Online Learning Groups Development: A Grounded International Comparison

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Abstract

In this paper, we will present an extract from a PhD study in Educational Research carried out at the Lancaster University (UK) in its conclusive process. The intent of this work is to describe and analyse, how online learning groups may evolve into online learning communities, through a comparative case study,. The contexts chosen were one blended Master course and one online Master course in education delivered respectively in Italy and United Kingdom (UK). The Research involved the use of the Grounded Theory analysis of the text messages exchanged in the designated course forums. The paper will first presents some theories about online learning group development and design, it will then illustrate the characteristics of this study and then its final findings and comparisons. The Building process theory at the basis of this work involved the construction of new categories representing the fact that each group is unique in its development and the presence of "stage of development". Three different models were obtained and compared and further conclusions and comments were drawn. The Final discussion will lead to understand how both the context and the course design played significant influences on both the degree of collaboration of each group and their evolution into online learning communities.

Keywords

Online learning group development, culture, design, grounded theory, comparative research

"State of the art" about online learning group development

The state of the art about teaching and learning with the use of new technologies demonstrates how researches are still needed in order to help educators, teachers, professionals, academics to better understand how this takes place, what are the implications are, what the benefits for learners are and what the difficulties are.

Indeed, the analysis of how a group of learners evolve online may help us understand how it should inform the course design (and vice versa) and as a consequence, what key elements are considered as crucial for an effective online learning and teaching processes to take place. Hence, key definitions and theories about group learning, development, culture and assessment are provided here, although there are few studies available describing the online group development.

Definition of adult learning and implication for group learning

Mezirow (1991) proposes the term "transformative adult learning" as the need of adult people to acquire more understanding over events and a higher degree of control over their lives and their learning process. Indeed, the negotiation of meanings brings about the possibility to manage new ways of shared authority through a more democratic educative process. Transformative learning helps adults evaluate critically and reflectively their actual social world. Sometimes culture can encourage or discourage transformative learning.

However, learning can be basically considered a process of development and transformation.

This view of learning is valid and can refer most of the time to "group learning" or better, as described above, it can refer to team-based learning (TBL) (Michaelsen, 2002). Michaelsen (2004: 28) provides four basic principles of team-based learning that need to be implemented in order to build cohesive learning teams: groups must be properly formed and managed; students must be made accountable for

their own and group learning; group assignments must promote learning and team development; students must have a frequent feedback.

According to Michaelsen (2004), particular attention should be paid to assignments. Indeed most of the problems arising while learning in group are related to inappropriate assignments, so that instead of requiring truly group interaction and work, they require just individual sharing of tasks and roles.

Theories of learning and principles of group learning here illustrated aim to show how it is striking for the individual working in the group, to reach personal growth, change and transformation.

Theories and practice about face-to-face and online group development

One of the most influential theories about "face-to-face" learning group development is Tuckman's one (Tuckman and Jensen, 1977). This theory refers to the developmental stages of small groups and report four phases:

1. Forming: the group members assess both the relationship and the norms in the group;
2. Storming: group hostility and conflicts arise because of the search for autonomy and leadership;
3. Norming: interpersonal activities are more cohesive and define members' behaviour; there is an increase in exchanging information;
4. Performing: there is the development of a sub-culture where participation matches with the minimum emotional interaction during the task completion.

Tuckman's model is hierarchical, that means an upper stage cannot be reached if the previous one is not accomplished although Miller (2003) also adds that groups are systems which often change in their social process and context with a developmental and dynamical nature.

This study was recently integrated by more qualitative researches. While some authors (Palloff and Pratt, 1999; Fisher et. al., 2000; Guanawardena et. al, 2001; Johnson et. al., 2002) use Tuckman's theory and apply it to the online learning environment, some others (McConnell, 2006; Moore et. al., 2006; Brown, 2001) state that the developmental stages of online groups are significantly different from those of traditional face-to-face groups and propose a new theorization about group development in virtual learning settings.

One of the most recent theories about e-learning groups and communities development is the one developed by McConnell (2006). He draws from his experiences with online learning groups in academic settings and uses a grounded theory approach to study the group development. He identified four main developmental phases with a several number of sub-stages:

Phase 1 – Negotiation: this long stage is characterised by collaborative negotiation involving all the members of the group;

Phase 2 – Organizing: this medium-length phase is characterised by sub-grouping and cooperative work;

Phase 3 – Production: this short stage is characterised by the production of common work.

Phase 4 – Reflection: members reflect on their learning and on what they have done. (McConnell, 2006: 154-155)

During each phase there is a continuous movement and a blurring between one phase and the next one.

The overall view and schema presented by McConnell (2006) is a complex one and tries to represent with a holistic approach, the reality of online learning settings. This model involves the presence of several other elements and milestones. He defines the latter as a point in the group-work when something crucial happens (i.e. the group making important decisions, an event helping to focus on the group work).

Assessment and Culture for the Online Design

Authors such as McConnell (2006), Mason, (2002) Boud (2000), Howard et. al., (2004) and Garrison and Anderson (2003), consider the sharing of the power about the assessment criteria between students and tutor to be fundamental even online. Indeed, any form of assessment provides a message to students about what they should learn and how they should go about learning and it tells them what activities are considered to be important aspects of learning and worth of consideration (McConnell, 2006)

For these reasons, assessment can be considered as the most powerful prompt for learning. As a consequence it is striking to embed, in a coherent way, assessment activities into the course design, aims and objectives (McConnell, 2006; Garrison and Anderson, 2003; Howard et .al., 2004) and this is much more influential online than in traditional learning environments (Crosta, 2006). Assessment provides not only powerful prompts about how students learn but also it provides prompts about how they evolve as a group (and vice versa).

Garrison and Anderson (2003) propose a well balanced mix of assessed learning activities (both individual and group ones). The use of new technologies enhance this possibility much more than traditional teaching methods can do.

Some considerations are also made in relation to culture and to how cultural issues influence the way learners perceive learning and learn. They have direct implications on the course design and on the way teachers see themselves "in context". This is becoming even more important if we consider that new technologies get people coming from different parts of the world into the same network, and bring new implications for teaching and learning that shouldn't be underestimated.

Hewling (2006) provides some insights about technology, time, assessment, authority and control that need to be negotiated in the online classroom as crucial cultural elements. They all in a way have something in common with the findings of this study.

McLoughlin (2001:7) adds how the online curriculum should include activities ensuring the protection of cultural diversity nowadays. She proposes a Continuum in order to represent the two extremes from the most traditional to the most culturally responsive curriculum and their levels in between:

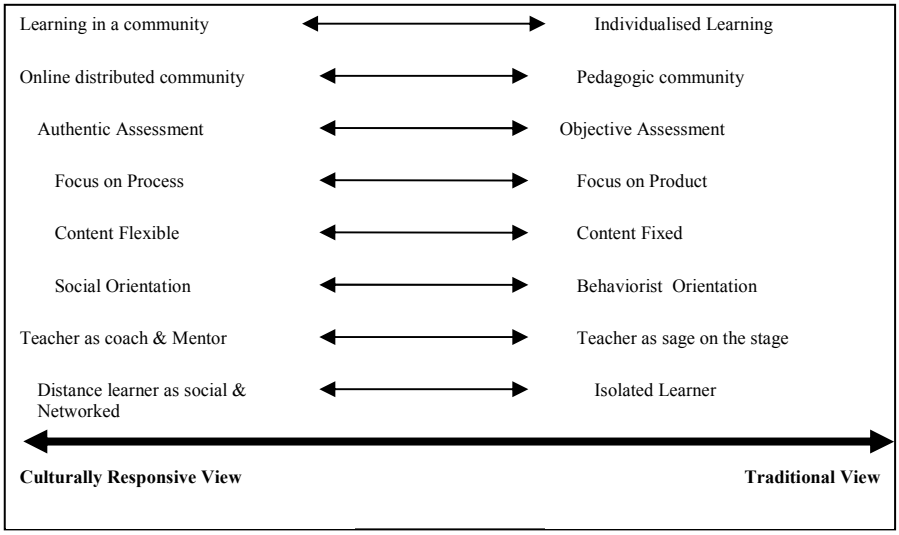

Figure 2: Continuum of Perspectives on Learning (McLoughlin, 2001: 10)

This schema presents similarities with the findings and the theorization of the present study, since the idea of a continuum was also at the basis of some final personal reflections. Probably the emergence of new issues requires a certain degree of flexibility in the online teaching and learning, that can be better represented through the use of the Metaphor of "Continuity".
According to Liu (2007: 44) the cross-cultural curriculum can be supported "through the integration of collaborative learning in online learning community"

The research contexts and design

The present study is conceived as the combination of two case studies compared in their contexts, characteristics and findings. Each case study refers to a different country: in more details, the MOET (Master in online education and training) blended course refers to the Italian context, whereas the MEd (Master in Education) online course to the English one. These two courses were run respectively in 2004 and in 2001. In the first case one of the authors played the role of a participant observer and of an online

tutor, whereas in the second case the same author was a simply non-participant and asynchronous observer. In the MOET hundreds of messages posted in the discussion forums between February and June 2004 were analysed for each of the seven online groups. In workshop one of the MEd, messages posted in the Assessment forums, between October and January 2000-2001, were analysed for all the four groups. In the latter messages were posted in groups aimed at producing some online collaborative work and self-peer-tutor assessment.

Taking into consideration the Research design discussed above, Denzin and Lincoln (2005) define Case Study as a complex learning experience from a single case, rather than as a methodology.

> Case Study is not a methodological choice but a choice of what is to be studied. (p. 443)

On the other side, the term Comparative Research according to Hantrais (1995) can be described as the search for similarities and differences among two or more different cultural settings. Phenomena can be better understood if compared with others and possible alternatives to our approaches can be found (Grant, 2000; Arnove and Torres, 2003).

The main purpose of this work was that of discovering how the online group would evolve and develop into a more complex community and how this information would have been useful for the course design and would be influenced in return, by cultural differences. However these reflections were added at a second stage, while the research and the grounded analysis process were evolving.

The analysis of the text messages was carried out using the Grounded Theory Approach. The reasons for the this choice lies mainly within the fact that since little was known about online group development and communities in educational settings, the use of the grounded theory would have helped to obtain insightful information "from the ground", and to explore (Boulton and Hammersley, 2006) the real context in which online groups work and develop. In the Grounded Research the researcher enters the setting with a general topic of investigation that will be further developed and "discovered" thanks to his/her "Theoretical Sensitivity". (Marshall, 2002). The process of analysis in the Grounded Theory is a continuous interplay between the researcher and the data (researched) and this represents a challenge to the traditional source of authority (the researcher). (Gitlin and Russel; 1994)
More in details Strauss and Corbin's (1998) building process theory is here conceived as a "Constructivistic Grounded Theory" (Charmaz, 2005) rather than as an objectivistic one, since it views reality as socially constructed between the viewer and the viewed (researcher and participants).

For the MOET course there was the chance to access more material than for the Med which would come from different sources and gain more critical perspectives: pre-course interviews (participants and staff), personal online observation and learning journals, written text communication from the groups in the forums, some feedback from participants, critical friends and so on. For the MEd, the analysis of written text messages was integrated just with a face-to-face interview with the course director, Prof. David McConnell, and with some previous published studies on the same course. However, the process of participant observation in the MOET helped to develop "intimate familiarity" with participants that supported a better understanding of their views, although on the other hand, during the MEd analysis it was somehow easier to step back and obtain meaningful insights form the data.

The emerging categories and the comparison of the three models

The categories found in this research were the result of 3 different coding and categorization steps, till when the researcher was satisfied with the findings obtained. Indeed, the intent of the work was that of representing the overall qualitative complexity of the online learning setting, as close to reality as possible.
The following table will better represents how the found categories were discussed and analysed for each course and how the three models were obtained from the same analysis

Table 1: Three Models Comparison

	MOET- ITALY		MED-ENGLAND
Model	**1 Product-Group**	**2 Product/Process**	**Process-Community**
Context	Traditional	Traditional/innovative	Innovative
Design	Teacher-centred	Teacher/student centred	Student centred
Tutor	Leader	Leader/Facilitator	Facilitator
Collaboration	Individual/Competitive/Cooperative	Cooperative with some elements of collaboration	Collaborative with some elements of cooperation
Autonomy	Teacher/tutor dependent	Dependent/independent	Teacher/tutor independent
Technological anxiety	Self-Confidence with some elements of anxiety	Technological Self-confidence	Initial Anxiety followed by self-confidence
Social relationshiop	Social Relationship with some elements of isolation	Social Relationship	Initial Social Isolation followed by social relationship
Assessment	Assessment Anxiety	Assessment Self-confidence with elements of anxiety	Assessment Self-confidence
Researcher's role	Tutor, Synchronous Participant Observer	Tutor, Synchronous Participant Observer	Non participant asyncrhonous observer
Significant fact	Participant's post	Participant's post	Tutor/Participant's post
Major agreement	Production of a common work	Production of a common work with some organizational elements	Production of a common project proposal, work-plan with lots of organizational elements
Developmental stages	4	6	6
Online groups	Cygnus – Perseus	Auriga – Cassiopeia – Andromeda	Online groups 1, 2, 3, 4

The extreme left column indicates the main found categories, namely: Tutor, Collaboration, Autonomy, Technological Anxiety, Social Relationship, Assessment, Significant Fact, Major Agreement and Developmental Stage. The Milestone (McConnell, 2006) of each Model is characterised by the presence of Developmental Stages that each online group undertakes, like i.e. 4 for Model 1, whereas 6 for Model 2 and 3. Each stage undertaken by the group is characterised by the presence of a Significant Fact taking place in the group because there is a Major Agreement taking place. All the other categories vary depending both on the stage of the development reached and on the group itself as well as on the kind of Model considered.
It is interesting to notice that even if there were two analysed, three models came up during the analysis, namely: Product-oriented-Model, Product/Process-Oriented-Model and Process-Oriented-Model, depending on the degree of product or process oriented group-work presents in each. However, The characteristics of each Model are better described in detail in table n.1, where there is clear evidence on how both the course design and culture play an important influence on the overall group developmental process as well, and vice-versa.

All the elements composing the design of the model are very much related to the context they belong to. The culture part of the learning set directly influences the way a model will develop and will be implemented. Hence, while the elements composing the models are the same, the degree and intensity of their presence will change depending on the situation. The fact that each context is specific and unique, whether a more traditional or innovative one, will define the kind of approach used for designing an online course.
The tutorship is another key element in the development of an online group. The kind of intervention and approach used by the tutor plays a direct influence on the online learning of participants. A too interventionist approach may prevent the group to become autonomous and creative whereas a less interventionist approach may produce the effect to see the tutor as an "outsider". Furthermore, It is important to consider the effect that a separate role between "the tutor" and "the teacher" may produce in

the learning context and among staff members. The involvement of the tutor in the course design is also essential for the "well-being" of the group development.
The technological anxiety and the social relationship are other elements worth of attention. In a more process-related model the absence of anxiety for technology and the presence of social relationship online is expected. However, in the MEd case, this was not an immediate event as it was in the MOET.
When there is less anxiety for technology and immediate social relationship, participants feel more comfortable in using the tool as well as making posts and communicating with each other. However, if it is not cultivated enough this may produce again some problems any time throughout the course.

In the models a key element is played by the assessment. In a process-related model participants should be able to deal with and to self-manage their own learning and to feel comfortable with it. In a more product-related model participants will develop some anxiety about the assessment since they will be left aside to it. They will not be involved in assessing their learning and they will still remain tutor-dependent till when assessment criteria and methods will be revealed to them. Hence, for autonomous and collaborative learning to take place, assessment should be designed in a way that reflects these principles not only in theory but also in practice.

Stages of development in a product-related model will be less in number and in duration than those of a more process-related one. In the former, students having less time available, will have no need to spend time for meta-reflection, development of organizational skills and discussion following standard rules and criteria provided by the staff. Collaboration is usually substituted with more competitive, individual and cooperative work. In a more process-oriented model instead, participants will pass through a major number of developmental stages, since more time is needed in order to develop social, organizational, reflective and collaborative skills. They will be stimulated in using creativity and the submission of common work is alternated with time for reaching agreements in defining work-plans and work sharing as well as in "how to work together". The learning experience is much more rewarding and usually it leads to the creation of an online learning community. However in all models initial stages are needed in order to build the following ones, sequentially in a bottom-up order (Daradoumis and Xhata, 2005)

Discussion and Conclusions

Table 2 here below represents the summary of all the Developmental Stages found in each Models. In a *Product Oriented Model* some developmental stages are skipped and are less articulated if compared with those of the more Process Oriented Model. The initial experimentation stage, for example, is missed because it is compensated by the presence of face-to-face meetings and so no anxiety for technology seems to prevail. This way the next stages seem to speed up because production of artefacts takes place immediately after the opening of the course with little if no planning and negotiation at all. The passage between one production stage and the following one takes place through the submission of new artefacts. Individual in-presence assessment closes the development. The developmental process appears very short and more oriented to pure production rather than to reflection and personal change. All the stages appear influenced by a certain degree of anxiety for assessment as well as of the tutor's attitude towards the course which is that of a "mediator" between the teacher in charge and the students.
A *Product/Process Oriented Model* presents characteristics in between the Product and the Process one. Production is the main element of stage three and four, however some meta-reflection is introduced as well. Assessment becomes central in stage five and six and some self-reflection is supported. Hence, this model is not totally product-focused since some reflective elements, negotiation and discussion are introduced. As for the Product Oriented Model, initial social relationships are enhanced with face-to-face meetings. In this kind of model less time is needed in order to start producing an artefact which is however the result of a collaborative work although not always it is well organized. All the stages appear influenced by a certain degree of anxiety for assessment as well as of the tutor's attitude towards the course which is that of a "mediator" between the teacher and the students.
A *Process Oriented Model* is characterised by an initial stage of experimentation about the use of technology. Some anxiety is present and needs to be elaborated. However, the initial experimentation phase is necessary in order for participant to get familiar with: technology use, new communicative paradigms, other participants, the course and the new environment. In this schema, later stages of reflection, meta-reflection, production and assessment, are reached after the previous stages about initial planning, negotiation and discussion have passed. Hence in a way, deep meta- and self-reflection are not

possible at the beginning of the group development if enough experimentation, negotiation and planning have not taken place before. Anxiety for assessment is however not visible and participants play a certain degree of influence and control over their learning. The tutor attitude is that of a "tutor-participant".

Table 2: Developmental Stages Comparison

1. PRODUCT ORIENTED MODEL(blended)	**2. PRODUCT/PROCESS ORIENTED MODEL (blended)**	**3. PROCESS ORIENTED MODEL (online)**
1. OPENING – PLANNING - NEGOTIATING – DISCUSSING	1. OPENING – PLANNING - NEGOTIATION –DISCUSSION	1. OPENING-EXPERIMENTATION (more emphasis on technological anxiety)
2. PRODUCTION (cooperative activities)	2. FURHTER NEGOTIATION – PLANNING (emphasis on social issues)	2. PLANNING – NEGOTIATION – DISCUSSION (more emphasis on autonomy and collaboration
3. FURTHER PRODUCTION (individual activities)	3. PRODUCTION – SOMEHOW META-REFLECTION (cooperative, collaborative activities)	3. FURHTER PLANNING – NEGOTIATION (more emphasis on social relationship)
4. CLOSURE – ASSESSMENT (individual, face-to-face)	4. FURHTER PRODUCTION – SOMEHOW META-REFLECTION	4. PRODUCTION-META REFLECTION (more emphasis on autonomy, collaboration and social issues)
	5. ASSESSMENT – SELF-REFLECTION (online)	5. ASSESSMENT / SELF-REFLECTION (more emphasis on assessment and autonomy)
	6. CLOSURE – ASSESSMENT (face-to-face)	6. CLOSURE – ENJOYEMENT (more emphasis on social relationship)

The aim of this work was that of trying to provide some explanations and interpretations of what really happens online while teaching and learning in groups. However, although some answers were provided, some other issues still remain open for further investigation. They are: "How is participants' experience of online collaborative group in different contexts?"; "Is it possible to find/apply one or more of the three Models proposed in this study to other or similar e-learning settings?".
Furthermore, the exploration of the link between different cultures, online learning community development and course design might represent a key feature since the spread of courses internationally run, bring together people coming from all over the world. Hence further questions still remain open: "What kind of online design is needed and applied in practice for different contexts?" "Does this design match with the real online practice?". Goodfellow (2004) envisages for comparative studies looking at experiences of online students across different international contexts.

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