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## COMMUNICATION PRACTICES OF 12-14 YEARS-OLD DIGITAL USERS

Practici de comunicare digitală ale utilizatorilor de 12-14 ani

Silvia FĂȚ, Inna PIELESCU

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## COMMUNICATION PRACTICES OF 12-14 YEARS-OLD DIGITAL USERS

Silvia Fatu\*

University of Bucharest,  
Faculty of Psychology and Sciences of Education,  
Bucharest, Romania  
*silvia.fat@fpse.unibuc.ro*

Inna Pieleescu\*\*

I. G. Duca Secondary School,  
Bucharest, Romania  
*innadpielescu@gmail.com*

### Abstract

This study aims to explore the online communication habits and practices of 12-14-year-old 50 students from an urban school. Measuring their answers on the Digital Native Scale of Timothy Teo (DNAS), this study refers to the suggested four-factor by the author, creating a framework for the analysis of their digital native profile: grown up with technology, comfortable with multi-tasking, reliant on graphics for communication, and thrive on instant rewards (Teo, 2013). The results of the study enhance the understanding of digital natives. As we expected, this research shows a high degree of comfort in online communication in their differentiated profile. It is relevant the issue of age when exemplifying digital natives' skills. Also, it is estimated that there are similar behaviours, related with the debut age of technology use (4-5 years old). The most common actions in virtual space are surfing on the Internet, photographing, communicating, downloading, disseminating, adding to comments on colleagues' posts. According to this study, the online communication practices of these 12-14-year-old students include in terms of content various symbols, instant

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\* Associate Professor, PhD, University of Bucharest, Faculty of Psychology and Sciences of Education, Teacher Training Department, Bucharest, Romania.

\*\* Teacher, I. G. Duca Secondary School, Bucharest, Romania.

bonuses, and feedback elements. From an educational point of view, these can be included in a structured manner of learning. The article proposes, in this view, several ways to integrate usual students' communication practices in learning activities with the support of digital resources (virtual bulletin boards, online presentations, digital stories so on). The results indicate that students showed the digital native characteristics, that can be successfully used in school.

**Keywords:** *digital literacy, digital native, online communication, technology.*

## **Rezumat**

*Acest studiu î i propune s exploreze obiceiurile i practicile de comunicare online, specifice unui num r de 50 de elevi, cu vârsta cuprins între 12 i 14 ani, dintr-o coal urban . M surând r spunsurile prin intermediul scalei digitale a lui Timothy Teo (DNAS), acest studiu include cei patru factori propu i de autor, generând un cadru pentru analiza profilului nativului digital: familiaritatea cu tehnologia, confortul cu sarcinile multiple, utilizarea grafic a limbajului, interesul pentru recompense i feedback (Teo, 2013). Rezultatele studiului îmbun t esc în mod clar în elegerea profilului nativilor digitali. A a cum ne-am a teptat, studiul indic un grad ridicat de confort al tinerilor utilizatori privind comunicarea online, în profilul diferen iat al acestora. Devine relevant problema vârstei atunci când exemplific m abilit ile nativilor digitali. De asemenea, se estimeaz c exist comportamente similare în profilul acestora, corelate cu vârsta de debut în utilizarea tehnologiei (4-5 ani). Cele mai frecvente ac iuni în spa iul virtual sunt: navigarea pe Internet, fotografierea, comunicarea, desc rcarea, difuzarea, ad ugarea de comentarii la post rile colegilor. Conform acestui studiu, practicile de comunicare online ale elevilor de 12-14 ani includ în con inut diverse simboluri, bonusuri i elemente de feedback. Din punct de vedere educa ional, acestea pot fi incluse într-o manier structurat în înv are. Articolul propune, în acest sens, modalit i de a integra practicile de comunicare uzuale în activit ile de înv are cu suportul resurselor digitale (aviziere virtuale, prezent ri, car i digitale etc.). Rezultatele indic faptul c elevii demonstreaz caracteristici digitale native ce pot fi valorificate cu succes în coal .*

**Cuvinte cheie:** *alfabetizare digital , comunicare online, nativ digital, tehnologie.*

## Introduction

Recently, technology has become deeply rooted in the social and academic life of middle school students. Static or dynamic digital content reaches the younger students such as 12-14 years-olds easily and promptly. A laptop or a mobile phone can locate diverse e-content, which means that all students' communication needs can be fulfilled by an integrated system. These students are early digitally literate.

We present below a conceptual framework that support the understanding of our discussion:

- Gilster (1997) define digital literacy as the ability to understand and use information in different formats from a wide range of digital and virtual sources. Digital literacy has changed from technical or specialized learning into an everyday ability, deeply rooted in planning the future.
- Gilster (1997) identifies critical thinking as a basic skill in this digital literacy, more significant than the technical skill. Digital literacy is the awareness and ability to use digital tools, to identify, access, manage, integrate, evaluate, analyse, and synthesize digital resources, build new knowledge, create symbols, and communicate in specific situations. 12-14 years old students put into practice some structural skills of digital literacy: online understanding by asking questions and locating answers, critical assessment, synthesis, and communication of resolutions.
- Warshauer and Matuchniak (2010) identified some multimedia literacy skills, which are particularly useful for interpreting, designing, and creating content with images, photos, videos, animation, music, sounds, texts. These means are preferred by young users. They allow for easier communication and are a wide-open gateway to a wide range of topics.
- Warschauer (2006) recognised the key skills vital for students: the ability to identify the needed information for a specific task; the ability to locate the information; the ability to critically evaluate the information and its source; the ability to integrate selected data into the personal knowledge system; the ability to understand social and economic issues around the use of information; the ability to access information ethically and legally.
- Prensky (2001) used the term 'digital native' to describe a full adaptability for those who were born in the technology age.

## 1. Literature Review

Technologies become embedded even in educational structures and processes. Usually, teachers believe that young people do not have the critical skills to assess the legitimacy of digital content (Mason & Rennie, 2008). However, they understand that new generations are increasingly resilient to the routine promoted by the school, which leads them to reconsider their pragmatic value.

Online communication is one of the items that can influence positively or negatively both the students' academic and social performance. While some studies, those in low-tech cultures, did not find significant relationships, others showed clearer results in terms of their linkage. For example, Tiene (2000) showed that, through the way of written communication, cyberspace helps students to carefully articulate thought out and structured ideas. A positive impact on language development and interest in reading has been also demonstrated by Tuan (2013). According to Boyd (2007), high-school students are the most enthusiastic users. Deng and Tavares (2013) concluded that the exercise of discussing 'online' can develop critical thinking skills, because young people pay attention to the quality of opinions. Online networks can help introverted teenagers socialize more, behind the safety of various screens. In a study by Bowers-Campbell (2008), the role of online communication in reading was analysed. A system of virtual bonuses was used to increase the interaction between students and students/teacher, which led to spectacular effects. It should be noted, however, that the results of similar studies must be correlated with those that involve, as a variable, the general attitude towards learning. For students, the benefits occur when social networks are used for learning and not for socializing.

On the other hand, the online communication has negative effects when children and teenagers construe and understand the notion of friendship. The virtual interaction, even if it is accepted, does not have a real emotional basis. The friendship is unfeasible to replicate in the virtual environment, a space for information, and not for action. In addition, online communication can become a source of socialization, only if the purpose is to complete the old real interactions. In the USA, Paul, Baker and Cochram (2012) revealed, based on evidence, the negative impact of online communication on student performance. Some studies have reported a significant negative correlation

between online communication and student outcomes. Malaney (2005), making an analysis of studies conducted between 2000 and 2003, reported as an effect, a lot of time lost in the online environment. Cramer and Hayes (2010) consider that young people, persistent digital users, tend to be more vulnerable in real life interactions.

Following the analysis of these selected studies, we notice that the findings are so contrasting that it is difficult to draw a coherent conclusion. The diversity of contexts in which such exploratory studies take place, makes it difficult to simplify. Regardless of the evidence, we have seen how, these days, professionals in education have become increasingly firm in their position on reducing time in online environment, and thus optimizing real communication.

## **2. Research Design**

### **2.1. Purpose of the study**

Our study aims at measuring behaviours or habits linked to online communication, as frequency or intensity.

### **2.2. The objectives of the study**

Our study is focused on the following objectives:

- illustrate the degree of familiarity with technology, reflected by the ease and the start of use;
- define multitasking skills as a phenomenon of early use of technology;
- identify the language tools and symbols used by young people;
- explain the expectations of young users regarding feedback and rewards.

### **2.3. Hypothesis**

It is estimated that students aged 12-14 have the specific characteristics described in the DNAS.

## 2.4. Sample

The respondents were 50 students in middle school. They were informed of the research goal in the beginning of the questionnaire application and spent about 15 minutes on the application of DNAS in Google Forms. Their ages ranged from 12 to 14. Of the 50 students who participated in the study, 34% were boys and 66% were girls. The group of respondents was chosen from the school population at random, from the urban environment.

## 2.5. Method

This study was structured by different items derived from the Digital Native Scale of Timothy Teo (2013). Inspired from the literature, he developed a psychometric perspective and suggested a list of habits and actions. Evolving from this framework, a multi-item scale was designed to measure four traits of digital nativity (see Table 1).

**Table no. 1. Digital Native Assessment Scale**

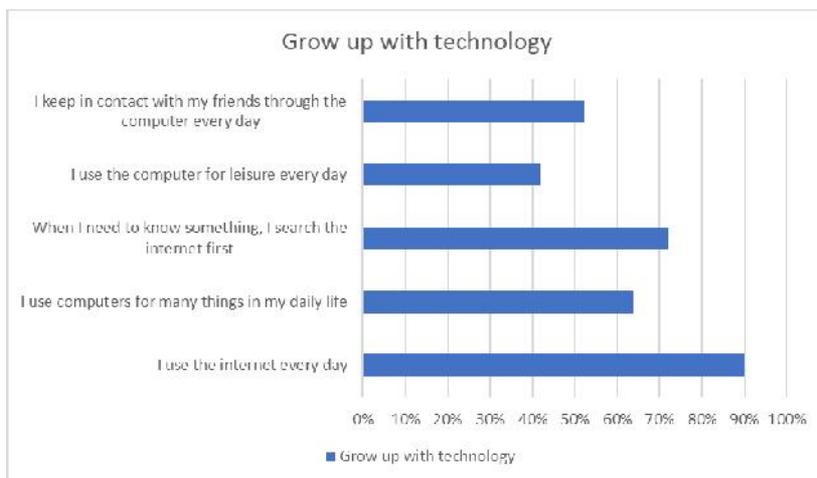
Research category	Item	Description DNAS
GrowT	grow up with technology	According to Prensky (2001), digital natives have a fluent and consistent behaviour in the use of language, games, and the Internet. Technology is a part of their biography. Digital literacy also occurs early on as a life skill, not a technical or a specialized one. All activities and associated processes use intensively the technology and its related devices.
MultiT	comfortable with multitasking	Multitasking is the ability to blend different skills to achieve a higher-level goal. Multitasking refers to an act of participating in two or more tasks at the same time. Given the ability to create applications and activities simultaneously, this phenomenon is deeply embedded in young users' habits, since primary school. Digital natives can perform more tasks than adult users, and in a shorter time.
GraphicsC	reliant on graphics for communication	By comparison, digital natives appeared to be more visually literate than previous generations who grew up with printed text (Prensky, 2001). They display preferences for graphics, images, symbols and less for text. They communicate visually by images with mobile phones or video cameras, then sharing via social networks. There seems to be the evidence that the extraordinary neuroplasticity of the brain has made it possible to reorganize knowledge through the way of reading images.
InstantGR	thrive on instant satisfactions and rewards	This exposure to technology has shaped the digital natives through interactivity and the need for immediate response. Video games and the internet have a special impact in this regard.

Source: Scale T. Teo (2013)

### 3. Data Analysis

#### 3.1. Grow up with technology

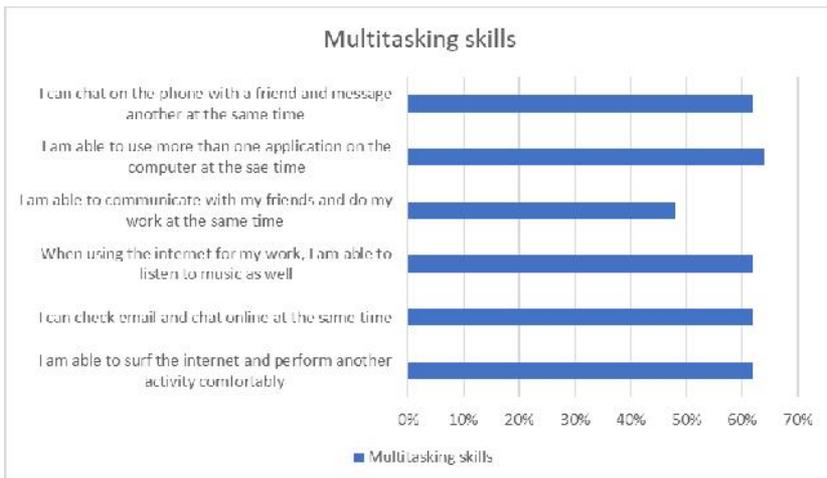
12-14 years old students use the internet every day in the percentile of 90%. When they need to know something, 72% of young users search the internet first. They use computers for many things in daily life (64% of them), keep in contact with their friends through the computer every day (52%) and use the computer for leisure every day (42%). Students are fascinated by the mirage of technology, especially for communication (chat, forums, e-mail), and entertainment (digital and virtual games). There is a big concern from teachers and parents linked with the lost time in the online environment, since teenagers and young people spend much more time for socializing and playing and less for learning. The Internet has become a tool to navigate, to get practical information or to explore new data. Unfortunately, the Internet also opens an unfamiliar world. Early education regarding safety use is necessary. Virtual socialization, although known by psychologists as a weak socialization, given the lack of direct interaction, presents, in turn, a way to expand real communication in the online environment. A compressed time and a virtual space become new challenging landmarks for communication.



**Figure no. 1.** The distribution of answers on daily technology use

### 3.2. Multitasking skills

Multitasking is a behaviour that lets young people to manage dual tasks simultaneously or alternate multiple tasks. Johnson (2006) describes one kind of multitasking that usually involves skimming the surface of the incoming data, picking out the relevant details, and moving on to the next stream. According to the answers, most of the 12-14-year-old students, in proportion of 64%, can use more than one application on the computer at the same time. In equal proportions, 62% of students are able to surf the internet and perform another activity comfortably; they can check email and chat online at the same time when using the internet for their work; they are able to listen to music as well and they can chat on the phone with a friend and message another at the same time. In a lower percentage, of 48%, they can communicate with their friends and do their work at the same time. Unlike adults, who perform these communication activities in a sequential manner, children have this speed of simultaneous execution of multiple actions. This may seem striking to adults, who become concerned about the intensity of these stimuli that interact with the child. Mobile phones are designed to allow the use of applications at the same time, with multiple windows, which requires fast skills from the user. This is a daily exercise that accustoms pupils to this device.



*Figure no. 2. The distribution of answers on multitasking skills*

Learning is a resource-consuming activity for the brain. Our brain makes probabilistic scores in every second about our actions and decisions. Therefore, for example, there are limits to performing multiple tasks at the same time. Recent studies showed a progressive expression of what multitasking involves for Baby-Boomers, Generation X and Net Generation. As a result, multitasking was declared by experts in Neurosciences, an adversary of the brain.

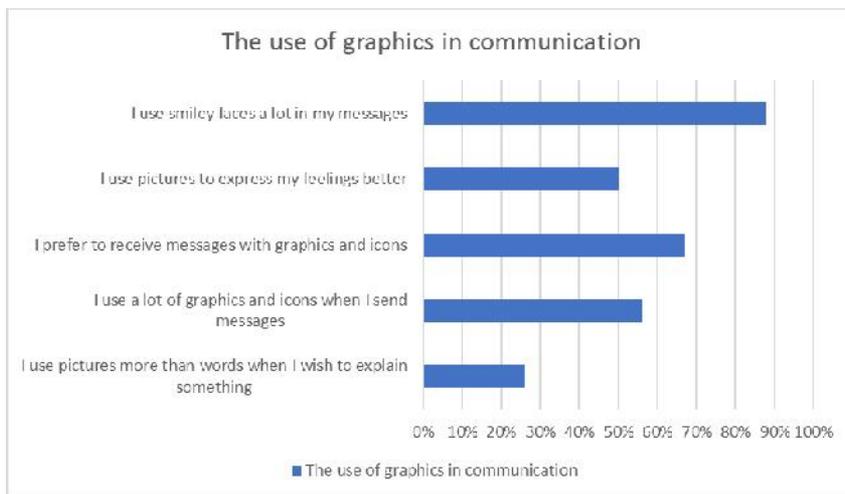
### 3.3. The use of graphics in communication

The use of graphic representation was another item of the applied scale. The most common practice refers to the use of 'smiley faces' in messages, by the 88% of respondents. The other practices have a comparative presence in the habits of young users:

- Students use pictures to express their feelings better - 50%
- Students use a lot of graphics and icons when they send messages - 56%
- Students prefer to receive messages with graphics and icons – 67%
- Students use pictures more than words when they wish to explain something - 22%

Communication networks have a marked iconic and graphic content. Children and teenagers use signs, symbols, photos, MEMEs, pictures, graphics early. These pathways include a stylised emotionality.

The language used in online space is a new type called cyber-language. It is spontaneously assimilated by young people, having a practical, instrumental aim. Interpersonal perception, nonverbal communication, listening, emotions, all are represented here in a compressed, fluid, diverse form.



**Figure no. 3.** *The distribution of answers on graphics use*

Students share instant messages using their own language codes, as markers of their social identities (Boyd, 2007). The peer group becomes the main source of behaviours norms and achievements recognition. In the early years of school, parents and teachers set the rules of behaviour for technology use. At the age of twelve, the students are interested in spending time together, without adult supervision. The virtual space remains in the extension of their life. Children aged 12-14 can think logically and are able to write, preserve inclusion in classes, subordinate, and subordinate relationships, and create symbolic representation. Memorization processes now reach a peak in their cognitive development. Despite of this, their language in the virtual environment seems to be superficial, incomplete, laconic. The question that concerns us is the following: where is the edge between their complex cognitive skills that they are capable of and the superficial use of online language? How can 12-14-year old students integrate these communication practices in their learning? How can teachers help them?

### 3.4. Feedback and rewards

Most of students, in proportion of 79,6 % expect to have the access to the information when they need it. Other two habits are equally represented by

63,3%: when they send out an email, they expect a quick reply; and they expect the websites they visit regularly to be constantly updated. When they study, almost half of them (44,9%), prefer to use those that they immediately learn first. The lowest percentage is showed by those 18,4% who have the wish to be rewarded for everything they do. That means that students' behaviours can be changed in the focus of the feedback, which is formative and stimulative. Online feedback tools are synchronous and speedy. Alert systems, signals, animations, automatic and individual bonuses have been created to provide a variety of motivational stimulus. This explains the fact that there is an increased reactivity of the verbal behaviours. Young people prefer synchronous messaging instead of asynchronous channels (the e-mail, the mailbox).

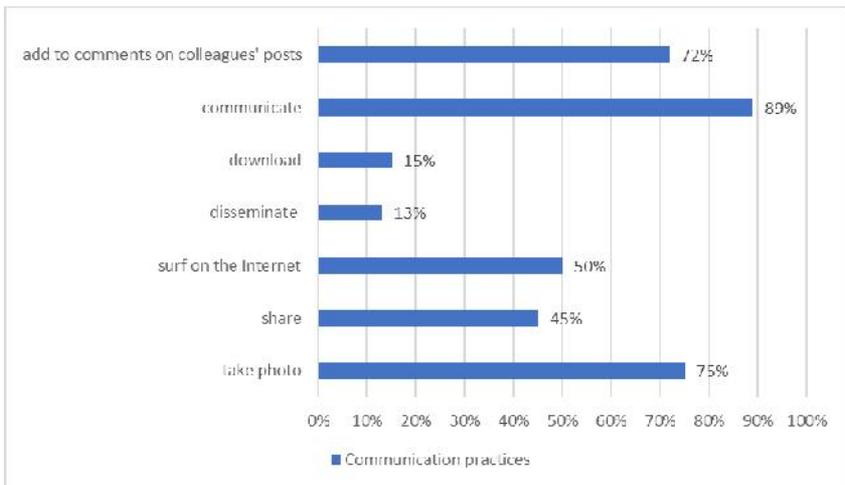


*Figure no. 4. The distribution of answers on feedback and rewards*

In this study we found that all students, typically good readers, had no difficulty in posting messages, reading the text online, participating in online surveys. Some students, usually poor readers, used more multimedia means to avoid reading texts, and not to expand their knowledge. The observed gap is based on differences in students' reading ability (traditional literacy), rather than on differential access to digital media (new literacy). These students

who live in urban areas, have state-of-the-art devices, and access to the Internet.

Frequently, students surf on the Internet, photograph, communicate, download, disseminate, add to comments on colleagues' posts. On blogs, portals, educational platforms, digital applications, students interact with a diverse content: MEMEs - text images, video content, infographic content and text-blog content. According to this research, animations, educational video, and YouTube are their preferences. It is estimated that there are different habits in their users' profile, depending on the debut age in the link with technology. It is redundant to point out that all these children started to use technology at the age of 4 or 5. Due to the increased frequency, unfortunately, they become experts in virtual communication being sometimes exposed to potential risks in real life (social isolation, addiction, anxiety and depression).



*Figure no. 5. Communication practices of 12-14-year-old students*

In the 1980s, when computers first appeared in a class of students, studies on digital divide and gender showed that girls use computers less than boys do. According to our empiric observation, this discrepancy disappeared. It is only a difference in the aim of practice. Boys use it mainly for games and competitions, and girls for communication or presentation. Anyway, positive early experiences influence later success in all these activities.

Students can build their own community, they can identify, apply, and transfer knowledge in a variety of contexts by practicing multiple presentation and writing skills, sharing resources among colleagues, creating new products, guiding group discussions, and exchanging ideas between peers. Students usually create their own communication experiences.

#### **4. Conclusions and recommendations**

In conclusion, the respondents demonstrate the four typical features of digital nativity. To develop these skills, in a systematic manner, we consider that the teacher's role is essential and far from simple. One cannot ignore there are significant changes in the communication practices of young people. That is why specialists in education believe that, beyond all the difficult changes, there is no longer acceptable to keep the gap between the widespread use of technology and its use in schools. There is a contradiction between school norms and these new practices. For example, we think that the attitude towards access to portable technology (mobile phones, tablets, laptops) should be re-evaluated. The biggest challenge is the correct usage, for a well-defined time and purpose.

Teachers can set some practices to make students' communication more efficient, in a structured manner. They can include daily communication habits in classroom learning, by using new methods for developing language (interactive learning resources: animations, tutorials, online lessons, videos, music, simulations, and virtual experiments). These resources will be adapted to communication needs, in a coordinated way, oriented towards the creativity of the language, rendered by preferred digital means. From this point of view, digital resources can be included for: creating virtual bulletin boards (Padlet); making presentations or learning paths (PowerPoint, Prezi, Sway, Symbaloo); creating stories (My storybook, Story Jumper); creating videos, cartoons, comics (Voki, WeVideo, Toontastic, Edpuzzle); writing collaborative documents (Google Docs); designing concept maps (Mind Map, SpicyNodes, Bubbl.us, MindMeister); composing clouds of words (Wordle, WordArt); participating in educational games and interactive exercises (ClassTools, Kubbu); solving tests and questionnaires (examples: ProProfes, Hot Potatoes, Socrative, Tricider). Blogs, YouTube tutorials can be successfully used for language developing.

Teachers and students can successfully integrate the technology of communication in the teaching and learning objectives. They can create a benign link including learning and socialization spaces, to change them into a joint goal.

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