Mastering the Content - The Challenges of an Academic Course Design

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**Abstract**

Our purpose in the present paper is to discuss the importance of an adequate academic course planning not only in terms of content, but also in terms of application learning - such as problem solving, thinking and decision making. Another aspect we take into consideration is the fact that information processing is different from one individual to another, it can be divided into global and sequential.

There should be high academic standards for all students, but to expect everyone, regardless of their ability (and disability) to meet those standards simultaneously, is inadequate and inherently unfair. Just as they learn differently, students test differently. In order to respect these social, emotional and cognitive differences, instruction needs to be differentiated, apart from being relevant in terms of content.

**Key words:** learning styles, course design, content organization, cognitive skills

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1. **Introduction**

This paper has been written in response to a widespread problem that we noticed in much of present academic teaching - most professors today do not seem to have learning goals that go much beyond an understand-and-remember type of learning. Aspects of application learning - such as problem solving, thinking, and decision making are most often neglected. Consequently, sitting in many courses gives the impression of assisting to an information dump. The information and ideas on a given topic have been collected and are dumped onto the heads of the listeners.

2. **Effective Learning Environments**

In our opinion, the most effective learning environments are those which are problem based and which create the premises of four distinctive phases of learning, according to Merrill’s “First Principles of Instruction” (2002):

- Activation of prior experience
- Demonstration of skills
- Application of skills
- Integration of these skills into real-world activities (Merril, 2002)

We all agree that many hours of practice are required for practical skills involved in music or sports, however, when it comes to cognitive skills, such practice is in most cases the single most neglected aspect of training. Therefore, when translating the above mentioned ideas into instructional design, we should be aware about the fact that learning is achieved only when:

- Learners are engaged in solving real-world problems.
- Existing knowledge is activated as a foundation for new knowledge.
- New knowledge is demonstrated to the learner.
- It is applied by the learner.
- It is integrated into the learner’s world.

Our teaching is obviously informed by our previous learning experience, our scientific research and our own teaching experience- the identification of our unique contributions brought to the course design and delivery in the face-to-face environment will help us strengthen our cognitive relationship with our students. The identification of these contributions can include ideas on what learners can learn only from us, excluding any other sources such as books, scientific articles or other professors. The way we think and solve problems or our own way of using humor to a topic, or our way of learning and processing content topics, personal experiences connected to course topics, all these ideas and many others represent our distinctive and personal contribution to the course content and design. This makes our teaching unique and represents an important contribution to our students’ formation (Nadrag et al, 2014, pp.205). Maybe the teaching of the future will belong to sophisticated equipment and machines, but the only thing machines will not be able to store, copy and process perfectly will be this complex human interaction and transfer which takes place in the face-to-face delivery of information (Popescu, 2012, pp. 96-97)

Therefore, a number of questions to be asked to ourselves should not be absent from the very beginning of our course design:

What are some of your unique characteristics that learners benefit from by having you as their instructor?
What can learners get from you that they cannot get from any other source (book, journal article, Internet, another teacher)?
How do you think through scenarios or problem-solve that learners would benefit from understanding?
What about your teaching do students positively comment on?
What unique experiences do you have that give you insight into your subject matter? (Smith, 2013, p.134)

The typical pattern used in teaching is to teach as we were taught, and those before us taught us the way they have been taught, with very slight personal alterations form one generation to another, this is how the cycle has gone for many decades and centuries. Change represents more work, we need to be trained in order to be able to change, to learn and internalize things we’ve never done before. Even a change of perspective requires a lot of time and cognitive effort. The design process will be visibly influenced and facilitated if we change our perspective, instead of only thinking about what we will teach, by shifting the focus on the learners in our course. „What do they need to learn?” and „How are they going to learn it” are facilitating questions in this respect.

The constant discovery of new information about brain research and learning, as well as the powerful tools being developed, have altered the learning environment offering both students and the teaching staff the opportunity to learn and work in new ways. We should be aware about the fact that today’s learners belong to a visual environment and to multiskilling- they can simultaneously be text messaging, talking on the phone, listening to music and browsing the Internet. The sequentiality of these activities influences and offers a plausible explanation on their (in)capacity to sit in our course and to focus continuously for fifty minutes.

3. Learning Styles

The concept of learning styles is highly debated and sometimes contested nowadays. As young academics, our first teaching experiences were connected to the idea that all people learn the same- by taking notes and reorganizing the content in the same manner. When discovering that our way of learning was not everyone’s approach, our experience with individuals and even our evaluation standards were completely restructured. There should be high academic standards for all students, but to expect everyone, regardless of their ability (and disability) to meet those standards
simultaneously, is inadequate and inherently unfair. Just as they learn differently, students test differently. In order to respect these social, emotional and cognitive differences, instruction needs to be differentiated. It is, therefore, our firm belief that a standardized test measures very poorly the diverse skills and cognitive abilities of our students in a reliable and respectful manner (Popescu et al., 2013, pp.67).

Felder and Soloman’s Index of Learning Styles Questionnaire (http://www.engr.ncsu.edu/learningstyles/ilisweb.html) might be informative on your students learning styles. Students are offered here useful general ideas on studying after completing this index; these will help them understand better their own style. The information is also useful for their professor as it helps including a certain amount of flexibility in the course design. Information processing can be divided into global and sequential. Individuals who process information globally can very easily view the “big picture” level. Those who process sequentially focus on individual details before understanding the big picture (Felder et al., 2016). Global learners are the most affected by the present academic system, as faculty rarely introduce the big picture of what they are teaching before presenting the details. It is important to offer global learners a global picture at the beginning and connect information to their prior familiar knowledge. Understanding how their mind functions compared to others’ allows learners to use and place their knowledge in its adequate frame.

“Many teachers are perceivers, meaning that they need information to come in through the five senses and in a sequential manner, so they may tend to teach that way. Intuitive learners learn in “fits and starts.” They may get the answer, but cannot explain where or how they did it. At times these individuals can be accused of cheating because they cannot identify the steps to working out a problem, even though they know the correct answer. It takes them a while to discern how they arrive at what it is they know” (Smith, 2014, p.83).

When creating content for our learners, Felder defines teaching style in terms of answers to five questions:

1. What types of information does the instructor emphasize: concrete (factual) or abstract (conceptual, theoretical)?
2. What mode of presentation is stressed: visual (pictures, diagrams, films, demonstrations) or verbal (lectures, readings, discussions)?
3. How is the presentation organized: inductively (phenomena leading to principles) or deductively (principles leading to phenomena)?
4. What mode of learner participation does the presentation facilitate: active (students talk, move, reflect) or passive (students watch and listen)?
5. What type of perspective is provided on the information presented: sequential (step-by-step progression—the trees) or global (context and relevance—the forest)? (Felder, 1993, pp.288)

The course content should be approached and introduced in a way that puts the emphasis on the learning target. Learners should be offered the opportunity to understand and internalize the subject and to be prepared to later retrieve and analyze information on their own (Nadrag, 2012, pp.228-229). By activating prior learning, we place the new information in a framework, in a functional context which creates meaning and sends back to past experiences.

4. Conclusions

Reflection plays an important part in the development process and even later when evaluating the overall achievement. A plan for progression should be foreseen and once we consider all of the content developed, we will need to revise the course from the learner’s viewpoint. It is quite normal during the first semester we teach, or even the first year, in some cases, to notice parts in the course that do not function the way we intended, these require to rethink and adapt the course to our learners’ and to our own needs. Another important aspect is to keep a record of students’ suggestions and frequently asked questions. Students have a unique perspective on the course which is impossible to be foreseen or duplicated, no matter how hard we try, in the revision process all these can provide a valuable input.
5. References


