Can the syllabus actually impact student’s perceptions of a course regarding their personal needs and motivation?

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IFRES - University of Liège

Trier - November 18th 2009
The course syllabus: functions for students

<table>
<thead>
<tr>
<th>Research object</th>
<th>Motivation/Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication device</td>
<td>establishes an early point of contact and connection between student and instructor, sets the tone for a course (Altman &amp; Cashin, 1992; Rubin, 1985, Grunert, 1997...)</td>
</tr>
<tr>
<td>Cognitive map</td>
<td>indicates the course destination, path, ways to travel... shows the course as a whole, promotes self-regulation (Matejka &amp; Kurke, 1994; Leeds, 1992; Nilson, 2007...)</td>
</tr>
<tr>
<td>Learning tool</td>
<td>guides the student's autonomous part of learning, anticipates risks, gives various working advices (Parkes &amp; Harris, 2002; Woolcock, 2003; Madson et al., 2004...)</td>
</tr>
<tr>
<td>Contract</td>
<td>defines the responsibilities and roles of students and teacher in the meeting of course goals (Johnson, 2006; Duffy &amp; Jones, 1995; Hammons &amp; Shock, 1994...)</td>
</tr>
</tbody>
</table>

→ a tool *likely* to favourably impact students’ perceptions and attitude toward a course regarding personal **needs** and **motivation**

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The course syllabus & student’s motivation

Frequent general assertions disseminated in literature:

- “warm syllabi explain expectations in a clear and friendly fashion, encourage and motivate students” (Slattery & Carlson, 2005);
- “a syllabus can be used as a teaching tool to motivate students and keep both the teacher and the students focused on course objectives (Albers, 2003)”…

Concretely: how could the syllabus affect the motivation to study, focusing on which perceptions of the students?
The course syllabus & student’s motivation

Discussing influences on specific motivational factors:

- “the promising syllabus fundamentally recognizes that people will learn best and most deeply when they have a strong sense of control over their own education” (Bain, quoted by Lang, 2006)
- “the syllabus conveys enthusiasm for the subject and sparks student interest and motivation” (Hammons & Shock, 1994);
- “by making the implicit explicit and communicating that we believe that students can and will succeed, faculty ensure that all students have equal opportunities in the classroom” (Slattery & Carlson, 2005).
Link 1: the *motivational dynamic’s* model of Viau

**MOTIVATION**

- **Determining factors**
  - Student's perceptions
    - of activity value
    - of his/her own competency
    - of the controlability of an activity
  - Context

- **Indicators**
  - Cognitive commitment
  - Performance
  - Perseverance

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The course syllabus & students’ personal needs

• From “the consideration of what students need in order to be successful learners” (Hess & Whittington, 2003)…
• … to the support of “developmental needs of the students” (Haugen, 1998), …
• … the learning-centered syllabus “appeals to students from a variety of backgrounds and responds to their respective needs” (The New School - A University).
• “If thoughtfully prepared, your syllabus will demonstrate the interplay of your understanding of students’ needs and interests; your belief and assumptions about the nature of learning and education; and your values and interests concerning course content and structures. (Grunert, 1997)”

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Link 2 : the Theory of human motivation of Maslow

- Fundamental association of the basic need satisfactions with basic desires to know (“to be aware of reality, to get the facts, to satisfy curiosity, to see rather than to be blind”) and to understand (“to systematize, to organize, to analyze, to look for relations and meanings”).

- Proximity with students needs in academic context :
  - The need for self-actualization
  - The esteem needs.
  - The love needs.
  - The safety needs.
  - The 'physiological' needs

  - maintain a normal state (schedule, timing)
  - sleepiness

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Link 2 : the Theory of human motivation of Maslow

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- The need for self-actualization
  The esteem needs.
  The love needs.
  The safety needs.
  The 'physiological' needs

(+):
- undisrupted routine or rhythm, outline of rigidity, not only for the present but also far into the future
- fairness
- consistency, coherent, meaningful whole
- make the world look reliable, predictable, organized, orderly

(-):
- threats of punishment, tyranny
- unexpected, unmanageable things
- afraid of parents' disapproval, or of being abandoned by his parents
Link 2: the Theory of human motivation of Maslow

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- desire for strength, achievement, adequacy, confidence in the face of the world, independence and freedom
- desire for reputation or prestige recognition, attention, importance or appreciation
Link 2 : the Theory of human motivation of Maslow

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- Proximity with students needs in academic context:
  
  The need for self-actualization.
  The esteem needs.
  The love needs.
  The safety needs.
  The 'physiological' needs

  - desire to become more and more what one is, to become everything that one is capable of becoming (perspectives for deepening, access to additional resources)
Research question

• The likelihood of a given syllabus to actually impact the concerned perceptions of students in the right way has not been tested experimentally yet.

• So, for a syllabus or introduction speech whose qualities / characteristics seem to make them likely or not to impact positively or negatively learners’ perceptions of courses linked to their motivation and individual needs, will consistent effects be observed on the ones who have read / heard them?

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Data collected from teachers

- In January 2008, at the University of Liège: a thematic seminar offering special guidelines to design syllabi was organized for new faculties. 10 participants were invited to join the research and accepted all.
- At the beginning of the following academic year, their ten syllabi and introduction speeches - meant to Freshmen or Sophomores - were collected and recorded.
- The likelihood of those materials to impact the students’ perceptions was then analyzed and rated according to 8 criteria associated with the motivation and needs models.

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Data collected from students

- During the second class meeting of the 10 teachers, questionnaires were submitted to their 1300 students (First/Second-Year) in order to investigate the impact of those syllabus on their perceptions of controllability, competency and activities value (motivation factors), but also on their perceptions associated with the 5 levels of Maslow.
  - 8 items “post” using Likert scales from “Tot. agree” to “Tot.disagree”
- 8 symmetrical “pre” items were added to measure hypothetical gains
- 2 more items (“have you read the syllabus”, “did you hear the speech”) were added to study relations between the “post” levels of perceptions and the fact to have actually read the syllabi or attended to the presentation speech.
### Data processing

- For each group, **percentages** of students declaring good perceptions (agree + totally agree) for the “pre” and “post” symmetrical items were compared to measure hypothetical gains due to syllabus + oral speech.
- Data collected from the students concerning their “post” perceptions and their answers about their reading / hearing or not of their syllabi or oral speeches have been crossed. $X^2$ were calculated to identify significant relationships between them, as well as correlations indexes.
- **Synoptic tables** are produced to observe consistencies between ratings of teachers’ performances and students’ levels of declared perceptions.

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<table>
<thead>
<tr>
<th>Research object</th>
<th>Motivation / Needs</th>
<th>Collected data</th>
<th>Data processing</th>
<th>Global results</th>
</tr>
</thead>
</table>

### Research object
### Motivation / Needs
### Collected data
### Data processing
### Global results

#### 2 examples (motivation)

<table>
<thead>
<tr>
<th>Syllabus</th>
<th>Speech</th>
<th>Items</th>
<th>% OK Pre (N=56)</th>
<th>% OK Post (N=56)</th>
<th>Gain / Loss</th>
<th>Consistent stars - OK post</th>
<th>Consistent stars - gains</th>
<th>%OK Read (N=29)</th>
<th>Consist stars syllabus</th>
<th>%OK Not read (N=29)</th>
<th>S ? (M)</th>
<th>C</th>
<th>%OK Heard (N=60)</th>
<th>Consistent stars speech</th>
<th>%OK Not Heard (N=60)</th>
<th>S ? (M)</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>+(*)</td>
<td>+++</td>
<td>Cont</td>
<td>74.6</td>
<td>78.8</td>
<td>7.1</td>
<td>1 unit -</td>
<td>78.4</td>
<td>85.2</td>
<td>80.3</td>
<td>1 unit -</td>
<td>100.0</td>
<td>/</td>
<td>0.20</td>
<td></td>
<td>100.0</td>
<td>/</td>
<td>0.17</td>
</tr>
<tr>
<td>++</td>
<td>+++</td>
<td>Vale</td>
<td>88.1</td>
<td>89.6</td>
<td>1.5</td>
<td>1 unit +</td>
<td>89.5</td>
<td>92.9</td>
<td>90.5</td>
<td>1 unit -</td>
<td>100.0</td>
<td>/</td>
<td>0.07</td>
<td></td>
<td>100.0</td>
<td>/</td>
<td>0.07</td>
</tr>
<tr>
<td>++</td>
<td>++</td>
<td>Compl</td>
<td>73.1</td>
<td>85.1</td>
<td>11.3</td>
<td>1 unit +</td>
<td>82.1</td>
<td>89.3</td>
<td>84.4</td>
<td>1 unit +</td>
<td>100.0</td>
<td>for 0.1</td>
<td>0.25</td>
<td></td>
<td>100.0</td>
<td>for 0.1</td>
<td>0.25</td>
</tr>
</tbody>
</table>

For norm 2=75

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2 examples (motivation)

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</table>

- **Data processing**

  - **Global results**

<table>
<thead>
<tr>
<th>%OK Heard (N=64)</th>
<th>%OK Not read (N=28)</th>
<th>%OK Read (N=39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,0</td>
<td>20,0</td>
<td>40,0</td>
</tr>
<tr>
<td>%OK Heard (N=303)</td>
<td>%OK Not read (N=250)</td>
<td>%OK Read (N=98)</td>
</tr>
<tr>
<td>0,0</td>
<td>20,0</td>
<td>40,0</td>
</tr>
</tbody>
</table>

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### 2 examples (needs)

<table>
<thead>
<tr>
<th>Syllabus</th>
<th>Speech</th>
<th>Items</th>
<th>% OK Pre (N=348)</th>
<th>% OK Post (N=348)</th>
<th>Gain / Loss OK</th>
<th>Consistent stars - OK post</th>
<th>Consistent stars - gains</th>
<th>% OK Read (N=99)</th>
<th>% OK Not read (N=250)</th>
<th>S ? (X*)</th>
<th>C</th>
<th>% OK Heard (N=64)</th>
<th>% OK Not Heard (N=45)</th>
<th>S ? (X*)</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*)</td>
<td>(*)</td>
<td>Phys</td>
<td>70.1</td>
<td>73.1</td>
<td>3.0</td>
<td>71.8</td>
<td></td>
<td>75.0</td>
<td>/</td>
<td>0.19</td>
<td>75.0</td>
<td>33.3</td>
<td>33.3</td>
<td>/</td>
<td>0.22</td>
</tr>
<tr>
<td>(*)</td>
<td>++</td>
<td>S#ou</td>
<td>56.7</td>
<td>59.7</td>
<td>3.0</td>
<td>59.0</td>
<td>60.7</td>
<td>/</td>
<td>0.16</td>
<td>60.9</td>
<td>33.3</td>
<td>/</td>
<td>0.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(*)</td>
<td>?</td>
<td>Appar</td>
<td>11.0</td>
<td>14.9</td>
<td>3.0</td>
<td>12.8</td>
<td>1 unit+</td>
<td>17.8</td>
<td>for 0.2</td>
<td>0.20</td>
<td>15.6</td>
<td>0.0</td>
<td>0.12</td>
<td>/</td>
<td>0.12</td>
</tr>
<tr>
<td>*</td>
<td>++</td>
<td>Estim</td>
<td>51.5</td>
<td>43.3</td>
<td>-3.2</td>
<td>39.5</td>
<td>50.0</td>
<td>/</td>
<td>0.20</td>
<td>44.4</td>
<td>33.3</td>
<td>33.3</td>
<td>0.17</td>
<td>/</td>
<td>0.17</td>
</tr>
<tr>
<td><em>(</em>)</td>
<td><em>(</em>)</td>
<td>Accom</td>
<td>32.0</td>
<td>34.3</td>
<td>1.5</td>
<td>39.5</td>
<td>29.6</td>
<td>/</td>
<td>0.20</td>
<td>34.9</td>
<td>33.3</td>
<td>33.3</td>
<td>0.14</td>
<td>/</td>
<td>0.14</td>
</tr>
</tbody>
</table>

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### Research object

Motivation / Needs

Collected data

Data processing

Global results

**2 examples (needs)**

<table>
<thead>
<tr>
<th>Accom</th>
<th>Estim</th>
<th>Appar</th>
<th>Sécu</th>
<th>Phys</th>
</tr>
</thead>
<tbody>
<tr>
<td>%OK Heard (N=64)</td>
<td>%OK Not read (N=28)</td>
<td>%OK Read (N=39)</td>
<td>%OK Not read (N=45)</td>
<td>%OK Heard (N=300)</td>
</tr>
</tbody>
</table>

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### Used norms

<table>
<thead>
<tr>
<th>Norm Motivation</th>
<th>Norm Needs</th>
<th>Norm gain / loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,0 * 30 / 40</td>
<td>0,0 * 10 / 20</td>
<td>0,0 * -35 / -25</td>
</tr>
<tr>
<td>0,5 * 40 / 50</td>
<td>0,5 * 20 / 30</td>
<td>0,5 * -25 / -15</td>
</tr>
<tr>
<td>1,5 * 50 / 60</td>
<td>1,5 * 30 / 40</td>
<td>1,5 * -15 / -5</td>
</tr>
<tr>
<td>1,5 * 60 / 70</td>
<td>1,5 * 40 / 50</td>
<td>1,5 * -5 / 5</td>
</tr>
<tr>
<td>2,5 * 70 / 80</td>
<td>2,5 * 50 / 60</td>
<td>2,5 * 5 / 15</td>
</tr>
<tr>
<td>2,5 * 80 / 90</td>
<td>2,5 * 60 / 70</td>
<td>2,5 * 15 / 25</td>
</tr>
<tr>
<td>3,0 * 90 / 100</td>
<td>3,0 * 70 / 80</td>
<td>3,0 * 25 / 35</td>
</tr>
</tbody>
</table>

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### Research object

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</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Stars vs % OK post</th>
<th>Stars vs % gain pre-post</th>
<th>Stars vs % OK post - Read ($X^2$: 9 S)</th>
<th>Stars vs % OK post - Heard ($X^2$: 12 S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Relative consistencies between both consistencies: 13

$X^2$ when $C$ or NC: 3 S / 13

$X^2$ when $C$ or NC: 5 S / 17

<table>
<thead>
<tr>
<th>Physiological</th>
<th>Stars vs % OK post</th>
<th>Stars vs % gain pre-post</th>
<th>Stars vs % OK post - Read ($X^2$: 18 S)</th>
<th>Stars vs % OK post - Heard ($X^2$: 14 S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe</td>
<td>1.C and 1 NC</td>
<td>2.C and 2 NC</td>
<td>0.C and 1 NC</td>
<td>1.C and 0 NC</td>
</tr>
</tbody>
</table>

Relative consistencies between both consistencies: 13

$X^2$ when $C$ or NC: 9 S / 24

$X^2$ when $C$ or NC: 6 S / 22

- Consistencies ($C$) : in corresponding norm’s margin
- Near consistencies (NC) : 1 unit (10%) + or – than the corresponding norm margin

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