenge. Self-confidence and the awareness of one's own competences usually translated into teaching quality. Previous experiences with online education and ICT in general have become relevant. Therefore, supporting the development of teachers' competences in the field of ICT is so significant that it should constitute a permanent element of educational systems. All the more so as the education system that will prevail after the pandemic is going to be rather mixed and won't constitute a return to what it was before the epidemic (König et al., 2020). This also applies to other parts of Europe and the world, where the possibilities of online education have been recognized (e.g., its relatively lower costs compared to traditional education).

Teachers were dragged into online teaching because of the pandemic. After just a few weeks of experience, two difficulties became apparent. First: How are teachers and students prepared for this kind of work? Second: How reliable is the global technology infrastructure to cope with the additional loads? It turned out that even in the United States, 15% of households with children at school do not have access to high-speed internet, and among low-income families, one in three do not have access to the internet (Puckett, Rafalow, 2020). Therefore, digital exclusion is not a thing of the past and we still need to bridge the gaps that exist at different levels: between countries, between social groups, and between generations. Can a mobile phone be a tool that will provide educational platforms in a convenient manner? Mobility is undoubtedly its advantage. However, proper internet speeds are

still required for the tool to do its job. Nevertheless, the experience with the educational use of the mobile phone so far gives hope that it can be used as an educational tool to some extent.

The situation changed significantly in the second decade of the 21st century when the "traditional" mobile phone was transformed into a smartphone. This provided people with a handheld computer and a versatile mobile tool at the same time. For many, it has become the primary source of information and knowledge obtained from the web. Therefore, as M. Anshari et al. claim, a smartphone can be treated as a tool that supports education. On the other hand, however, there are doubts about including mobile phones in the teaching process: Will smartphones not disturb the education process? Research shows that smartphones are much better suited for distance education (even off-line) than when used directly in classes (Clayton, Murphy, 2016). If used directly in schools and universities, they can fulfill completely different functions than the educational ones.

The bigger the demand for efficient means of education (online learning) in the pandemic era, the more educational mobile applications should be used. The experiences that have already enriched our knowledge about distance learning in the past dozen or so months of online teaching, imposed on us by the pandemic, can be helpful in designing educational platforms. This applies not only to the substantive content or the teaching tools used but also to the interpersonal aspects of online communication. Keeping records of online learning by both the students and the pupils, as well as by the teachers, can be an interesting autoethnographic experience, facilitating the understanding of the specificity of distance education (Job, 2020).

Advantages of the mobile phone as an educational tool

N. Selwyn (2017) believes that, above all, technology makes education more flexible, mainly due to its individualization and personalization. There are several basic advantages in the architecture of cellular networks. First, there are costs. Cell phones and mobile devices are cheaper than desktop computers and laptops. A new learning methodology (so-called microlearning) can be introduced in phones. The methodology consists of quickly assimilating information and moving to following tasks so as not

to focus too much on the device itself. Most cell phone users are accustomed to getting an immediate answer to a question asked on their smartphone so they are used to immediate information assimilation. Inquiry-based learning was used in science education as early as in the 1970s. Additionally, educational applications can be based on popular games, which increases their attractiveness. After all, the invaluable advantage of a smartphone is the almost unlimited range. Users have apps, modules, and courses at their fingertips (Mishra, 2021).

The approach to smartphones in the education system has changed in the last few years. And during the months of the pandemic, this process significantly accelerated. The existing concerns about the disintegration of the teaching process caused by mobile phones have been replaced by the expected benefits of phones in terms of education. It was recognized that taking advantage of telephones can encourage students to learn and ensure interaction, making class a pleasant experience. They can be used for both classroom and remote learning (Nikolopoulou, 2020).

Research conducted just before the outbreak of the pandemic at the University of Ghana showed that in Africa (where there may be significant problems with infrastructure) using smartphones in education was also gaining popularity. It was desirable for students to learn how to use a mobile phone and gain access to an educational platform (e.g., Sakai). However, using smartphones had a negative impact on the academic activity of students as the phones engaged too much of the students' attention (Darko-Adjei, 2019).

The global expansion of the educational capabilities of smartphones has contributed to an increase in the number of tools offered for creating educational materials for such devices. Such a platform is, among others, WizIQ (https://www.wiziq.com), a cloud-based learning platform with a suite of integrated features: virtual classroom, courses management, learning content creation, video streaming, testing, and assessment as well as analyses. It is also possible to take advantage of these functions on a mobile phone. In 2020, 100,000 online classes were carried out with the use of the WizIQ platform each month (WizIQ 2021).

Undoubtedly, teaching with the use of mobile devices is flexible and promotes the independence of both sides of the process. To a great extent, students in the 21st century expect offers that are tailored to their needs, time-saving, and convenient. Mobile devices can also significantly facilitate

the contact between parents and teachers by giving them an insight into what is happening during class (Gowans, 2017).

Using mobile phones in education is still a big if. Even though in most countries smartphones constitute a popular and everyday means of communication, conviction about their educational capabilities does not necessarily go hand in hand with their popularization. It seems that the first step will be convincing teachers of its capabilities. Research conducted in some developing countries (e.g., in Pakistan) revealed that teachers are concerned that the ludic functions of smartphones will outweigh the educational ones. There is also concern as to whether relatively small phone screens are capable of conveying educational content (Iqbal, Bhatti 2020). This also points to the second group of problems related to technology. In order for mobile devices to fulfill their educational role, they must have access to fast internet. Online learning during the time of COVID-19 has shown that low internet speeds and disconnections can pose significant obstacles in developing remote learning.

Furthermore, using mobile devices in education mean increasing the amount of time that children and adolescents will spend in the environment of electronic media. A. Hansen (2019) believes that this already has a negative impact on the physical and, especially, mental condition of the young generation. Our brain is not adapted to this kind of functioning. Evolution has prepared it for something completely different. In everyday life constructed in the digital world, we often deal with excessive stress, anxiety, and depression. This is undoubtedly a challenge for the creators of mobile educational platforms.

The case of refugees

The educational capabilities of mobile phones have already been tested to some degree. They were "spontaneously" tested on groups of immigrants arriving in Europe in the second decade of the 21st century. First, it was noticeable that phones were a "first necessity" for them, even though in most cases they came to Europe with very few possessions. In the field of mobile telephony in the countries of Africa and Asia, the Mara Corporation has become a telling example. The corporation, which is expanding in many African countries, has produced the first smartphone made entirely in Africa and from African parts (models Mara X and Mara Z). It advertises its phones as the first African Android-based smartphones (Maraphones, 2021).

The production of African Mara phones in Rwanda shows how expansive the technologies related to mobile devices are. People in various parts of the world, even those considered as developing, have a potential educational tool in their hands. They may not yet have the skills to create educational platforms or the strategies to use them but they do possess the basic tool to take advantage of.

The waves of refugees that have reached and are reaching Europe have demonstrated the capabilities of a mobile phone in the hands of even the poorest people seeking help. Of course, mobile technologies can be used to create an electronic police force and track the movements of refugees (Dijstelben, Meijer, Besters, 2011) but they provide much greater possibilities in terms of recognizing the needs of immigrants, their acclimatization, language learning, and assistance in dealing with everyday matters. It was quickly noticed that many migrants own mobile phones and use them willingly. This was evidenced by the multitude of selfies on social networking sites. In many environments, especially anti-immigrant ones, selfies taken by immigrants right on the shore after leaving the boats caused outrage and became proof that we are dealing with economic emigration. In turn, the immigrants used apps like WhatsApp and Viber to inform their families about their status and the coastguard of their location. A 32-year-old Syrian refugee expressed his need to possess a mobile phone in round terms: "Our phones and power banks are more important for our journey than anything, even more important than food" (Alter, 2017).

The potential of mobile phones is such that we are encouraged to take advantage of it. The services responsible for the admission of migrants created applications for learning the basics of a foreign language. The *Alphabeta* app has several versions and is still being modernized. It is addressed specifically to migrants (e.g., *Italian for migrants*) and is available on mobile phones (www.alphabeta.it).

Another, perhaps even more important, group of apps prepared for migrants was those used to find a job. A special game, WORKEEN, available on Google Play, uses new technologies to provide advice and facilitates access to European labour markets. Similarly, the USAHello application (www.usahello.org) allows immigrants to find their place in the American labour market. It places great emphasis on acquiring new skills and learning to use them later in the labour market.

A particularly interesting offer of assistance for migrants is the ALMHAR app (www.almhar.org). It intends to help refugees in the field of mental health and is especially intended for those who had to flee their homes and live in exile. To expand its capabilities, it was prepared in English, Persian, and Arabic. It explains and clarifies the simplest emotional problems.

Research conducted on the use of mobile platforms by migrants in various parts of the world indicates a narrow range of mobile applications. There are only a few tools that can be used for bigger educational challenges. This can be seen in language learning apps that provide only simple vocabulary and grammar. Migrants have increasingly high educational aspirations; they want to have greater opportunities to shape the educational programs and monitor their own progress. In order to build a system that will be useful but also flexible, it seems optimal for both parties to cooperate (Demmans, Epp, 2017).

The *Importance of Mobiles for Refugees: A Landscape of New Services and Approaches* report of 2017 emphasizes the advantages of so many refugees possessing mobile phones. It considers maintaining the possibility of communication as the most important, which means maintaining the communication infrastructure and providing mobile connectivity is important not only for the refugees themselves but also for humanitarian organizations. The report points out that mobile communication should work in favour of connecting families as well as education. Finally, mobile technologies make it easier to find a job, run a small business, and manage money. The report emphasizes that three elements will become most important in terms of using mobile phones by refugees: accessibility, proper price, and utility (2017).

Conclusions

Mobile phones have long ceased to be devices used solely for voice calls. Introducing the first iPhone to the market and the revolution that led to creating the smartphone opened up completely new possibilities for mobile devices. The phone began to integrate various functions. Its advantages are undoubtedly its small size and popularization. It became a communication platform and thus provided possibilities for developing various forms of interpersonal interactions based on communication, such as information transfer and education. The COVID-19 pandemic has made the search for e-learning platforms even more intense. The already gained experiences

(such as those concerning refugees) are very promising. A mobile phone combined with proper apps can constitute a tool for work, study, and even psychotherapy. However, when promoting the wide use of mobile devices, one should remember their impact on the psychological aspects of our lives. Changes in social relationships, stress, and the intensification of anxiety behaviours are often connected with an excessive cramming of the human environment with technology.

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Ecucational Value Digital Information

Elżbieta Perzycka

Introduction

In the available digital resources, it is possible to observe an explosion of information, both text, photos and videos, thanks to the Internet. This is one of the most severe effects of the development of communication and information technologies. On the one hand, the multitude and variety of information provides answers to many bothering questions posed by digital resources, but on the other hand, their so-called overproduction urtudies reaching the most valuable. On the one hand, there is information hunger, and on the other, information noise. On the one hand, satisfaction with the multitude of information grows, and on the other hand, it is difficult to choose the right one. Both phenomena lead to an imbalance between the amount of information provided and the possibility of its processing by a human.

The increasing resources of information on the same subject available in digital resources entail the necessity to make their selection.

And although it would seem that a higher level of IT competences gives greater opportunities to navigate digital resources, in fact it is necessary to know which resources to use in order to make what they offer useful, useful - valuable. Therefore, it is not enough just to know the basics of using a computer, tablet or smartphone. Seemingly ordered digital resources are places of chaos, information noise and a multitude of useless, outdated - redundant information. And the variety of information means that satisfying them adequately is an undoubted challenge for a human being.

So what is needed for digital learners to make learning effective on the one hand and safe on the other? This text is a voice in the discussion of the place and meaning of using digital resources in the learning process. Discusses the necessary conditions for managing digital information for learning. This text is a supporting material for classes in the field of media education.

Perception and expression of information

Cybernetics, being a science, is indicated as the foundation for the emergence of information theory "on control with the use of feedback" (Nęcka, 2006, p. 24). It is related to the broadening of the subject of research by covering not only telecommunications systems, but also increasing the scope of the content of the concept of information system (Hetmański, 2006, pp. 6-7). Moreover, it combines the concept of information with communication as a regulation that takes place in a complex system. In this approach, information describes both the actual, current operation of the system and all possibilities of its functioning, including changes and development (Hetmański, 2006, p. 108). Cybernetic perception of information made it possible to apply this category in areas including mental, social and cultural life.

The etymology of the term "*information*" is derived from the Latin noun informatio, -onis, formed from the verb *informo, -are, -avi, -atum* (Hetmanski, 2006, p. 108).

The root *informatio* "refers to an image, representation in some form", while informare "means shaping (of the mind), instructing" Rozu. information-possession encompasses both ontological properties, by grasping the phenomenon of "the representation of some contents in the physical world," and epistemological, because "it refers to the cognitive subject's ability to interpret-make sense-the elements of the physical world."

The first of the adopted aspects allows for the perception of information in a broad sense, as carried by all objects in the world, and narrowly referring it to "cognitive entities using some symbolic language". The second of the indicated ones makes it possible to look at information as a source of human knowledge (Surma, 2017, p. 44).

The sources of the term "information" can be traced to ancient history. The first theories about the rights of receiving, processing and transmitting messages appeared

in the works of Empedocles (5th century BC) (Rogala-Lewicka, 2015, p. 17). The foundations of the term in question were included both in the Platonic theory of ideas and in the Aristotelian concept of form, understood as that which gives shape and form to matter. Cicero

and St. Augustine referred to the words informatio and informare to terms indicating idea (idea), form (morphe), and also essence (eidos). It is also worth mentioning that in ancient history one can also find the foundations of mathematical theories regarding information, showing "a form of being as a pattern or structure that can be represented by numbers (Bondecka-Krzykowska, 2016, p. 128)". Due to its ambiguity, the term "information" is difficult to define unequivocally. Due to this fact, "the question about the definition and nature of information is one of the basic and most frequently asked questions in the philosophy of science" (Bondecka-Krzykowska, 2016, p. 128) ". The reasons for this state of affairs can be seen primarily in the fact that information is considered a primary and necessary attribute, as well as a stimulator of action (Kowalczyk, 1974, p. 5).

In information theory, it is generally accepted that information is a primary concept and therefore undefined in the normative sense. It can be emphasized that the appropriate attempts to construct a descriptive definition in this area are made in the quantitative and qualitative information theory (Unold).

L. Floridi, who deals with the philosophy of information today, considered the question "what is information?" To be one of the most difficult. He also assumed that this concept can be considered in three perspectives: "information as reality", "information about reality" (semantic information), and "information for reality" (eg genetic information) (Floridi, 2004).

The term "information" was popularized at the end of the 19th century in thermodynamic physics and continued in the 1920s and 1930s in the theory

of the construction of electrical communication systems. On the other hand, the scientific perception of the term "information" in many areas took place at the turn of the 1940s and 1950s. Among the reasons determining this state of affairs, there are several reasons: 1) dynamic changes that took place in society after the Second World War, 2) publication of works

C. Shannon and N. Wiener, 3) the appearance of the first computers in Germany, Great Britain and the USA, which involved taking up the issue of transforming data into information (Hetmański, 2006, pp. 20-21).

The explanations of Claude E. Shannon can be considered the leading information theory

and Warren Weaver. The authors describe information in terms of its quantitative aspect, referring to "the possibility of measuring information as a static property of the transmitted signals" (Hetmański, 2006, p. 23). This theory can be found to be universal, because despite its mathematical and engineering nature, it affects theories and research that differ in subject, character and methodology.

The meaning and value of information

In the context of the deliberations, it is worth noting that the breakthrough stage in the perception of information was called the "information age", the beginning of which dates back to 1945. This period is considered to be one of the most important in the process of human evolution. In the course of its duration, "information has become the greatest good and has been recognized as an element determining the birth of the information society" (Wojcichowska-Filiek, 2015, p. 19). At the same time, it is also a good that is difficult to grasp in the economic contrast. This was confirmed at the end of the 20th century, when a new economic subdiscipline emerged, known as the economics of information. Its main goal was to study the impact of information on the economy, to identify general and economic regularities of these interactions and to search for solutions favoring the economic application of information in economic processes (Czekaj, Ćwiklicki, Obora, 2010, p. 47).

From an economic point of view, nine aspects of information can be distinguished. In the first one, information is perceived as **an economic resource**: general knowledge, professional qualifications, infrastructural information collections and information systems of both the state and

supranational organizations, as well as information resources of social and economic entities, as well as those forming the information sector of the national economy (Olesiński, 2002, pp. 242-243). In the second aspect, information is perceived as **a public good**. It is expressed in providing each social and economic entity with unlimited access to a specific scope of information. The third economic approach to information perception assumes that it is **a productive factor** and as such is of decisive importance for the social and economic development of the state. Another aspect shows information as **an effect of the information production process**, during which the following functions are performed: generating, collecting, storing, transmitting, processing, sharing, interpreting and using information. The fifth understanding assumes that information in the economy is **an information product or service**. It is worth mentioning that the dynamic development of the information market, mainly on the Internet, has resulted in the blurring of the differences between the aforementioned concepts. The next - sixth, in turn, of the accepted possibilities of perceiving information relates it to **a commodity**, i.e. the subject of a transaction on the market, which in the case of information takes the form of the aforementioned information products or services. It is also assumed in economics that information, due to the economic growth of the importance of the consumption of information, is a consumer good. The last aspect assumes that information **is a component of the infrastructure of the national economy**, including "resources and information systems that condition the functioning of other resources and social and economic systems" (Olesiński, 2002, pp. 313).

Information is related to such an issue as "information society", which, although a general concept, is for it the most valuable and commonly mentioned good (Szewczyk, 2004, p. 12). The undoubted importance of information is also reflected in the recognition of both access to it and the ability to create it. And the changes taking place in this aspect in individual countries are conditioned not only by the degree of dissemination of information and communication technologies, education of citizens, but above all by information culture (Piątek, 2010, p. 83).

Taking into account the goals and functions of information management (Buśko, Filipek, Śliwiński, 1980, pp. 18–23), several information features can be identified that are of value to information collectors. These are: 1) reliability, 2) timeliness, 3) detail, 4) accuracy, 5) availability, 6) completeness, 7) relevance. The quality of information is also influenced by: purposefulness,

reliability, versatility (Bukowski, Feliks, 2015, p. 267). Summing up, it is worth noting that the issue of information is very broad in terms of scope. Undoubtedly, however, it is very important from the perspective of the functioning of society and education.

The importance of information for education in the face of the covid 19 pandemic

With the technological revolution, the educational tools of learners changed in societies. Initially, it was a stone tablet, then a book, notebook, binder, and in the era of the covid-19 pandemic (Ryan, 2020a; Ryan, 2020b), it was a computer connected to the Internet.

The undoubted evolution of the Internet towards the 2.0 standard meant that it can be considered an instant communication channel. In connection with the progress in this area, the perception of this medium has also changed - from the pull medium, characteristic of generation 1.0, in which the user had to make many efforts to find the information he needed, it turned into a push type, providing the user with access to information at the same time. definitely less commitment in this regard (Oświęcimski, 2015, p. 49). Digital space begins to decide what and where is important to its recipient.

In e-learning, to which both teachers and students have been forced, adapting digital resources to the subject matter of classes has become a challenge. Teachers were expected to use interesting programs, presentations and websites in such a way that they could be used to carry out educational tasks. It is no longer enough just to know the basics of using a computer, tablet or smartphone to make learning from digital resources valuable and useful. The increasing amount of information on the same subject available on the Internet entails the necessity of making a selection and choosing the desired, appropriate, useful - educationally valuable information.

The goal of any education, both formal and non-formal and informal, is to arouse the cognitive interests of learners by inspiring them to be self-active and to search for information and knowledge necessary for independent learning. In the context of the discussed considerations, it is also worth paying attention to the fact that the information is used in various ways, depending on the needs of the person and the collecting community.

The teacher as a navigator and trainer in the student's information space

Depriving the people seeking information (students) of a competent intermediary (teacher) between the sender and the recipient of the information and putting the whole initiative in the hands of the so-called end users, it can cause those end users quite a bit of trouble. In the literature, the following terms are used: disordered, unstructured, chaotic, incoherent information, information scattered, scattered, fragmented, unknown, incomprehensible. There is also talk of the atomization and fragmentation of information, information without context, isolated or "without anchoring" (Derfert, 2005). Uncontrolled and unorganized information is not a wealth in the information society but, on the contrary, becomes an enemy to the information handler. Having and properly using the right information, it is possible to achieve the planned goals much faster and much better, without a significant increase in expenditure, understood either as material resources or energy consumed. On the one hand, information creates society (ITS), and on the other hand, society creates information (STI). Therefore, will a good preparation of the teacher and student for information management (collecting, processing, distributing) be the first task in ordering the available information resources? It should be emphasized that the main attribute of the information society are both individual and specific information needs of a human being, which can be expressed, for example, in a convenient and effective process of searching for them, regardless of the right choice of words or the inclusion of an appropriate Internet address - www.

Summary – self-development

A large part of the younger generation believe that all the information they are looking for is available on the Internet, and if they are not able to find the information they are looking for, it means that it does not exist at all (Duch, 2001). In addition to information noise, the phenomenon of "information silence" is known. Due to high fluidity, instability, changeability and indeterminacy, the awareness of the teacher and student are exposed to deformation and constant changes. R. Tadeusiewicz (1999) introduced the concept of "information smog", according to which it is a complex set of problems and phenomena related to a large excess of information sources, combined with the highly problematic value of the information contained

in a large part of these sources. The value of the retrieved information can be low or high. If the information wanted is true and up-to-date, then its value is high. When finding information that is out of date and obsolete, its value is low. The information may be worthless when the links lead nowhere because the information has been removed from the network or moved to a different address. The information may be wholly or partially false. If in the network users deal with the phenomenon of information disorientation, then the apparent truthfulness of information occurs. Another phenomenon is the so-called toxic information. It is information consciously poisoned with content such as pornographic, pseudoscientific, racism, intolerance, verbal or symbolic violence, etc. The Internet information environment becomes the natural environment of every school and - as with every natural environment - it should be taken care of, not allowed to deteriorate, destruction, distortion, etc.

In the English-language literature, in relation to the concept of information competences, the following terms are used, among others: information literacy - understood as the ability to recognize, process, evaluate, create information and a number of other activities related to information; media literacy (media literacy, media literacy, media literacy) - defined as a range of skills to acquire, analyze, evaluate and create messages in various forms; information literacy and communications technology ICT literacy (literacy, competences or literacy in the field of information and communication technology) - the use of digital technology and network tools in communication; digital literacy (digital literacy, digital literacy, IT competences) - reading and understanding multimedia texts and hypertext, information skills - information skills. In Poland, there can be observed a lack of terminological solutions in this regard. It can be assumed that there will be interest in this issue in pedagogy, especially under the influence of distance education experienced during panmdemia covid 19.

The essence of the discussed issues is also evidenced by the fact that the issue of information culture is defined as the sphere of human activity that accompanies him from the earliest years of life, as soon as he begins to realize

from the existence of information and the possibility of its deliberate use (Batorowska, 2009, p. 9). In this understanding, it is not important in what historical period a person functions, although the importance

of information has undoubtedly increased along with technological progress, but how valuable information is for humans. The simultaneous upbringing "towards values" and disseminating information culture provide the basis for sustainable information education.

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Images of solitude in Kenya (as seen by a European observer-researcher)

Lidia Marek

Introduction

The inspirations to address the topic indicated in the title were provided, among others, by John Urry's book *The Tourist Gaze* and experiences related to mobility in the framework of the TICASS project in Kenya. According to J. Urry's thesis, a tourist experience is essentially a visual experience which fosters the reflexivity of the tourist and the reflectivity of the place they get to know. It is created and authorized by various discourses relating to social life. Thus understood by John Urry, the tourist experience requires solitude, privacy, and a personal, somewhat spiritual relationship to the object of cognition. The subject of the presented research and tourism perspective is the problem of the loneliness of the inhabitants and tourists in Kenya. The search for different faces or images of loneliness among Kenyan residents and tourists did not have all the features of a purely scientific study. It can be called only a research study because it was quite fragmentary, and knowledge of the subject of this diagnosis would require further research

and analysis. In this research, elements of visual ethnography and narrative techniques (focus and individual interviews) are used. It is supported by the visual perspectives of a researcher and tourist from Europe and my own individual gaze. The structure of the narrative in the text takes the form of an autoethnographic study rather than a classic research report. The "seeing" of loneliness in Kenya presented in the text is therefore an expression of a special cognitive interest supported by everyday experiences in contact with the place and the people who create it. To illustrate the observed social situation, the technology of image recording with the use of a photo camera and a video camera was used.

Loneliness and a sense of solitude – sketching the theoretical background of a research study

The idea of an orderly reflection on the images of loneliness in Kenya was accompanied by a special experience of such constant thinking about the problem of loneliness and, to my surprise, seeing it properly … everywhere. Previously, I had missed such a full awareness that loneliness is actually embedded in so many of our everyday and unusual experiences, in our relationships with other people, and in our contact with the content and values of culture. I also remembered *How to Tame Solitude,* a book of poetry given to me by a student, Monika Djakowska. It was written by Monika, a young growing woman and a novice sensitive pedagogue. One of her interesting poems was titled "The Manifest of the Lonely". I will quote this poem; it will also be recognition of the debut of the young poet.

"The Manifest of the Lonely"

We – the lonely – we are not afraid

of fear.

We frequently discover less liked and more calorific

substitutes of despair

and it is true that sometimes

We drag behind us our shadow

on a leash.

We walk familiar streets, we see familiar houses,

which morbid indifference fills the emptiness

Generated by aversion and coldness of other people.

But we do not have sad superficiality

of a malicious invalid who hates the surrounding –

for its normality.

We know that the price of happiness is lower

than its market value,

since happiness is like false teeth –

it fits one person only.

While looking for an idea for a text about the pictures of loneliness in Kenya, I began to notice how much is said and written about loneliness, how often it becomes a leading motif in books, films, and articles that describe our reality. Loneliness also appeared in the text of the book by the eminent writer Philip Roth, which I was reading at that time. In his book, he describes a situation from the life of the hero when he talks to his young daughter: ""Daddy, I'm so lonely", said several-year-old Merry. "Darling, where have you got this word from?" asked the surprised father. "I like when you hug me, Daddy", Merry answered", and it occurs to us that Roth wrote a novel about solitude, the solitude of a child, a growing girl, and the solitude of her father. It is actually about the sense of loneliness since loneliness is never a cautious choice. Roth describes the sense of loneliness in his other books too, it is presented as a tragic consequence for both - the person experiencing it , their relatives and acquaintances.

The paper is based on several major theoretical objectives that define solitude as a state selected by a person (provoking creativity, supporting self-reflection and self-fulfilment) on the one hand, and loneliness possibly leading to depression, stagnation, and regression on the other (Wałejko 2007). Czesław Tarnogórski wrote: "Most often, solitude is a state chosen. It does not exclude being open to other people; quite the contrary, it supports such opening. (…) whereas loneliness is primarily the consequence of external factors. Loneliness is not chosen out of several options. Thus, the question: What can be done when we experience it?" becomes more important (Tarnogórski, 1988, p. 4).

Then he adds: "One thing that solitude and loneliness have in common is that they do not depend on age. It may be relevant for a lonely old man, but also a several-year-old child or a teenager, especially during adolescence. A man who is alone does not have to be lonely, but they can be lonely although they do not live alone". It should be emphasised that solitude and loneliness are idiosyncratic experiences (unique for a given person); they are experienced individually and subjectively. Each period of solitude and loneliness is no like any other (as noticed by Czesław Tarnogórski) (Tarnogórski 1988, p. 5).

The search for an idea for the paper was carried out in extraordinary circumstances. I went to a research trip to Kenya, Africa in December 2018 as part of the international project TICASS. As mentioned at the outset, thinking about solitude and the text itself coincided with my experiencing solitude virtually every step of the way. In the streets of Mombasa, Kilifi, Malindi, at a Kenyan beach, in a Hindu hotel, and on roads leading to the savannah, I started to discover pictures of solitude and the sense of loneliness. My adventure with the text "images of loneliness" started right there.

Empirical inspiration for the paper was provided by materials collected (photographs and interviews) during a study visit to Kenya, Africa. Analyses are divided into several themes: creative solitude, the solitude of a woman, the solitude of a child, solitude in a crowd, the solitude of another person, solitude in illness and disability, and the solitude of a white man in black Africa.

At this point of my paper, I would like to share with you the output of our research etude. I call my recognition an etude since it was quite fragmented and an in-depth study of the subject would require further research and analysis. In our research, I used elements of visual ethnography and narration techniques (focus group and individual interviews conducted with Agnieszka Szajner).

Visual materials were recorded in photographs and videos. These means of collecting empirical information enabled us to grasp fairly complete information, which facilitated the analysis of what can be described as rather symbolic interactions. **Resorting to photographs** as a source and method of recording reality, we were guided by Jerzy Busza: "The mere act of triggering the shutter in a camera to record a picture on a light-sensitive film is, at the same time, a symbolic recording of a picture which appears in the mind of the photographer when he takes a picture" (Busza 1981, p.

26). Therefore, our choice of pictures is to a certain extent subjective since the photos were taken by female researchers sensitive to signs of solitude.

We took all the photographs included in the presentation ourselves. As regards the use of the visual materials, the people in the photographs gave us their consent to publicize them for scientific and education purposes.

Images of loneliness in Kenya – the results of a research study

In this part of the text, I present the visual materials, initially arranged and collected by us, illustrating the subject of the text.

- **Photo 1.** Creative solitude (Author: L. Marek, Kenya, March 2018)

The first photographs show solitude that was partially chosen and had a creative nature. Every day, Juma, a disabled man in his forties, created sand sculptures in the sand of a Mombasa beach. Alone, in silence, he patiently created his sculpture for many hours. His effort was frequently rewarded with petty cash donated by tourists. Sometimes, he created sculptures on request. Juma was satisfied with his creative effort since it was a source of joy as well as a small income. It made his life as a disabled person easier. In his creation, he found a certain intimacy in the contact with the matter (sand) and himself as a creator. On a crowded beach, he sculpted his intimate world of solitude and creativity, a world which, at that given moment, was

the most important for him. The crowd around him (big or small) didn't mean much since what really counted was the artist, matter, and creation. Juma also encountered loneliness resulting from the social exclusion due to his disability (at the same time, he emphasized the presence of supportive people around him, since every day, Quinta and Theresa, women working in a massage studio in the vicinity, helped him get from the street to the beach. Juma had a very simple wheelchair which didn't allow him to overcome major architectural barriers).

I will come back now to the dialogue quoted from the book by Philip Roth in which an astonished father asks his daughter about where she heard the word "loneliness" from? Where do children learn the word "loneliness"? What do we adults know about the loneliness of a child? What do parents think about the loneliness of their children?

• **Photo 2.** The solitude of a child (Author: L. Marek, Kenya, December 2018)

There are a number of questions regarding how the loneliness of a child is represented in the mind of the adults responsible for their safety, creating conditions conducive to meeting other children's needs, and promoting growth (Malka 1994). Such reflection reminds us about the beautiful (Oscar-nominated) film *Kafarnaum* by Nadine Labaki. In a neglected district of Beirut, twelve-year-old Zint sues his parents for... being born, for bringing him to life and exposing him to a permanent sense of loneliness. "However, extensive loneliness may be harmful to the psyche of an adult too. It may be but does not have to. With a child, it always does. In the case of adults, loneliness may sometimes be a question of choice rather than necessity. In the case of a child, it is never a choice since it contradicts the nature of childhood" (Łopatkowa 1989, p. 6).

Kenyan children are not exempt from experiencing the feeling of loneliness. They account for a significant percentage of the overall population (nearly 50% of Kenyans are children and young people under 15 years of age) (http://uis.unesco.org/en/country/ke). Frequently, on the city streets, on dusty roads leading to suburbs or villages, and in front of poor huts, we can see confused, extremely neglected, and sad children. Loneliness among children in any part of the globe calls for more care; actually it cries out for it. A lonely child is completely helpless" according to E. Dubas, children have not yet managed to develop an "internal world in which he or she (...) could escape and hide". It is worth emphasizing that adults are responsible for bringing up a child to be creative in their solitude, and a child cannot manage to attach any value to solitude on their own (Wałejko 2016, p. 257).

A separate group of photographs includes images with visual messages highlighting the solitude of a Kenyan woman. There are slightly more women in Kenya than men, 26,264,000 and 25,951,000, respectively. According to 2018 demographics, on average there are 988 men per 1000 women in Kenya. However, in the National Assembly, out of 349 members only 69 are women. The life expectancy for a Kenyan woman was 48 years (50 for man) in 2006; nowadays it is longer.

· **Photo 3.** The solitude of a woman (Author: L. Marek, Kenya, December 2018)

The social status of women in Kenya is indeed low. This can be spotted easily by even a very inattentive observer. Kenyan women encounter a multifaceted loneliness (as overtly expressed in interviews with female Kenyan students). Their voices are not considered when the future of the country and its citizens is being decided nor in their family homes, where fathers, and then their husbands, exercise complete authority over them. A man marries a woman in exchange for a dowry. Although much has changed in Africa in the past 20 years, since the government has successfully put an end to many tribal traditions, for instance, female genital mutilation, the custom to marry a woman in exchange for a dowry is still present. In 2014, polygamy was legalized in Kenya. During the vote, half of the female deputies to the National Assembly refused to participate in the discussion on what, in their opinion, was a patriarchal law. Others ostentatiously left shortly before the vote when Samuel Chepkong, the head of the justice committee, crossed out a provision on the bill which requested men to consult their first wife before entering into a polygamous relationship

(and then with the second, third, and fourth). "After taking care of handsome salaries and allowances, large houses and cars, members of the assembly adopted the law which enables them to meet yet another goal, which is to have as many women as they please", wrote Emma Kabiru, one of many exasperated Kenyan women, in her open letter to the *Daily Nation* newspaper. "Don't be surprised when after the approval to polygamy, the assembly will proceed with the approval for beating women" (Pawlicki 2014). During their interviews, students from Pwani University in Kilifi emphasized that violence towards women is very common (in the family clan of one of the girls, the use of violence is considered equivalent to tenderness and love).

Photograph 4 depicts cheerful young girls. Can anyone suspect that they experience loneliness due to social exclusion? These girls are twins, and this is enough to be considered by some people (in fact, quite a large group in Kenya) as daughters of Satan.

- **Photo 4.** The solitude of twins (Author: A. Szajner, Kenya, December 2018)

They are different simply because they are so similar to each other. During the interview, they said that they encountered social exclusion, which deepened their sense of loneliness when they were among other people. This phenomenon is not unique in Kenya, and in Africa as a whole, where

it is so easy to be accused of witchcraft and black magic only because you appear to be different from others (e.g. children with physical or mental disorders) or because of some circumstances, for example, a child can be accused of witchcraft if they are born at the moment someone else dies or because the delivery was abnormal in some way (this applies, for example, to prematurely born children, children mispositioned at birth, babies born with albinism, or twins).

This originates from superstitions and stereotypes as well as shortage of knowledge. Ikpe-Itauma, who represents the Child's Right & Rehabilitation Network, claims that it is not only beliefs and superstitions that lead to such behaviour. "Poverty is also a factor stimulating accusations of witchcraft. Poverty is the sister of ignorance, its twin sibling" (Tekień 2016). Kenyan children also experience economic loneliness and extreme poverty. The twins from our story spoke about a significant luck piece of they had. Thanks to the support of charity organizations, they found a family in Australia who funded their education for a number of years (since they were seven years old, and now the girls are second-year students). It was a major support for them and their families.

While wandering the streets of Mombasa, Kilifi, and Malindi, we met the inhabitants of those cities and the tourists who visited them. Despite being a part of everyday life in Kenya, the presence of couples of different colour and significant differences in age is still something unusual. These include mature older white women (tourists) and young black men, and mature white men (tourists) and young black women. Embracing couples are seen frequently in Kenya as sex tourism has become one of the main branches of tourism. Sex tourism in Kenya was also the theme of the film *Paradise: Love* by Ulrich Seidl, a distinguished Austrian director. The film tells the story of Teresa, a 50-year-old Austrian woman, who, together with other Europeans, enjoys her trip to Kenya.

- **Photo 5.** Solitude in Kenya – *Paradise: Love* by Ulrich Seidl (Dobrzyński 2012)

The director, who met with a community of sex tourists, said in an interview for Polish magazine *Wysokie obcasy* (High Heels) (Dobrzyński 2012, p.10),

For some, it is a milder form of prostitution, for others a "romantic tourism" which is about building an emotional bond. Often, female clients maintain contact with the men after they return home from holidays. Those exotic lovers provide them with something they cannot expect from their busy or bored husbands. Beach boys cure their clients' low self-esteem resulting from their disappointment in their relations with white men. This is how they heal the pain of LONELINESS and the lack of feeling physically attractive. (...) They pay for the illusion of warmth, tenderness, and love, rather than for sex.

What is the sex tourist profile? It is hard to determine even though some attempts have been made. It can be a man, a woman, or a couple looking for sexual stimuli, and they usually experience a sense of loneliness for various reasons. "Being with someone" for a moment provides them an illusion of overcoming the bad feeling.

A sense of loneliness is also usually experienced by the people providing sex services to sex tourists. They are lonely in many ways; for certain economically. It is their financial and social situation that forces them to resort to prostitution and only very rarely the result of sexual deviations or extreme hedonism. We can refer to them as victims of sex tourism.

According to the 2019 UNICEF Report, over 30% of Kenyan girls between the ages of 12 to 18 (Morawska 2019, p. 23) are involved in prostitution.

An extreme example of sex tourism is the sexual contact between white tourists and Kenyan children. Despite pedophilia being rampant, there are only a few ineffective attempts to combat it. In hotels, posters calling for protecting children's innocence and combating pedophilia are displayed in places that are less visible, for example, in the corners of information boards, blurred by more "attractive" content. This is a serious cause for concern, and more alarm must be raised to take care of Kenyan children.

- **Photo 6.** Solitude of a child (Author: L. Marek, Kenya, March 2018)

Now for our hands-on experience in the search for creative solitude at a Kenyan beach. Can a white tourist enjoy such a moment? When he or she comes to a seemingly deserted beach (with a silhouette of a security officer in the distance), locals appear suddenly as if out of nowhere, including vendors with everything that can be sold (necklaces, bracelets, colourful pareos, Maasai figures, magnets with the map of Kenya, a massage service or even … their bodies). You can buy everything here except a moment of creative solitude. "Want to walk? I'll accompany you", they say. That was our special experience during our stay in Kenya.

- **Photo 7.** The solitude of a white man in black Africa [Author: A. Szajner, Kenya, December 2018]

Conclusion

The search for various faces and images of loneliness and solitude among the inhabitants and tourists in Kenya described in the text did not have all the features of a purely scientific study. It was inspired by a stay in Africa, the readings currently being read, and from the inspiration to write this text. I call it only a research study because it is quite fragmentary and subject of this diagnosis would require further research and analysis. In the research, I used elements of visual ethnography and elements of narrative techniques (focus and individual interviews with Agnieszka Szajner). However, retrospectively, I can also say that I supported my research study with what John Urry calls "the tourist's gaze" (Urry 2005). According to his thesis, a tourist experience is essentially a visual experience which favours the reflexivity of the tourist and the reflexivity of the place they get to know. It is created and authorized by various discourses relating to social life. Thus understood by John Urry, the tourist experience requires solitude, privacy, and a personal, somewhat spiritual relationship to the object of cognition. Therefore, I support my research study through the visual perspective of a researcher and tourist from Europe and my own individual perspective. The view of loneliness in Kenya presented in the text is therefore an expression of a special cognitive interest supported by everyday experiences in the place and with the people who create it.

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