ONLINE LEARNING GROUPS AS SELF-REGULATED ENTITIES

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ABSTRACT
The concept of ‘self-regulated learning’ (SRL) usually refers to individual learners. In this paper the idea of SRL is extended to the perspective of learning groups. The discussion is based upon the experience of the ‘Leipziger Online-Seminar’ – a students’ online project of the Department of Media Education and Further Education at the University of Leipzig. The Department of Media Education and Further Education has been interested in online learning groups as self-regulated entities in tele-learning arrangements since 1999. For this purpose, ILIAS has been used since 2002.

In the ‘Leipziger Online-Seminar’, student groups are trained as online tutors within a period of three terms. During that period, they take on more responsibilities and act with more independence. In the first term, the students take part in an online course. Next, they plan and design in a tutor group their own online course, which is realized in the third term. In this period the tutor group is seen as an SRL entity.

Although decisions in the process of planning, executing and monitoring as well as evaluating are made by the group, the tutors have to realize them individually. In order to keep the group capable of acting, each member of the tutor group has to have a high social competence. On the one hand, different opinions must be discussed, compromises as well as solutions have to be found, and on the other hand, all decisions made have to be accepted and realized by the individual. The tutor group is coached by university lecturers, who stimulate and guide the reflection on the group processes and their outcomes. An essential tool is ILIAS, which supports the communication between the members of the group as well as the process of finding solutions and tracing results. The online course is also planned, designed and realized on the ILIAS platform.

This article demonstrates that processes in online learning groups can be described with an SRL process model, and concentrates, further, on the social component of self-regulated learning.

INTRODUCTION
Learning almost always happens in social contexts. Almost all learning processes are imparted socially – be it by a teacher or by cultural artefacts. Additionally, new knowledge is often acquired in group situations. The focus here is not the learning process of the individual, but the (re-)construction and assessment of it within the group process. This is especially true for Social Sciences and Humanities, where interpersonal discourse forms of learning are a
long and elaborate tradition. Nevertheless, most theories that deal with learning focus on the individual. Within these theories, we can distinguish between ones that examine the course of a learning episode as action, and ones that try to explain the build up of knowledge and skills in the individual. The theory of self-regulated learning belongs to the first group. The Constructivist Learning Theory belongs to the second. The Action Regulation Theory brings together both perspectives on the cognitive level: learning as a process and the learning itself. But in order to be able to describe learning in a comprehensive way, in addition to the cognitive aspects, emotional, motivational and social aspects also have to be taken into account. In this way, we can describe learning within social contexts, as in the “Leipzig Online Seminar” of the Department of Media Education and Further Education at the University of Leipzig.

**SELF-REGULATED LEARNING IN GROUPS**

**Self-regulated learning and the constructivist paradigm**

In the Constructivist Learning Theory, learning is understood as a construction process of mental activities and their internal representations. Reinmann-Rothmeier and Mandl (1999) write, that knowledge is not a copy of reality, but a construction by humans, and that knowledge is neither an external object which can be transported from teacher to learner, nor is it a true internal representation of a particular subject. This means that learners interpret their perceptions on the basis of previous knowledge and construct new knowledge as a result. From this Gerstenmeier and Mandl (1995) conclude, that in order to evade the problem of inert knowledge, learners should not see themselves as passive recipients of knowledge but as active, self-controlled learners. They should be increasingly able to plan, organise, carry out and evaluate their learning by themselves. You can find this in the instructional models of the Constructivist Approaches (Anchored Instruction, Cognitive Flexibility Approach, Cognitive Apprenticeship Approach). Characteristics of these instructional models are described by Gerstenmeier and Mandl (1995) as:

- authenticity and situatedness
- multiple contexts and multiple perspectives
- social context

In order to describe self-regulated learning, we can use component models as well as process models. The notion of self-regulated learning, in the way in which it is the basis for the Telepeers project (Telepeers consortium, 2005), tries to combine these two aspects. Following Zimmermann (2000), the learning process – the ideal course of a learning episode – is divided into three stages: (1) the planning of the learning action, (2) executing and monitoring the learning activity, and (3) the evaluation of the outcome. Permanent feedback on the learning process takes place by the ongoing monitoring and the final control. In addition to this control circuit model, it is emphasised that different components play a role in learning. The component model distinguishes four components: (1) cognitive, (2) emotional, (3) motivational and (4) social aspects.

**Self-regulated learning and the Action Regulation Theory**

The cognitive part of the learning process – the course of a ‘learning episode’ – is explained in more detail by Hacker (1978) in his Action Regulation Theory. This theory derives from occupational psychology and was originally designed for conveying motor work sequences in industry. Its description of cognitive action regulation in the learning process suggests its application to general learning processes. Hacker understands human acting as a foresighted, target-oriented action on the basis of internal representation.

When planning an action, a target is fixed, from which sub-goals can be derived, and from this subordinated targets can then also be derived. In this way, a hierarchical order of targets is generated and the targets can be dealt with in sequence. In this context, the Action Regulation Theory talks of hierarchical-sequential organisation in the regulation of an action. Each of these steps of dealing with the individual targets represents a complete cyclic action. As in the process model of self-regulated learning, these steps consist of a planning, execution and a control stage. Therefore, permanent controls take place even on the lowest target levels. In this way, the action is permanently monitored, and the planning can be corrected if necessary, even on the higher levels. It is quite possible to obtain advances in the different target levels at differing velocities.
This analysis of building a hierarchical order of targets is called action regulation in the Action Regulation Theory. It is only possible to build target orders if ideas of the action are present, or if they can be developed. The totality of these ideas of what has to be done is called operative cognitive task representation in the Action Regulation Theory and comprises, besides the targets, also the necessary actions to reach the targets and the execution conditions. The generation of an operative cognitive task representation and the generation of an action regulation are called learning (Duscheleit, 1983).

For the educational support of cognitive learning processes, we can derive that the learning target is first divided into sub-goals in order to stimulate the generation of an Operative Cognitive Task Representation. In this way, the combining of individual, already practiced action steps into new, bigger action sequences will be facilitated for the learner. In these processes, reflection plays an important role, so that the learner is enabled to increasingly regulate his actions independently.

**Self-regulated learning and learning in groups**

The Action Regulation Theory concentrates on the cognitive process of learning. The remaining aspects of the component model are not considered. But in this context, self-regulation does not mean only the freedom to decide what, when, where and how one wants to learn. It also places additional requirements on the learner: The learner himself is responsible for all stages of the learning process. He does not only have to possess the cognitive capacities to plan his learning process independently, i.e. to generate sensible sub-goals and operative cognitive task representations, he must also continually motivate himself, be emotionally available to the subject matter and the different forms of delivery, and finally, navigate a successful social integration as learning almost always occurs within a social context.

If the learner is left to himself, frustration can easily arise. In order to sufficiently support the motivational, emotional and social aspects of learning, a comprehensive educational model is needed (cf. Brüggen in this volume), which also takes into account the co-learners. Many fields – especially in Humanities – can best be made accessible within discourse. Therefore, learning groups also have an essential function in the cognitive treatment process.

Here, it is of crucial importance that the focus is not only the acquisition of pure facts, but also dealing with different opinions and generating an individual point of view.

Negotiating meanings in discourse and finding solution strategies together will have positive influence on the motivation of the group. Through common events and experiences a sense of group and community emerges, which again strengthens the identification with the group and the subject material. Also, competition amongst the group and mutual help create bonds. Within this, emotions play a crucial role, which are to a degree also socially determined.

Within this context, learning groups must be seen as self-regulated entities. They execute the learning processes in the sense of the Action Regulation Theory as cyclic complete actions: they plan, act and control the process. In this sense, the group as a whole is responsible for the success of their learning activities. The individual does not decide by himself, but has to co-ordinate and deal with the other group members in all learning stages. On the one hand compromises must be found, opinions have to be forwarded and solutions found in discourse, and on the other hand, decisions that have been taken must also be supported and put into practice by all group members. In this way, the group can remain capable of action in all stages of self-regulated learning processes. The social skills of the group members are an essential contribution to the success of the learning activities. The social climate within the group has a high level of influence on the emotions and the motivation of the group members. In short, the outcomes of the learning activities of self-regulated groups are only as good as the degree to which each individual integrates into the group and acts within it.

Even though the group is the entity of self-regulation, the individual group member actively takes part in the process: He will be involved in the construction of the group opinion and group organisation. In this way, the individual group member will acquire and further develop social and communicative competencies. Moreover, within the group, a bond is generated, a group sense, which bears a higher level of motivation.

**TUTOR TRAINING IN THE “LEIPZIG ONLINE-SEMINAR”**
The Department for Media Education and Further Education at the University of Leipzig has been testing the implementation of self-regulated learning as a group process in a TELE since 1999. The ‘Leipzig Online Seminar’, an online seminar on the subject of media literacy, is combined with a tutor training for e-learning within a master plan. Students from media studies and educational careers from different institutions for higher education within central Germany take part. In a curriculum of three terms (cf. Figure 1) with a consistent didactic concept, the students, together with the teachers, deal in practice and in theory with new media. Herein, the students increasingly take on responsibility and act independently.

Each year around fifty students on average take part in the online seminar; the subsequent tutor training usually takes place with eight to ten students. Since 2002 the educational platform ILIAS has been used as a tool throughout the whole cycle. The online seminar takes place on the platform, and participants use it as communication tool for their group tasks and for the communication with their tutors. In the tutor training, the tutor group works with the educational platform as author and uses the integrated author tool. The platform also serves as a documentation and communication tool. In this way, students get to know the possibilities and limits of the platform from both perspectives – from the point of view of the learner and from the point of view of the teacher.

The Online Seminar

At the beginning of the training cycle, an online seminar is organised, in which participants deal in theory and in practice with the notion of “media literacy”, which is crucial to media education. The seminar consists of two online stages, which are each concluded with a two-day attendance meeting. In the first online stage, participants deal in groups with different topical media, educational concepts of media literacy, elaborate the basis and results of recent research on the promotion of media literacy in young people and adults through literature, and get to know methods for conveying media literacy. The different lectures are made available to the students weekly. In the first stage of the seminar, the students learn and apply the working methods of self-regulated learning in an online seminar, e.g. discussing an issue in online forums, planning and organising group work online and presenting common work results. The first attendance meeting takes place at the end of this theory stage. It serves the consolidation and deepening of the basics that have been elaborated up to this point and the homogenisation of the knowledge level of the participants, as well as the presentation and discussion of the group results that have been achieved online. Moreover, this attendance meeting leads to the second phase of the seminar which is more practice-oriented.

In the second online phase students apply their theoretical knowledge to concepts for media educational projects for the promotion of media literacy. Students develop scripts. These project conceptions are presented at the end of the seminar in the second attendance meeting to the other work groups. They are discussed and tested in play. This final meeting is also used for a qualitative evaluation of the seminar.

In the first part of the online seminar, participants are lead by student tutors, in order to familiarise them with the way of working in the seminar. Each week, a new lesson is enabled, in which a linear navigation clearly indicates the way for learning and the sub-goals that are to be reached. There are concrete tasks and instructions, and the tutors approach participants actively. In this phase they acquire as a byproduct, the competencies in planning and execution of common work on the Internet. The tutors stimulate reflection of the group work. With the increasing confidence of the participants, the tutors give less and less advice on the ways of working and promote self-regulation within the groups.
In the second online phase learning groups elaborate, largely through self-regulation, a script for a media educational project. Tutors set up sub-goals, provide advice and stimulate evaluation of the script drafts. On the second attendance meeting, the group presents its project to the whole seminar, and in doing so the results are evaluated under authentic conditions.

In the course of this term, students learn how to deal with problems in online communities in an increasingly independent way. They acquire the tools for the following two terms of tutor training in which they apply their knowledge to a real project, a new online seminar.

The tutor training

The tutor training, with a focus on conception and production of an online seminar, starts in the following summer term. Interested students from the previous online seminar form a tutor group and prepare the next seminar, execute it the following winter term and present it to the new participants. In changing from the perspective of participants to the perspective of provider, their own experiences as learners are dealt with again, reflected and applied to a new seminar. Herein, the group as a whole acts as a self-regulated entity. The decisions in the processes of planning and acting are negotiated in the tutor group and afterwards they are applied by the individual. An essential part of the group work is reflection on group processes and group results. This serves the ongoing assessment of the whole project and its sub-processes.

In the planning phase, the tutor group elaborates in discourse the hierarchical sequential organisation of the development process as well as of the implementation of a new online seminar. It sets itself goals, devises acting strategies and monitors the execution phase. The most important tool for the group is the platform ILIAS; it supports the communication between the group members, decision processes are documented in an understandable way, and last but not least the new seminar is planned, produced and finally realized on the platform.

The third term of this cycle is the execution of the seminar which has been drafted by the tutor group, as well as the control of the planning of the seminar. Flaws in the conception have tangible consequences under the authentic conditions of the every-day academic life with real students. This ‘pressure of reality’ is a huge motivation for the tutors.

In all its activities, the tutor group is guided and attended by two members of the Department of Media Education and Further Education. At the beginning of the development, teachers do not only prefix the framework within which the seminar will take place, but also stimulate regulatory processes and moderate the discourse in the group. In the course of the work, the group identifies itself increasingly with the product of their work and acts more and more independently. In the execution in the winter term the tutor group as a whole, but also every individual tutor, feels responsible for the positive outcome of the seminar.

Conclusion

Thus, in the course of their three term training, students first deal with the notion of media literacy and experiment with new forms of teaching and learning as participants of the online seminar. Subsequently, they apply their experiences to a new seminar and change from the side of the participant to the side of the provider in further developing and creating the seminar as tutors.

The group is the authority of self-regulation in the tutor training, but the individual contributes actively to the learning process and is highly involved. It cannot be suggested that the skills for self-regulation and group work are already fully developed. This is why the tutor training is integrated into the process, in which students are lead from guided learning to increasing independence. They do not only learn how to draft, produce and create an e-learning course, but also the necessary acting strategies for such a project and respectively enlarge their social competence.

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