

# Using active e-learning to accommodate the Net Generation of learners

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**Abstract:** *This paper explores some of the active e-learning ideas and considers e-learning as useful or even main method of learning in the future.*

*On the one part, this question is not so much technical question as educational; on the other part, change of technologies is an important element in educational changes.*

*Nowadays, students are different from students of previous years. This is why, educators are faced with the challenge of adapting their teaching styles to accommodate a new generation of learners. Usually, such young people are considered as the Net Generation, Millennials, Generation Y, Digital Natives, Trophy Kids etc; and they have not the same learning expectations, styles, and needs as former students.*

*This article assists educators in teaching the Net Generation by highlighting their characteristics and providing examples of how to adapt teaching strategies by using of different e-learning tools for active learning to foster student interaction in e-learning. The difference between active and passive e-learning is observed, and importance of both strategies usage is argued.*

**Keywords:** Net Generation, Eight Norms of the Net Generation, e-learning, active and passive e-learning.

## INTRODUCTION

According to the Generation Theory [1], there are Four Generations of population cohorts.

Scientists tries to describe all the generations of XX century – in order to give them names and description.

Understanding differences between the generations is fundamental in building of successful learning-teaching process. For each generation there is particular experience characterized by specific preferences, potential, capacity, opinion, and learning style.

Brief chronological classification of generations is provided below.

1. Traditionalist (1925-1945);
2. Baby Boomers (1946-1964);
3. Gen X (1965-1980);
4. Gen Y, Millennial, Net Generation (1981 and later).

Modern scientists have identified Gen Z (after 2000) as further group of population cohorts. This article focuses on the fourth group (Gen Y) which is aid to

be the Net Generation. The main reason for this is belonging of modern students to this cohort.

Usually, such young people are considered as the - Net Generation, Millennials, Generation Y, Digital Natives, Trophy Kids etc.

A great number of scholars such as Don Tapskott [5], Diana G.Oblinger [7], James L.Oblinger [7], Marc Prensky [6,8], Kassandra Barnes [9], Raymond C. Marateo [9], S. Pixy Ferris [9], and Carole Barone etc. state that the Net Generation students have not the same learning expectations, styles, and needs as former students.

„The current model of education is not appropriate for kids who have grown up digital world and are accustomed to interacting with people, not just to listening. The early educational model might have been suitable for the Industrial Age, but it makes no sense for the digital economy, or for the new generation of learners. We should change the education system to make it relevant for them“ Don Tapskott [5].

This article assists educators in teaching the Net Generation by highlighting their characteristics and providing examples of how to adapt teaching strategies by using of different e-learning tools for active learning to foster student interaction in e- learning. We also observe on the difference between active and passive e-learning and argue importance of both strategies usage.

## **1. WHY E-LEARNING?**

According to [5], we highlight Eight Norms of the Net Generation:

- freedom,
- customization,
- scrutiny,
- integrity,
- collaboration,
- entertainment,
- speed,
- innovation in today's world.

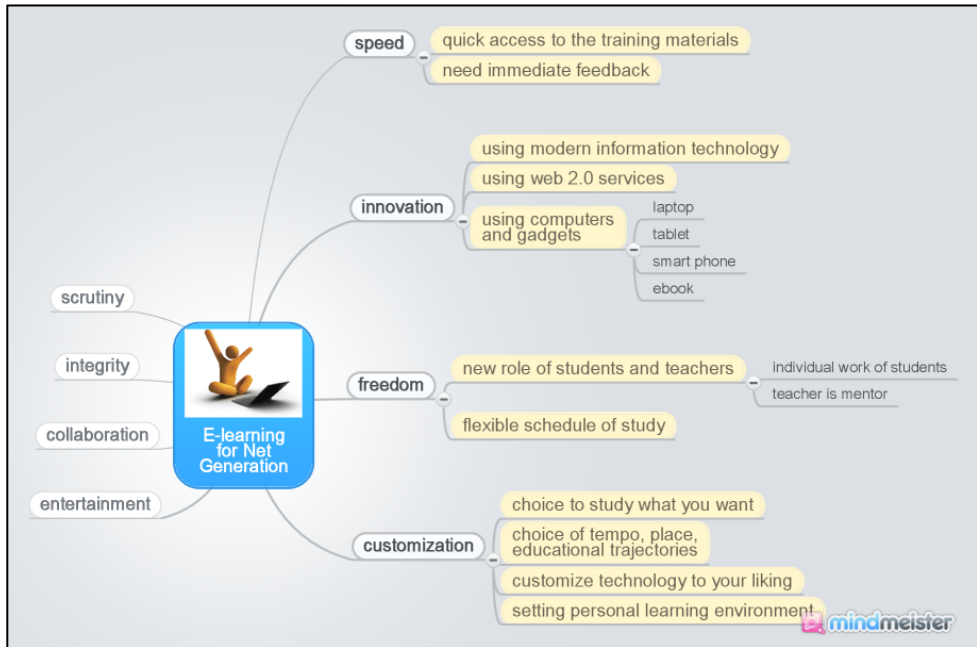
It was found that half of these norms comply with the principles and foundations of e-learning [Figure 1].

*The first rule is freedom.* Students and teachers get an entirely new roles due to e-learning. On the one part, the main role of the teacher is to guide the students. It looks very similar to classic learning, but the difference is following: a teacher should not teach, his/her function is to help, direct, and supervise. On the other part, a teacher has to update his/her knowledge in the area of modern information technology and using this in the learning-teaching process.

All the stated above is related to setting the needs of students. Thus, students get the necessary freedom in studying, a big boss is removed from learning process and replaced by a mentor.

E-learning allows students to freely schedule their studying process. Students get possibility of flexible selection of what, when, and where to learn.

They choose tempo, place, and educational trajectories. They also make choice to study alone what they want. These advices is also related to the second rule.



**Figure 1. Relationship between e-learning and Norms of the Net Generation**

*The second rule is customization.*

Students create personal learning environment via e-learning. They customize technology to their liking, make individual setting and often use avatar. Whereas before using of avatar, we get the anonymity of interacting in the virtual world of personal learning environment. Using of a programmable avatar often enables individuals to communicate and express themselves in the new ways. Thus, they feel more confident and can obtain better learning results.

*One more important rule is innovation.*

The Net Generation students stoutly and easily "speak the language" of technology. This emphasizes the importance of modern information technology usage in the learning-teaching process.

As noted in [6], today's students represent the first generations to grow up with this new technology. Author calls them Digital Natives because they have spent their whole lives surrounded by and using of different tools of the digital age such as computers, laptops, tablets, smartphones, e-books, digital music players, video cameras etc. Digital Natives have mixed their online and offline life.

In contrast to them, the author highlights those (Digital Immigrants), who were not born in the digital world, but became fascinated by and adopted many or

most aspects of the new technology. This pays attention to the fact that the biggest problem facing education today is that our Digital Immigrant instructors (who speak the outdated language) are struggling to teach population that speaks the entirely new language.

Another striking characteristic of Net Generation students is *speed*.

When speaking about young people, we usually say ‘They want it right now’. This means these people want learn quickly, in particular, specific practical knowledge. They need quick access to the training materials, and e-learning tools can accommodate this.

Net Generation students also expect quick online professors answers, but many professors often have no time or interest to do this [4]. Communication tools via e-learning are really effective. We can increase student participation and engagement in the learning-teaching process by using of such tools. Also we can get feedback on student learning.

## **2. ANOTHER SIGNIFICANT NORMS OF THE NET GENERATION VIA USING DIFFERENT E-LEARNING TOOLS**

Another Norms of the Net Generation do not exactly go with the principles and foundations of e-learning. But in fact, they are completely realizable via using different e-learning tools.

A list of rules and e-learning tools related to these rules are provided below.

Above all things, Net Generation students are excellent *collaborators*. They are natural at networking and like to work in teams. For the Net Generation, collaboration can occur in the same classroom or with team members across the world. They feel comfortable starting and maintaining online relationships and becoming "good friends" with people they have never personally met [4]. We must remember that working together is not cheating in their world.

Many teachers lay emphasis on using Web 2.0 tools or social software within their organizations for improved collaboration and innovation [Figure 2].

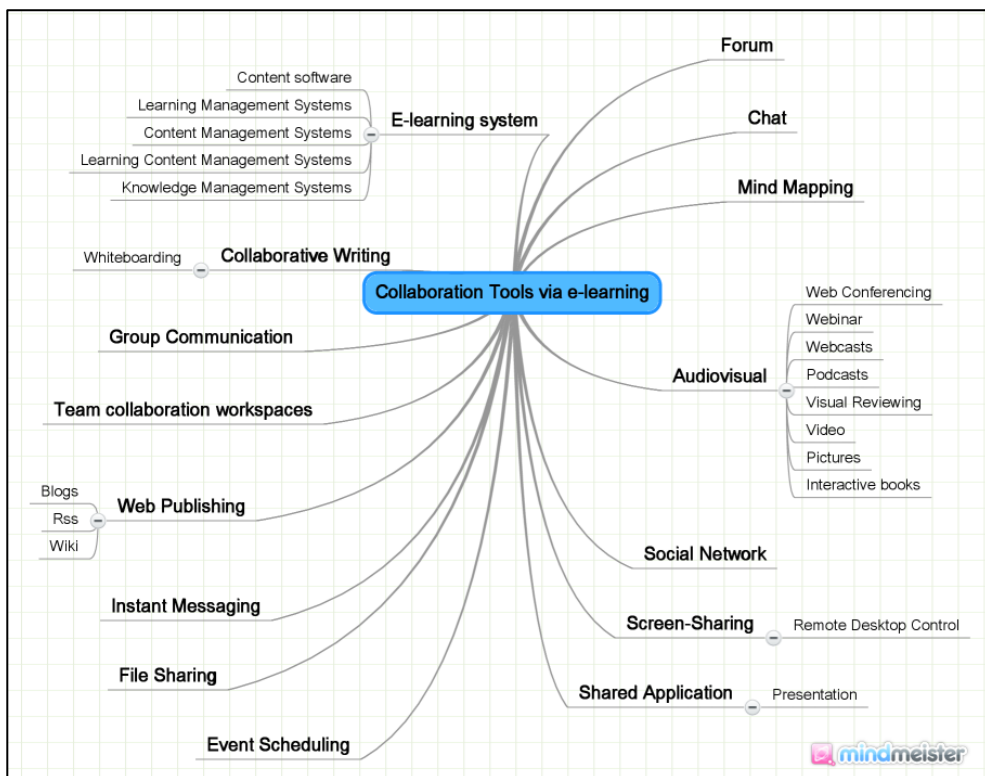
The list provided below contains examples of freeware tools to each group.

First group includes different learning systems and tools. The classification of such systems is presented in Figure 2.

It is important to keep in mind that modern projects offer free courses online for anyone. An example of such a project is Coursera. This project try to connect people to a great education so that anyone around the world can learn without limits. More information can be found here [11].

Second example of such a project is OpenCourseWare (OCW).

OCW is a web-based publication of virtually all Massachusetts Institute of technology course content. OCW is open and available to the world and is a permanent MIT activity. More information can be found here [12].



**Figure 2. Collaboration tools via e-learning**

Another examples are in [Table 1].

**Table 1.**

**Collaboration tools via e-learning. E-learning system**

Name of tool	Examples of freeware tools	Description	Link
E-learning system	LMS Moodle	It is a Free web application that educators can use to create effective online learning sites.	moodle.org
Forum, chat	Embedded elements of Moodle	Communication tools	moodle.org

Net Generation students are active "global citizens". They usually take participation in the international study and service projects. Some e-learning tools help them to provide good communication and collaboration with foreign students [Table 2].

**Table 2.**

**Collaboration tools via e-learning. Examples 2**

Name of tool	Examples of freeware tools	Description	Link
Group Communication	Google Groups	Google Groups is a free service from Google Inc. that supports discussion groups, including many Usenet newsgroups, based on common interests	<a href="http://groups.google.com">groups.google.com</a>
Collaborative Writing	Google Docs	Google Docs, Sheets, and Slides are productivity apps that let you create different kinds of online documents, work with them in real time together with other people, and store them in your Google Drive online	<a href="http://docs.google.com">docs.google.com</a>
Whiteboarding	Lino	App helps create a group and share canvases and stickies with other users.	<a href="http://en.linoit.com">en.linoit.com</a>
Shared Application	LearningApps	LearningApps.org is a Web 2.0 application, to support learning and teaching processes with small interactive modules.	<a href="http://learningapps.org">learningapps.org</a>
Remote Desktop Control	Chrome Remote Desktop	Access to other computers or allow another user to access to your computer securely via the Internet	<a href="http://chrome.google.com">chrome.google.com</a>

It was previously mentioned about such characteristic of Net Generation of learners as their multitasking skills and short attention spans. These people were grown up online; and now they can simultaneously be in social networks, do homework, talk the phone and use an instant messenger, since they ignore anything "boring" in their life. Inspiring tools for Net Generation students are in [Table 3].

**Table 3.**

**Collaboration tools via e-learning. Examples 3**

Name of tool	Examples of freeware tools	Description	Link
Social Network	facebook	Facebook is an online social networking service	facebook.com
Blogs	moyblog	Service allows users to create blog, share the latest news, and chat with other on interesting topics.	moyblog.net
Rss	rss.i.ua	RSS technology allows inform everyone about the new information published on website.	rss.i.ua
Wiki	Wikimapia	Wikimapia is an open-content collaborative mapping project that aims to mark and describe all geographical objects in the world.	wikimapia.org
Instant Messaging	skype	Skype is a voice-over-IP service	skype.com
File Sharing	Dropbox	Dropbox allows users to create a special folder on each of their computers, then Dropbox synchronizes them in the way that it appears to be the same folder (with the same content) regardless of which computer is used to view it	dropbox.com

The research shows that Net Generation students are strong visual learners and weak textual learners.

One study has examined a library class at California State University (Hayward), where students frequently ignored long text directions for homework assignments. When the assignments were rewritten with using images first, student scores increased from 11 to 16 percent, and refusal to complete the assignment dropped from 10 to 14 percent [4].

**Table 4.**  
**Collaboration tools via e-learning. Examples 4**

Name of tool	Examples of freeware tools	Description	Link
Presentation	Zoho Show	Online document management software	<a href="http://www.zoho.com">www.zoho.com</a>
Video	youtube	YouTube is a video-sharing website,	<a href="http://www.youtube.com">www.youtube.com</a>
Pictures	Picasa	Picasa is an image organizer and image viewer for organizing and editing digital photos, also an integrated photo-sharing website	<a href="http://picasa.google.com">picasa.google.com</a>
Mind Mapping	bubbl.us	Easily create colorful mindmaps to print or share with others	<a href="http://bubbl.us">bubbl.us</a>

Another Norm of the Net Generation is *entertainment*. Devices and technologies such as iPads, Tablets, e-books, video, webcast, podcast etc. can be particularly fascinating for students.

Educational entertainment (edutainment) is any entertainment content that is designed to educate as well as to entertain.

Examples of edutainment are:

- audio and video;
- streaming multimedia;
- 3D audio, video;
- film, television and radio;
- virtual museums;
- educational games;
- virtual worlds (3D visualized environment, 3D gaming interface integrated to form 3D).



According to [3]:

- virtual worlds give users the ability to carry out tasks that could be difficult for them;
- in the ‘real world’, there are constraints, including cost, scheduling or location;
- virtual worlds’ persistence allows to continue and grow social interactions;
- which can serve as a basis for collaborative education;
- virtual worlds can adapt to meet user needs.

One of the main benefits of using virtual world in education is avatars.

Avatar is employed to read for the user the subject matter and to entertain the learner by jokes, gesture, facial expressions.

The example of educational virtual worlds and avatars is project vAcademia.

VAcademia is all that is necessary for effective e-learning: a comfortable auditorium, interactive whiteboards, text and voice communication, support for webcams, and 3d recording.

Avatars that represent their users appear in many facets of the cyber space such as virtual boardrooms, messaging and chatting, internet or console gaming, marketing, broadcasting, film, television, education and training (examples are provided on <http://vacademia.com>).

Another advantage of the system is the ability to integrate with Learning Management System (LMS). This will give the opportunity to use the already-tested ways of learning together with innovative ones.

Another Norm of the Net Generation is *Scrutiny, or Transparency*.

This rule is a very important especially for e-learning, because the students are critics and skeptics. Nowadays students must know that Our Facebook and Google accounts could be seen by anyone and our posts are permanent.

The Last Norm of the Net Generation is *integrity or honesty*. As we notice above, we must remember that working together is not cheating in world of Net Generation. This norm usually used in collaborative learning.

### 3. ACTIVE E-LEARNING

When we talk about Net Generation’s learning style, we have to highlight their high activity in education process. Apparently, they do not want to be passive observers, and aim to be active participants, of course, only in case of the obvious benefits of this experience for yourself.

E-learning tools offer at least two powerful benefits for education. First, as you see above, collaboration is a part of the fabric of Web tools. Second, e-learning tools allow students to become active creators of content rather than passive consumers of information.

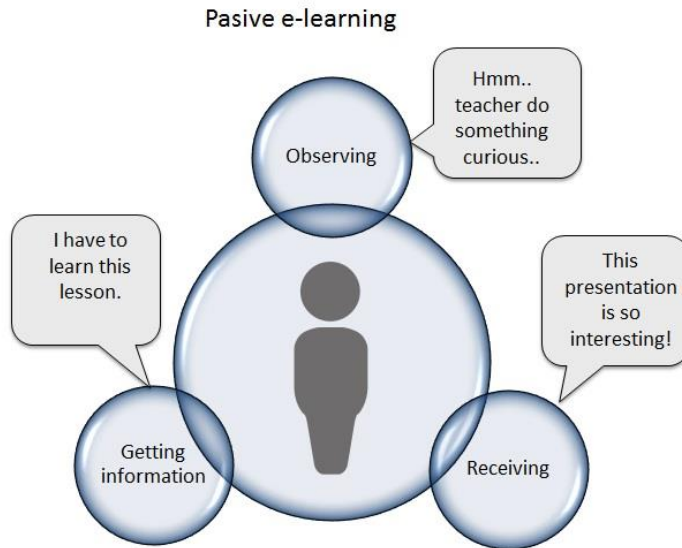
This second benefit moves teachers from a role of knowledge transmitter to a position of a mentor. We talk about this discussing the first rule of Net Generation (freedom).

Nevertheless, we cannot exclude completely passive learning and provide only active learning.

Both types of engagement should have their places in the e-learning-teaching process.

Active learning can exist only on the basis of passive learning, when we get information but we do nothing with it [10].

So, at first we have the following structure (Figure 3).



**Figure 3. Passive e-learning**

In this structure, student receives necessary knowledge base for future use.

As stated in [10] „...we read books and newspapers. We watch TV. No one would suggest that these are ineffective means of learning. Keep in mind, passive does not mean ineffective. It also does not mean that you have to stick with bullet points or just text as in the example above. The learner does not have to do anything with the information at that point in the course, but this does not mean that you cannot add variety in how it may be delivered”.

Further, having a basic knowledge, we use the following structure (Figure 4).

In this structure, active learning is consistent of:

- exploring;
- creating;
- experience;
- connecting;
- reflecting;
- sharing.



**Figure 3. Active e-learning**

Nevertheless, it is important to use combination of different learning styles; this can foster development of active learning experience.

Mix up different learning styles and methods:

- ✓ informal, incidental learning;
- ✓ integration of technology and media in learning (webinars, social networking sites, Avatars);
- ✓ case study;
- ✓ problem situation;
- ✓ ice breakers (ask a provocative question to break the ice);
- ✓ project-based;
- ✓ programmed instruction;
- ✓ context learning;
- ✓ the research method of teaching;
- ✓ modular training etc.

## CONCLUSION

So Net Generation requires new approaches to adapting their teaching styles. According to the main characteristics of this generation, e-learning may fully satisfy them. On the one hand, we need to understand that new tools open up new perspectives; on the other hand, traditional learning is always in demand. Only a harmonious mix of classic learning and new approaches can meet the needs of Net Generation.

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