

## *Digital Native/Immigrant(?) Teachers on Themselves*

Mariusz Marczak, PhD  
Pedagogical University, Cracow  
Chair of Translator Education

**Introduction.** The profile of an average contemporary learner has been perceived through the lens of Prensky' (2001a; 2001b) seminal articles on the digital native vs. digital immigrant dichotomy. In his seminal publication Prensky (ibid.) posited that learners born after the 1980s speak "(...) the digital language of computers, video games and the Internet" (Prensky 2001a, p.1) as they grew in an environment where all the technology was interwoven into their the fabric their daily routine. In effect, he credited digital natives with "Different kinds of experiences lead to different brain structures" (Prensky, 2001, p. ?) and ascribed to them a number of characteristics which allegedly distinguish them from digital immigrants, i.e. people who were introduced to Information and Communication Technology (ICT) only in the course of their lives, having been born into a world devoid of it.

In the views of Prensky (2001) but also Tapscott (1999), Oblinger and Oblinger (2005) digital natives are active learners who prefer experiential learning to the traditional paradigm of knowledge being transmitted from the teacher to the students. Moreover, they engage can successfully handle multi-tasking, i.e. involve in the performance of several tasks at the same time as well as access information and communicate with others through ICT .

However influential the premises of Prensky's (2001a; 2001b) theory turned out to be, they were countered by the opinions of the sceptics, who found challenged Prensky's views on neurological grounds. For instance, Van Slyke found it hard to accept the belief "(...) that neurological structures could change to such a dramatic extent from one generation to the next" (Van Slyke, 2003, p. ?).

At the same time, scholars such as Thomson (2001) seemed to support Prensky's (2001) logic when they observed that neurolinguistic research does indicate that change to brain structure even over the duration of one's life may be brought about by appropriate stimulation and that "(...) the early years are a period of considerable opportunity" (Thomson, 2001, p. ?). Thus, Thomson maintained that neural connections in the human brain could indeed be bloomed and pruned, depending on experience and types of activity in which a young would involve. Similarly to Prensky (2001), he would emphasise the role of early exposure to ands interaction with technology on the development of neural synapses.

Even if Prensky's suggestions pertaining to dramatic alterations to brain structure caused by early experience of information and communication technology were true, opinions have been voiced that neurological programming of that kind would not necessarily augment people's lives. Brody (2004) expressed the concern that ICT constituted an electronic distraction to social life, and that "(...) computers, headsets, and cell phones, has made it possible for children and parents almost to avoid each other's company entirely, even when sitting next to each other in the same room (...)" (Brody, cited by Alliance for Childhood, 2004, p. ?).

In terms of technological expertise and skills, digital natives' achievement has been questioned on the grounds that even those who happen to have been exposed to technology early in their lives may tend to utilise technology to varying degrees. An opinion of this kind was expressed by McKenzie (2007), who distinguished between light, medium and heavy users of technology, thus indicating that age cannot be treated as a universal predictor of an individual's confidence with technology. In congruence with that, Kvavik, Caruso & Morgan (2004) reported increased ownership of selected types of technology among digital natives, including the utilisation of: personal computers (93.4%) and mobile phones (82%); but only limited usage of hand-held devices, estimated to amount to c.a. 12% of the population examined.

Kvavik, Caruso and Morgan's (2004) research further revealed that a vast majority of technology users who, in terms of Prensky's (2001) theory, technically qualified as digital natives used ICT to perform the most obvious tasks, including: word processing (99.5%); emailing (99.5%) and surfing the web for pleasure (99.5%), while only a minority used technology in more sophisticated manner, e.g. in order to create web content and publish it online (c.a. 21%).

Similar results were reported by Kennedy et al. (2008), who gathered evidence which revealed that strikingly large proportions of digital natives, as classified by date of birth, had never involved in more challenging forms of web-based activity. For instance, it turned out that over 80% of the students examined had never produced a podcast or contributed to a wiki; over 70% had never kept their own blog; over 50% had never used a social networking site and read a blog or downloaded a podcast.

More recently, Bartlett and Miller (2011) conducted a study whose findings demonstrated that the manner in which digital natives utilise modern technologies is far from expert. For example, the research revealed that c.a. 50% of the 12-15 year-olds examined who used

search engines were not critically aware of the provenance of the content; only 8% validated websites for authorship and purpose and "(...) only 17% compare[d] information across websites" (Bartlett & Miller, 2011, p. 22).

**Study.** A survey study by Marczak (2013) yielded findings which revealed that Polish EFL teachers' implementation of information and communication technology in order to enhance foreign language instruction to a very limited degree. Although over 93% of the subjects maintained that they used ICT in EFL teaching, it became apparent from the results obtained that they utilised computers and selected peripherals, chiefly multimedia projectors and printers, mostly in order to prepare materials, while they used the web only for the purpose of accessing ready-made online content. At the same time, they scarcely used more advanced computer-assisted language learning tools or authored/delivered content on the web. Only 13% of the teachers surveyed used virtual learning platforms, 14% declared that they uploaded ELT materials for learners online, 3.8% contacted learners via web chat, 3% engaged learners in blog-based tasks and 1% authored and published web pages. 93% very rarely, or never, used made use of concordancers, 76% rarely or never taught English as a foreign language through interactive computerised stories.

Since the limited use of ICT in language education could be, at least in theory, ascribed to the teachers' age – over 74% of the respondents were 30 years old or above at the time of the study – a study was conducted in order to investigate how student teachers, who were supposed to enter the ELT profession, perceived themselves against the backdrop of Prensky's distinction between digital natives and digital immigrants. That, in turn, was supposed to indicate whether the EFL classroom in Poland could soon become the setting for more innovation with regard to computer-assisted language learning.

The study was motivated by the following research questions:

- Which do the subjects classify themselves as digital natives or digital immigrants?
- Do they agree with Prensky's dichotomy?
- Which characteristics of DNs/DIs do they agree/disagree with?

The participants were 22 teacher trainees in the 3rd year of a undergraduate university programme and 33 in-service teachers in the 1st year of a postgraduate programme. The research instrument was an online forum-based survey which contained 3 open-ended questions corresponding to the research questions cited above.

	<b>DNs</b>	<b>DIs</b>	<b>Hard to tell</b>
Trainees	36%	41%	23%
Teachers	39%	46%	15%

Figure 1: Which do you classify yourself as a digital native or digital immigrant?

Figure 1 illustrates responses to question 1, which revealed that 36% of the teacher trainees viewed themselves as digital natives, while a slightly larger proportion (41%) classified themselves as digital immigrants. 23% of the trainees surveyed found it hard to classify themselves as members of either category.

In the case of in-service teachers, 39% of them perceived themselves as digital natives, while 46% believed that they fell into the category of digital immigrants; 15% of the in-service teachers found it hard to decide where they belonged.

	<b>Agree</b>	<b>Disagree</b>	<b>Hard to tell</b>	<b>Missing responses</b>
Trainees	32%	27%	36%	5%
Teachers	45%	18%	30%	6%

Figure 2: Do you agree with Prensky's dichotomy?

Figure 2 presents responses to question 2, where 32% of the teacher trainees agreed with Prensky's digital natives/digital immigrants dichotomy, while 27% disagreed with it; 36% found it hard to declare decidedly whether or not they perceived the dichotomy as valid, and the remaining 5% constituted missing responses.

Among the in-service trainers, 45% accepted Prensky's dichotomy as valid, while 18% did not approve of it; 30% found it hard to express a clear-cut opinion, and the remainder (6%) failed to provide a valid response to the question.

Responses obtained through question 3 demonstrated the characteristics of digital natives, as delineated by Prensky (2001), which the respondents accepted as reflective of reality. One of them was the fact that digital natives are more advanced users of information and communication technology than digital natives. Another quality accepted was digital natives'

capacity to process information in manner different from that utilised by digital immigrants, which the former group supposed owe to early exposure to, and use of, new technologies.

The respondents also agreed that digital natives have a preference for learning from digital resources.

At the same time, question 3 revealed that the respondents believed, as Prensky (2001) did, that digital immigrants have limited ICT skills and awareness; and they need to learn how to utilise new technologies for learning purposes and teaching purposes.

There were a number of the characteristics of digital natives and immigrants which the respondents called into question. For instance, they discarded the view that digital natives differ from digital immigrants in brain structure. They underlined that the lifetime is too short a time for such changes to occur. They also questioned the alleged contrast between teachers as digital immigrants and their learners as digital natives. Firstly, the respondents emphasised that generational difference is not necessarily technology-induced.

Secondly, they expressed the belief that crediting age with the power to determine an individual's ICT skills, and the resulting group membership, is an unwarranted simplification, and other factors are likely to exert a much greater influence on a person's ability to handle new technology, e.g. upbringing and parental model; living circumstances, e.g. financial means; personal attitude towards innovation and technology, personality, flexibility and one's global motivation to learn.

What is more, the respondents did not take for granted the advantage of digital native learners over their digital immigrant teachers. As a respondent suggested, "(...) teachers should teach (...) students the skills they may not have had the chance to gain without our help", which implies that to the respondents old school, offline skills are as important as modern, online/ICT skills.

That, in turn, was congruent with the respondents' view that digital natives do not necessarily need to be taught with the exclusive use of a new curriculum. They posited that particular elements of what Prensky (2001) sees as the old curriculum could play a vital role in education, as they "(...) challenge the brain and have been found to stimulate the growth of dendrites. Therefore, such content still has a place in the classroom".

The respondents also expressed the belief that digital natives do not feel the need for ICT-enhanced learning alone. As one of the respondents observed, "Not everything should happen at a speed of 4.9 seconds, which is the average time it takes a web page to load, and last just

as long. Instant gratification is nice, but does not have the same feeling as something that you have had to work for".

Interestingly enough, the respondents also undermined Prensky's (2001) premise that digital immigrants by default lack interest in technology, or cannot associate learning with enjoyment. As an individual observed, "Although I wasn't born into the digital world, e-mails, the Internet, cell phones and instant messaging are integral parts of my life, and I believe that my students can learn successfully while watching TV, listening to music, playing computer games or talking via computer".

Another quality attributed to digital natives by Prensky (2001) which the respondents believed to be a fallacy was digital natives' supposed superiority in information processing, as illustrated by the following quotation: "youngsters are somehow excused from thinking (...) a computer will do everything for them".

What nicely encapsulates the message underlying the respondents' views is their call for a balanced implementation of both old and new teaching methods, as well an adaptation of educational methods, so that they optimally satisfy the needs of contemporary learners. In addition, it was suggested by a respondent that the existence of a generation gap between learners and their teachers has always been an inherent element of education, yet it has not affected educational achievement, as illustrated below:

"I remember the time when I was attending school, the generation gap between teachers and students (also seen in handling new technologies) was always present but it never affected the quality of teaching."

***Implications for further research.*** The results of the study have a number of implications for further research. In the light of the findings it seems particularly desirable to investigate how digital native/immigrant teachers' declarations correlate with their daily classroom practices, especially in terms of the ICT skills which they actually display in action as well the extent to which they utilise ICT in order to enhance foreign language instruction. It also needs to be examined in what manner digital native/immigrant teachers utilise various forms of technology with a view to enhancing language education.

Last but not least, it is necessary to identify factors which interfere with, or facilitate, technological innovation in the EFL classroom, so that their detrimental effect to teachers' initiatives is limited.

## References

- Alliance for Childhood (2004). *Tech Tonic. Towards a New Literacy of Technology*. Retrieved March 31, 2014, from [http://www.educ.msu.edu/epfp/meet/01-24-05files/tech\\_tonic.pdf](http://www.educ.msu.edu/epfp/meet/01-24-05files/tech_tonic.pdf)
- Kvavik, R.B., Caruso, J.B. & Morgan, G. (2004). ECAR study of students and information technology 2004: convenience, connection, and control. Boulder, CO: EDUCAUSE Center for Applied Research.
- Marczak, M. (2013). *Communication and Information Technology in (Intercultural) Language Teaching*. Newcastle-upon-Tyne: Cambridge Scholars Publishing.
- McKenzie, J. Digital Nativism Digital Delusions and Digital Deprivation. Form now on. the educational technology journal, *vol 17/No 2/November 2007*.
- Oblinger, D. & Oblinger, J. (2005). Is it age or IT: first steps towards understanding the net generation. In D. Oblinger & J. Oblinger (Eds), *Educating the Net generation*, pp. 2.1–2.20. Boulder, CO: EDUCAUSE. Retrieved March 31, 2006, from <http://www.educause.edu/educatingthenetgen>
- Prensky, M. (2001a). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1–6.
- Prensky, M. (2001b). Digital natives, digital immigrants, Part II: Do they really think differently? *On the Horizon*, 9(6), 1–6.
- Tapscott, D. (1999). Educating the Net generation. *Educational Leadership*, 56, 5, pp. 6–11.
- VanSlyke, T. (2003). Digital Natives, Digital Immigrants: Some Thoughts from the "Generation Gap" *The Technology Source Archives* Available online at [http://technologysource.org/article/digital\\_natives\\_digital\\_immigrants/](http://technologysource.org/article/digital_natives_digital_immigrants/)