

## Net Generation, Threats & Opportunities for Higher Education Institutes

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**Abstract:** The generation getting birth during the digital age (Net-Genre) has different views and feelings about the information and communication technologies (ICTs) than their elders who also know the pre-digital era. The old generation is learning it as a new technology but net-genre is adopting it as old or existing technologies meaning that they the old generation is learning by changing themselves while net-genre is personalizing and customizing new technologies according to their individualized requirements and styles. This new creed of learners is filled with both threats and opportunities for the higher education institutions and particularly the academicians or teachers. The purpose of this paper is to bring together the diversity of findings and stand-points about the net generation with a view to identifying the emerging threats and opportunities from the situation and sorting out measures and strategies to handle it.

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### 1. Introduction

Idiomatically, eLearning is a blessing in disguise for the developing countries, who have been struggling against illiteracy, poverty, global isolation and disempowerment since very long. ICTs have, obviously, emerged as universal remedy, if not for all but most of these paralyzing ills as they had started believing in their absolute incapacity to educate their masses by providing them required physical learning infrastructure (Nawaz, 2011). Contemporary cutting-edge technologies have opened a vista of opportunities for all the HEIs of the globe to grab as much benefits as possible depending on the capabilities, consistency of efforts and localization of technologies (Nawaz, 2012b).

Computers are helpful for the students not because they can create a better form of learning but mainly because the knowledge and skills needed to operate new tools are essential in today's job market. The ability to work with this new technology is perceived as an asset for the future success of their pupils (Sasseville, 2004). Research Even according to researchers, student manipulation of technology in achieving the goals of education is preferable to teacher manipulation of technology (Abrami et al., 2006). The challenge of evolving pedagogy to meet the needs of Net-savvy students is daunting, but educators are assisted by the fact that although these students learn in a different way than their predecessors did, but they do want to learn (Barnes et al., 2007; Kundi & Nawaz, 2010; Nawaz & Kundi, 2011).

Contemporary eStudents are denoted by several concepts to express their involvement with ICTs: computer geeks/nerds (Thomas & Allen, 2006); net-generation, net genres, and net-savvy students (Barnes et al., 2007); millennial, and electronic natives (Garcia & Qin, 2007). Instead of learning from computers, students are able to learn with computers in these constructivist environments. Given that most students almost anytime, anywhere can access various forms of information technology – MP3, cell phones, PDAs (Nawaz & Kundi, 2011), it is obvious that the Net Generation is different from previous generations in terms of their technological abilities, teamwork skills, and openness to participatory pedagogies (Nawaz, 2012d).

'Net Generation' is regarded as a force for educational transformation. They process information differently than previous generations, learn best in highly customizable environments, and look to teachers to create and structure their learning experience (Dinevski & Kokol, 2005). The challenge of evolving pedagogy to meet the needs of Net-savvy students is daunting, but educators are assisted by the fact that this generation values education. These students learn in a different way than their predecessors did, but they do want to learn (Barnes et al., 2007). The 'dot.com generation' joins the university with an intensive education in digital technologies (Nawaz & Zubair, 2012c).

### 2. Net-Generation

For life-long learners the first generation Internet allowed easy access to a vast range of published

materials. The second generation Internet allows them to contribute to it. This ability for new life-long learning communities to participate and create the new web has led to a whole generation of new 'socially based' tools and systems that are generically referred to as social software (Klamma et al., 2007). Many names have been used to describe the new generation of college students including: Millennials, Electronic Natives, the Net-Generation. They are identified as being conspicuously different from the preceding generations in their technological abilities, teamwork skills, and openness to participatory pedagogies (Garcia & Qin, 2007).

Learning for the younger generation is enhanced by confrontation with complex interactive experiences, [and is] a non-linear process of adaptation using associative and creative thinking' (Knight et al., 2006). Thus, one key characteristic of this generation is that they are very education oriented. Educational pressure begins early for Net Geners; college-directed goals take hold as early as the first year of high school (Barnes et al., 2007). Although they value education highly, Net Geners learn differently from their predecessors because it is the first to grow up with digital and cyber technologies (Nawaz & Zubair, 2012b).

Net Geners tend toward independence and autonomy in their learning styles, which impacts a broad range of educational choices and behaviors, from 'what kind of education they buy' to 'what, where, and how they learn'. This makes Net Geners more assertive information seekers and shapes how they approach learning in the classroom (Nawaz & Kundi, 2011). These students make conscious choices about what learning techniques work best for them, which can include reading lecture notes online, viewing interactive media such as PowerPoint presentations or digital images, or working in groups (Nawaz, 2012d).

Digital Age students express a need for more varied forms of communication and report being easily bored with traditional learning methods. Net Geners need self-directed learning opportunities, interactive environments, multiple forms of feedback, and assignment choices that use different resources to create personally meaningful learning experiences (Barnes et al., 2007). They want more hands-on, inquiry-based approaches to learning and are less willing simply to absorb what is put before them. This more independent learning style has grown out of the ingrained habits of seeking and retrieving information from the Internet, which marks a striking contrast to previous generations of students, who tended to acquire information more passively from authority figures (Nawaz & Kundi, 2010c).

To Net Geners, the social interaction and structure of the classroom is more important than the potential distractions of the Internet. The students of his generation like the social interaction that comes from being in class with their peers because for them, the relationships are a driving force in the learning process and learning through social interaction is important (Nawaz et al., 2011c). Furthermore, the habituated use of media by net-genres in different formats highlights another notable characteristic of their learning style. Multitasking is an integral part of the Net Generation lifestyle: using multiple media simultaneously, using computers and the Internet at the same time as video games, print media, music, and the phone (Nawaz, 2012a).

Other educators, however, object to the pressure to reshape higher education to meet Net Generation expectations. They argue that the move to incorporate technology, reduce lecture time, and reshape assignments to engage impatient Net-Genres merely caters to a lack of discipline. At some point, what we are doing is killing higher education (Nawaz et al., 2011a). Yet while education can be altered and even improved by incorporating greater autonomy in learning, the educational system may be ill-served by rushing to meet the perceived needs of the Net-Generation. While they are frequent users of electronic tools, Net-Genres typically lack information literacy skills, and their critical thinking skills are often weak (Nawaz, 2012c).

### 3. Threats for Higher Education

Given the fact that new generation is different from their predecessors in their learning style therefore they need to be provided with a different learning environment which accommodates the novel attributes of the net-generation. The higher education institutions are under pressure to change their existing practices and adopt innovative technologies by accommodating them in pedagogy as well as the management of the educational practices (Nawaz & Sattar, 2011). The experiences however, tell that the change process is very difficult because there is natural resistance to change and unless something is done to handle this resistance, the demanded change is hard to create (Nawaz, 2012c). There is need to catch-up with the paradigm shift in teaching, learning and education management of higher education around the globe for providing a gateway to the masses to access the digital world (Nawaz, 2012b).

For the net generation the eTeacher has to personify the role of 'guide on side' as opposed to his/her traditional character of 'sage on stage' because over the decades, educational technologies is playing critical role by providing options and flexibility to both teachers and students in teaching practices. It is

rather an obligation for the teachers to keep track of advances theories and technologies of teaching (Kundi and Nawaz, 2010). Given this, a diversity of changes have to happen in teachers and teaching of universities because the shift tells that teacher is no more the only source of scholarship. New avenues have opened where teacher has to play the roles of guide, mentor, coach, and counsel (Nawaz et al., 2011a).

Despite the large and often contradictory variety of approaches and attitudes in the field of eLearning in higher education, there is almost no systematic discussion about the new generation of learners. Since the subject refers to the most influential change process in our educational systems - a change process that is not only going to determine the form of the educational system but also the nature of education and hence the nature of the coming generations (Aviram & Tami, 2004; Andriole, 2006). The field of eLearning is changing and those responsible for educating the next generation of technology professionals are responding with a new computing curriculum containing computer engineering, computer science, software engineering, information systems and information technology. Unfortunately, the new curricula fail to address the depth and speed of the changes in the learning style of the learners thus the gap between theory-n-practice is getting bigger (Nawaz & Kundi, 2010c).

#### 4. Opportunities of Digital Age

The mushrooming development of ICTs is increasingly forcing individuals, institutions and governments to take-on the alternatives to traditional teaching methods by using educational technologies in multiple modes (Nawaz & Qureshi, 2010b). As the demand for ICT graduates is rising, the role of higher education is becoming wider and more complex. Like new generation of students, new creed of teachers is emerging. Teachers are embracing ICTs as an indispensable tool for teaching, learning and administrative purposes. New teachers are coming with computer skills but existing ones are facing problems in filling the gap (Nawaz et al., 2011a). Whatever the state-of-affairs, educational technologies are providing tremendous possibilities in: enhancing students' learning, developing teachers' professional capability, and strengthening institutional capacity (Nawaz & Zubair, 2012c).

The rapid growth of eLearning is occurring without our understanding the differences between how students learn in an online environment and in the more traditional setting (Luck & Norton, 2004). However, wherever used wisely and well, it is breaking the barriers to learning (Kuriloff, 2005) and assisting in adopting a learner-centered approach to education by encouraging and supporting two-way,

communication between teachers and taught (Wims & Lawler, 2007). There is need to avoid an all-encompassing model of faculty development rather establish multiple links between computing staff and faculty to support the growth of sustained partnerships for effective uses of technology in teaching (Kopyc, 2007). Furthermore, having faculty and technical staff in constant communication about emerging theories and practices can help in effectively adopting new digital tools (Ezziane, 2007).

However, teachers also believe that they can control recent changes in education with knowledge accumulated over the years from their professional experiences. They perceive professional knowledge as a way to steer technological change in a direction they can understand and which they feel is beneficial to their students. So cost-effectiveness may be imperative, but the student and not technology should be the center of any change in teaching and learning practices (Sasseville, 2004; Ehlers, 2005). Therefore, the developers of eLearning have to consider a variety of factors: development approaches and attitudes, project management techniques, user participation, user training, change management and the context within which all is going on (Nawaz & Kundi, 2010b).

#### 5. Discussions

There is great uncertainty among the instructors who find themselves confronted with a new role in which they are tutors and facilitators during the learning process. It requires that the system developers should go beyond the technical paradigms of their own discipline when designing and implementing learning software. They should rather seek interdisciplinary exchange with teachers, authors and learners. The developers therefore have to think in a new way: no longer is the instructional material built in a series of straight consecutive units where each presentation is based on the preceding one, rather to response new generation of learners efforts are made to produce such learning modules that they are de-contextualized and reusable.

Despite the theoretical benefits of eLearning systems, difficulties can occur if systems are not designed in accordance with the learner attributes in terms of nationality, gender, and learning styles. There have been massive investments on the establishment and maintenance of educational media for students but on the other side, there has been very little and infrequent knowledge-generation about the educational use of such media. The research tells that technology is widely used by faculty-members, the application of technology for teaching and learning has not been so extensive, nor it has integrated into the curriculum.

After passing through the above argumentation, the issues of net generation with reference to the higher education, teachers and learning environment can be plotted graphically to get a holistic view. The net generation is technology-oriented therefore, they need ICT-based facilities including eTeachers for learning in higher education levels. While the eTeacher (modern or expected teacher) hails from traditional teaching legacies, therefore he resists changing. However, the only solution is to replace the traditional methods with new digital gadgets so that both teachers and students can collaboratively learn and earn from the emerging opportunities.

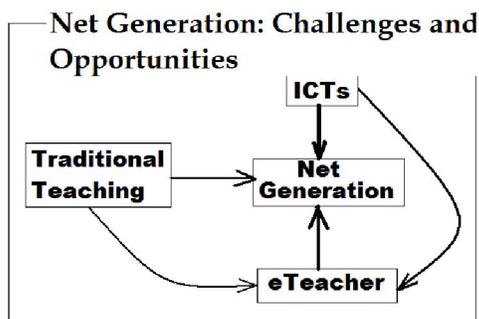


Figure 1 Showing Challenges & Opportunities of Net Generation

## 6. Conclusions

The higher education sector in the developing states is working hard to integrate next-generation education technology into its learning activities through the available cost-effective approaches. The learning management systems that evolved to provide support for distance education efforts have been adopted for use by the larger learning community, but the expense of operating 7 x 24 x 365 enterprise-level technology is daunting for many institutions. To move the educational practices forward, there is need to understand the users' changing behavior, willingness to experiment new models, and an appreciation of hybrid organizations that take advantage of skills contributed by various players of diverse backgrounds. Leadership of such organizations requires an appreciation of all the stakeholders and their respective contributions along with a clear and imaginative view of the futuristic information.

Squarely comprehending the learners is essential for creating such learning environments that optimize learners' strengths and minimize their weaknesses. Modern multigenerational body of students requires the educators who can understand generational differences, in terms of technological ability. A more critical conclusion, however, is that educators need to

expose students to novel approaches and provide them with opportunities for self-learning. If university education is made independent and self-regulatory, the students will take the responsibility and excel in online, hybrid, and other electronically mediated delivery modes.

Mass education has been a standing problem for the developing countries like Pakistan who can now benefit from the information revolution, which offers extraordinary opportunities in education. New technologies even enable the educators to teach different learners differently. Parents demonstrate this intuitive wisdom when they communicate differently to their children according to their ages. Electronically supported processes in the teaching and administrative spheres do not seem to be displacing traditional ways of doing things. Rather, the outcomes are often a matter of the new 'virtual' and the old 'traditional' notions of the university co-existing in a tense relationship. Universities and even smaller departments within organizations are becoming capable to afford sophisticated digital systems.

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