The Advent of Online Education (Part II)

The following entry has been inspired by my participation in ‘Effective Online Tutoring’ with Oxford University. Part I explored current trends in online education and its pedagogical implications. The second part explores the psychology behind online learning.

1. An Introduction to Gilly Salmon’s 5-Stage Model
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Introduction: Our Minds Keep On Evolving

When Rene Descartes laid down the foundation of mind-body Dualism in his second and sixth ‘Meditations on First Philosophy’ (Cottingham et al., 1985) he could not have possibly anticipated that the human mind would evolve a significant stretch further. Not only is the mind perceived as a non-dualist, emergent and supervening quality of the body (Davidson, 1970), but representation of identity is, even more puzzling, embedded in data, big and small. One of these additional ‘layers of identity representation’ is made of ‘Big Data’ (Pentland, 2012), the electronic trails we leave behind as a passive narrative of our lives as we move through the world such as our credit-card transactions or any records of digital subscriptions and economic expenditure. The second layer of identity representation, our active digital participation, comprises of constructs such as emails, SMS-messages, social network postings or Blogs; our digital Alter Ego. Philosopher Andy Clark and David Chalmers also talk of the ‘extended mind’ which encompasses smart-phones, tablets, personal computers and their immediate access to networked knowledge bases. Chalmers and Clark coined the phenomena ‘active externalism’ whereby the environment drives cognitive processes (Clark & Chalmers, 1998). The digital environment has become a useful extension of our natural mind.
The cultural divide between indigenous populations, traditional life-worlds and developed countries is growing and so is the global digital divide. This delicate notion, combined with the concept of additional symbolic embedding of mind, play a key-role for understanding the creation of online learning platforms. It becomes obvious that high levels of (media) literacy and pro-social, communicative competence form prerequisites to successfully participate in this new world.

This two-fold dilemma of literacy requirements and given limitations of social life-world backgrounds confronts online tutors on many levels, in particular for courses inviting an international and multi-cultural audience of students. In the following we shall have a closer look on typical issues that global learners face on individual and collective level.

1. An Introduction to Gilly Salmon’s 5-Stage Model

Gilly Salmon’s operational 5-Stage Model of Online Learning (Salmon, 2011, 2014) has become the gold-standard for designing online courses for good reasons. Firstly, her model recognizes the logical difficulties and progressive familiarity that learners experience in an online learning environment. Secondly, each preceding stage constitutes a prerequisite to engage successfully on the next level. An extended summary goes as follows:

**Stage 1 ACCESS AND MOTIVATION.** The student can access the online learning platform and is supported to gain confidence in navigating and managing the virtual learning environment (VLE). To offer an encouraging, constructive and reassuring personal welcome is of the very essence since many beginners experience considerable anxieties in the unfamiliar territory.

**Stage 2 ONLINE SOCIALISATION.** The student establishes a digital identity via setting up a public profile and introduces him- or herself to study colleagues. The student engages in first social online activities (‘e-tivities’) and information exchanges hosted by the e-moderator which includes introduction to ‘house rules’ and netiquette. The e-moderator is weaving participants together; this is to evoke mutual social interests in other students during introductions. Online socialization continues to develop throughout the course.

**Stage 3 INFORMATION EXCHANGE.** Students actively start on their studies while the tutor scaffolds discussions and social interaction. Helpful tools are learning contracts and general agreements among the study group, for example to publish a minimum number of weekly contributions and to answer in a structured manner to colleagues’ postings. Students also learn implicitly time and resources-management to support ongoing dialogue. Information exchange can be facilitated both formally (such in official discussion forums) and informally (such as in a ‘Common Room’ or extended social networks).

**Stage 4 KNOWLEDGE CONSTRUCTION.** Students become contributors and authors in the collaborative creation of new knowledge. The tutor assumes the role of an assisting ‘guide on the side’ rather than a ‘sage on the stage’. The e-moderator facilitates group discussions and ensures that discussions don’t run off-topic, that discourse is not dominated by a few and that the learning process remains enjoyable, lively and insightful to all. Students learn to construct new knowledge collaboratively.
**Stage 5 DEVELOPMENT.** Students develop a virtual community where they support each other mutually and gain increasing autonomy as strong, self-directed learners. Students also assess critically their newly gained competences, the cross-contextual application of developed solutions and the roles that they have assumed during the learning process.

Salmon’s Model appears to be a robust and valid theoretical model to storyboard online courses. She also wrote a very useful paper on typical problems and their solutions occurring in the described stages in the online publication ‘80:20 FOR EMODERATORS’ (Salmon, 2006, p. 145-153). Most courses aim to keep stages 1-3 as short and effective as possible in order to maximize time for knowledge construction and students’ development.

2. A Note on PBLonline

Noteworthy for educators is the compatibility of Salmon’s functional workflow with Problem-Based Learning (PBL) which follows a similar path of social engagement, allocation of resources, construction of new knowledge, solutions development and subsequent mutual assessment. A comparative graphic is enclosed below.

Salmon emphasizes the constructivist philosophy (Blais, 1988) of the 5-stage Model based on the premise that learners actively construct authentic mental models of the task and challenge at hand. PBL shares this conceptual approach. However, Salmon’s e-moderating and PBLonline tutoring appear to address different dimensions. E-moderating as proposed by Gilly Salmon seems to refer to the logical functional development of the online learning experience (= what student do, such as familiarization, information exchange, socialization and knowledge construction) whereas e-tutoring refers to ensuring a high qualitative mental structure of students’ dialogue.

The quality of mental structure encompasses internal criteria such as:

- the specificity to which a student responds to someone else’s arguments
- the anchoring of key-arguments in references and research
- the degree of critical thinking
- the ability to apply reasoning in context
- the ability to actively explain and evaluate concepts, not only copying and reformulating them
- the sensitivity towards self- and group biases
- the ability to question one’s own premises and to be able to draw logical conclusions from well-argued prior positions, and finally
- the degree of meta-cognitive reasoning, this is to be able to justify the validity of an argument with good reasons (‘Why is this a good argument?’)
The tutor-based pedagogy of PBL is suited to be adapted online since new knowledge is created in small and structured teams. Cheaney and Ingebritsen (2005) point out the significant changes that take place in the translation of face-to-face PBL to PBLOnline. They note the preference of synchronous over asynchronous communication in PBLOnline as the course progresses. Savin-Baden (2006) argues that PBLOnline is necessarily different from its face-to-face version. She argues that the type of dialogue and means of giving and receiving information have changed. Furthermore so has the authenticity of the problem itself while the authorship of contributions differs greatly from face-to-face environments (Savin-Baden, 2006, p.13). The topic of redesigning PBL for online participation is perhaps deserving of a separate investigation. For now we can conclude that the paramount aims of PBL such as the development of higher cognitive and social skills in the context of typical real-world problems are in line with the overarching structure of Salmon’s model.

3. Typical Anxieties and Psychological Needs of Virtual Students

Readiness Anxiety is the fear of not being able to cope with the course before it even starts. Possible solutions are to prepare students by assisting them with the setting up of software, sorting out login- and navigation procedures or making sure students can order required textbooks on time. A ‘Student Readiness Assistance’ needs to be prepared and offered ahead of the official program start.

Technophobia is the fear of not being able to handle basic technologies required to communicate or the worry to handle technological resources insufficiently. Solutions are for example the availability of an IT-Helpdesk, easy-to-follow online videos demonstrating the use of the VLE or online brochures with easy-to-follow step-by-step instructions. Different students might have different preferences of choosing assisting media. As the number of digital natives increases technophobia might be on the overall decline.

Publishing Anxiety is the natural shyness of posting online based on a general lack of self-esteem (“My contributions are not good enough”) or fear of unknown negative consequences via online exposure. Shy and silent students require encouragement and need to be reminded that they operate in a safe, risk-free and highly supportive environment. Weaving quiet students into the communicative fabric of other students is a skill exercised by the e-moderator (Salmon, 2006).

Cognitive Overload Anxiety expresses the unpleasant perception of not being able to cope with ongoing tasks on a multilevel platform. It is important to assist students in planning external commitments ahead of time and to help with time-management issues once they arise.

Social isolation and loneliness: Since online learning is a more solitary activity, the feeling of being socially isolated and disconnected from others is not uncommon. Not fitting into an existing group or feeling not fully recognized as an individual may worsen such a depressed outlook. Different from initial anxieties (which may be more easily resolved) the feeling of isolation and loneliness can carry on throughout a course. The emotional need to belong to a group or to connect to a ‘study buddy’ is too often neglected and might turn online studies into a lonely and even sad experience. Social weaving by the e-moderator during introductions or meeting study colleagues in more familiar social networks ‘outside’ the official VLE may facilitate social bonding and exchange.
Cognitive Space Anxiety expresses the underlying fear of either not covering enough concepts in a program (the scope is too narrow) or covering too much ground (the scope is too wide). Such anxieties translate to students viewing a program as too easy or too demanding. To publish ‘Weekly Study Notes’ as a resource for all students might dispel such perceptions. Weekly study notes should give a comprehensive and brief overview about the most typical and significant concepts that have been developed in one’s field of expertise and which are about to be investigated.

To allow for a critical view of theories in the light of actual evidence and context might further open a more sober perspective on the validity of theoretical models. Weekly study notes furthermore level the tricky issue of students joining in with greatly varying levels of prior knowledge.

Professional scholarly discourse should ideally moderate student’s individual schemata and allow for more balanced subsequent discussions. Leveling the playing-field for students via study notes (by covering basic conceptual knowledge in the beginning of a learning unit) might counter the often criticized weakness of PBL, mainly that students lack the depth of specialized knowledge (Lee & Kwan, 2014). Course designers have to decide on the depth and breadth of the syllabus at any given stage, this is when studies turn into explorations and when they need to go into detail.

4. The Short and Beautiful Life of Online Learning Communities

From my personal experience, participating in online course at Oxford and Liverpool University, most online groups start naturally with minor hiccups and the usual smaller confusions - just like in any face-to-face class. However, by the end of each unit it is hard for everybody to say goodbye. We have grown together. Emotional and meaningful personal bonds that form during studies are the rule, not the exception, while tutors have the privilege to witness the magic of social crystallization. Online learning works and it does work well. Online Education teaches us that we can form deep and meaningful relationships on a truly grand scale.

By the end of this century the UN expects the world population to grow by 11 billion people of who 4 billion come from Africa, 5 billion from Asia and 1 billion from the Americas and Europe each (Rosling, 2014). In order to facilitate the enormous demand of training and education of people from all over the world, online education appears to hold a central key to our global future.
References


