Digital Natives’ learning expectations in Higher Education

Portrait of a generation by itself

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Digital Natives’ learning expectations

HES-SO

- 2nd biggest uni in CH
- 21,000 students
- 28 schools
- 6 domains (Design and Fine Arts; Business, Management and Services; Engineering and Architecture; Music and Performing Arts; Health; Social Work)
- 46 BA programs
- 20 MA programs
- e-learning center HES-SO Cyberlearn
- 14 persons, 9 full time
NetGen

Millenials

Digital Natives

Born digital

Y Z Gen
Digital Natives’ learning expectations
Characteristics

- Use technology as a natural part of their lives
- Hedonist
- Live in present
- Need various activities
- Short attention span
- Preponderance of visual (video, picture, etc.)
- Consider professor as part of the teaching/learning process, not the center, want other contributions than professor’s
- Professor has the role of facilitator

- Zapper, gamer
- Cooperation work
- Communication and peer exchanges are center of their lives
- Pragmatic
- Need meaning and pleasure in work
- Need to be valorized through constructive feedbacks
- Co-expert and content producer
Digital Natives’ learning expectations

Topics

What are the habits of students in Internet, social media, mobile?

As digital natives, what do they suggest to improve our resources and methods?

How would they design their « ideal course »?
Digital Natives’ learning expectations

Frame

1 survey
30 questions: 20 closed and 10 open questions conducted in 2013 and 2016 through HES-SO Moodle platform to compare the evolution of the profile of these students.
Digital Natives’ learning expectations

**Methodology**

<table>
<thead>
<tr>
<th></th>
<th>May 2013</th>
<th>May 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>2 weeks</td>
<td>4 weeks</td>
</tr>
<tr>
<td><strong>Population (Moodle)</strong></td>
<td>17’430</td>
<td>19’385</td>
</tr>
<tr>
<td><strong>Confidence level</strong></td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td><strong>Margin of error</strong></td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Sample</strong></td>
<td>376</td>
<td>376</td>
</tr>
<tr>
<td><strong>Responses</strong></td>
<td>800</td>
<td>387</td>
</tr>
</tbody>
</table>

z test to compare both groups
Digital Natives’ learning expectations

Results

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>54.6%</td>
<td>54.6%</td>
</tr>
<tr>
<td>Men</td>
<td>45.38%</td>
<td>45.38%</td>
</tr>
<tr>
<td>Less</td>
<td>0%</td>
<td>0.26%</td>
</tr>
<tr>
<td>18-25 y</td>
<td>80.13%</td>
<td>77.52%</td>
</tr>
<tr>
<td>26-35</td>
<td>15.75%</td>
<td>17.31%</td>
</tr>
<tr>
<td>More</td>
<td>4.12%</td>
<td>4.91%</td>
</tr>
<tr>
<td>Bachelor</td>
<td>83.13%</td>
<td></td>
</tr>
<tr>
<td>Master</td>
<td>07.88%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2.99%</td>
<td></td>
</tr>
</tbody>
</table>

No significant statistical difference (SSD)
Digital Natives’ learning expectations

Devices

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop</td>
<td>96.50%</td>
<td>93.80%</td>
</tr>
<tr>
<td>Desktop</td>
<td>34.88%</td>
<td>36.69%</td>
</tr>
<tr>
<td>Mobilephone</td>
<td>86.26%</td>
<td>96.89%</td>
</tr>
<tr>
<td>Tablet</td>
<td>20.25%</td>
<td>36.43%</td>
</tr>
<tr>
<td>e-reader</td>
<td>03.38%</td>
<td>08.53%</td>
</tr>
</tbody>
</table>

SSD for mobiles devices and desktops
Digital Natives’ learning expectations

Tech use

<table>
<thead>
<tr>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Internet during course: 84.5%</td>
<td>Access to Internet during course: 93.3%</td>
</tr>
</tbody>
</table>

- **Multitasking**: 33.14% (2013), 44.60% (2016)
- **Check professors’ data**: 34.20% (2013), 37.12% (2016)
- **Supplementing professors’ data**: 57.84% (2013), 57.84% (2016)
- **Boring**: 37.43% (2013), 42.38% (2016)

(Multiple choice)

SSD for check and supplementig profs data and multitasking
## Digital Natives’ learning expectations

### Tech use

**2013**
- Use their smartphone during the courses for personal purposes: 75.75%
- Browse Internet: 33.99%
- Checks mails: 76.73%
- Instant messaging: 64.03%
- Post on Social medias: 46.20%

**2016**
- Use their smartphone during the courses for personal purposes: 89.41%
- Browse Internet: 42.61%
- Check mails: 71.88%
- Instant messaging: 84.35%
- Post on social medias: 47.83%

### SSD for Browse Internet and Instant messaging

- Use their smartphone during the courses for personal purposes: 75.75%
- SSD for Browse Internet and Instant messaging: 89.41%
Digital Natives’ learning expectations

Preferred Educational resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Videos</td>
<td>54.88%</td>
<td>59.69%</td>
</tr>
<tr>
<td>Simulations</td>
<td>47.13%</td>
<td>51.42%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>46.25%</td>
<td>50.39%</td>
</tr>
<tr>
<td>Videos Courses</td>
<td>40.50%</td>
<td>44.19%</td>
</tr>
</tbody>
</table>

(Multiple choice)

SSD for video media (combining video+video courses)
### Digital Natives’ learning expectations

#### Way of teaching

<table>
<thead>
<tr>
<th>Year</th>
<th>Interesting</th>
<th>Efficient</th>
<th>Modern</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>74.13%</td>
<td>15.63%</td>
<td>21.13%</td>
</tr>
<tr>
<td>2016</td>
<td>65.89%</td>
<td>09.82%</td>
<td>16.54%</td>
</tr>
</tbody>
</table>

(Multiple choice)

**SSD for interesting and efficient:** diminution
Digital Natives’ learning expectations

Best learning ways

<table>
<thead>
<tr>
<th>Year</th>
<th>Graphs and explanatory videos</th>
<th>Note taking</th>
<th>Listen to the professor</th>
<th>Reading summaries</th>
<th>Explain to classmates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>69.50%</td>
<td>61.13%</td>
<td>53.25%</td>
<td>48.63%</td>
<td>44.13%</td>
</tr>
<tr>
<td>2016</td>
<td>72.35%</td>
<td>51.94%</td>
<td>50.39%</td>
<td>50.13%</td>
<td>48.84%</td>
</tr>
</tbody>
</table>

(Multiple choice)

SSD for Note taking (diminution)
Digital Natives’ learning expectations

Preferred pedagogical models

<table>
<thead>
<tr>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures followed by exercises</td>
<td>Workshop courses</td>
</tr>
<tr>
<td>55.63%</td>
<td>48.58%</td>
</tr>
<tr>
<td>Workshop courses</td>
<td>Lectures followed by exercises</td>
</tr>
<tr>
<td>46.63%</td>
<td>47.55%</td>
</tr>
<tr>
<td>Lectures</td>
<td>Lectures</td>
</tr>
<tr>
<td>23.00%</td>
<td>22.74%</td>
</tr>
<tr>
<td>Flipped class</td>
<td>Flipped class</td>
</tr>
<tr>
<td>18.63%</td>
<td>21.45%</td>
</tr>
</tbody>
</table>

(Multiple choice)

SSD for lectures, lectures followed by exercises (diminution)
Digital Natives’ learning expectations

Ideal course design

55% of the participants provided detailed propositions (several lines) for a total of 549 descriptions

(2013)

68.6% of the participants provided detailed propositions (several lines) for a total of 159 descriptions

(2016)

(open question)
Digital Natives’ learning expectations

Statements

“As a reminder, a course must be prepared and teachers must think about changing techniques every 7 minutes, students' attention drops at this rate.”

-> Short attention span
-> Zapper, gamer

“I love when professors show us other opinions, such as TED videos”

-> Consider professor as part of the teaching

« A course where technology is used to increase interactivity »

-> Cooperation work
Digital Natives’ learning expectations
Evolution of concerns

keywords regrouped into six categories:

Professor
Exchange  ex. main keyword in resp 1 : video
Resource  category : resource
Method
Model
Organization
Digital Natives’ learning expectations

Pedagogical categories
Digital Natives’ learning expectations

Conclusions

Four actions:

Operational level

1. Develop a Moodle plugin: e-voting: over 100 unis have deployed it
   - Increase interactions between students and prof in large audience courses
   - Integrate such a tool in the Moodle environment to ease prof’s work

2. Moocise the Moodle platform to host our Moocs: https://moocs.hes-so.ch

3. Develop a customizable quiz system
Institutional level

Launch a wide operation to train the whole institution in 5 years to address the digitalization of the university and society.

Objective: strengthen digital skills by developing a mixed education program by addressing three issues:

- Comprehend the change of model,
- Understand the issues and challenge of technologies,
- Make professions evolve according to the challenge of digitalization
E-learning center HES-SO Cyberlearn
Get in touch with us

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New Tools for New Students