

## Design and framing of the task in school study-groups

### Abstract

The way a group-task is framed and designed has an obvious impact on the students' mode of studying and learning in a study-group. The aim of the present study is to explore and describe this impact, how the students construct the group-work with a starting point in their perception of the task, and behaviour and communication of the peers. This study is part of a larger fieldwork, including observations and interviews with students in grades 7 and 8 in a Swedish comprehensive school, carried out during one semester. The results show that certain aspects of the task and of the task instructions as such, greatly influence the students' group-work and, ultimately, what they learn. So far, the findings have disclosed four different aspects of importance for group-work in school settings. Each aspect has a certain effect on the students' cooperation, the procedure (course of action), and the students' urgency and readiness to work.

### Introduction

Group assignments can be designed in various ways, and the design has a major impact on the students' performance and the outcome of the group-work. According to Sharan & Sharan (1999) far too little is known about teachers' instructional behaviour, its patterns and effects, and how these may vary in different organizational environments. Much still remains to be understood about how to design different tasks. But that is just one side of the complex reality in a task assigned for a group-work. Another side is how the students create the task through their own as well as their peers' interpretation of it, communication and behaviour in the group, and how they carry out the task after it has been interpreted in a certain way. This created, realized task and the different aspects of it, is the focus of this paper. The different aspects of the created task are; *the type, the outcome, the structure of content and the structure of form*. Each of these aspects includes different dimensions and a number of variations, which together produce a great amount of diverse, realized tasks. The way the tasks are designed (by the teachers), define (gives a frame for) how the students create the task. In this process different forms of behaviours, perceptions, ambitions and ways of being develop among the students. If the task is supposed to be collaborative it needs to be coherent and ill-structured (Cohen, 1994; Hertz-Lazarowitz 1989; Lotan, 1997b), but when the students create, realize and carry out this sort of task an opposition arises towards collaborative work. Thus, another focus of this paper is what this opposition could look like and how it could influence the students' work in group-work. The study is part of a larger fieldwork, including observations and interviews with students in grades 7 and 8 in a Swedish comprehensive school, carried out during one semester. Grounded theory and symbolic interactionism constitute the methodological framework. The *aim* of this paper is to explore and describe the students' creation and realization of the different aspects of a task given to a group of students and the diverse behaviour and perception of this produce.

### Cooperative, collaborative and group work

The concepts cooperative and collaborative are frequently used in connection with group-work and they are often used interchangeably, but there are differences between the two (McWhaw et al., 2003; Barkley et al., 2005). Cooperative is considered to be the most structured approach in groups while collaborative is less structured. In cooperative work, the organization is often imposed by the teacher and designed to achieve a specific goal or end product. Collaborative work represents a different philosophy of interaction, whereby students are given more power over their interaction (McWhaw et al., 2003; Barkley et al., 2005). In

this text the concept cooperative will be used generally when describing the students working together and collaborative will be used in connection with the description of a how the work or task is carried out.

When two or more students work together in some way, generally this will be called group-work in the text. When they work together in a genuine collaborative way it will be called collaborative work.

### **The importance of the task in cooperative work**

Important for cooperative work is real group tasks, where students work interdependently and are held accountable for the group's product, but also for evidence of individual work. Far from all tasks assigned to cooperative groups are real group tasks; some could be done as individuals and have the character of collaborative "seatwork". These tasks have fairly clear procedures and may have "right answers". A task is not considered a real group task, when it is possible to divide the work so that each person in the group does a different part of it and the group has only to put these pieces together to make a final product (Cohen, 1994; Lotan, 1997a).

There are, according to Barley et al. (2005), several general considerations to keep in mind when structuring the task in collaborative learning. (a) Make sure that the task is relevant and integral to achieving its goal. (b) Match the task to students' skills and abilities. (c) Design the task to promote interdependence, so that each member is responsible to and dependent upon the others to succeed. (d) Try to ensure individual accountability. Individuals need to know that they must do their share of the work, and according to the authors this can be accomplished by implementing a grading structure that assesses and evaluates individual student performance as well as group performance.

A group task is a task that requires resources (information, knowledge, heuristic problem-solving strategies, materials, and skills) that no single individual possesses, so that no single individual is likely to solve the problem or accomplish the task objectives without at least some input from others. In other words, each actor must exchange resources with others before the task can be completed (Cohen, 1994).

### **Tasks with different structures**

Tasks could be well-structured and closed or ill-structured and open-ended. Cohen (1994) argued that in well-structured tasks there is little need for discussion because there is typically a right answer or a procedure to follow. These tasks require low levels of cooperation because students do not have to discover anything as a group or negotiate any meaning. With this type of task, achievement is consistently related to giving detailed explanations to each other on how to solve the problem. Therefore, you could say that cooperation is low in such tasks, where students simply share materials or information or divide the work so that each person's contribution can be joined together as a final product (Hertz-Lazarowitz, 1989). In contrast, in ill-structured tasks, such as open-ended and discovery tasks, where there are no right answers or procedures to follow, discussion among the members is vital to productivity and help problem-solving learning activities to take place. Students need to exchange ideas and information if they want to find creative solutions or discover the underlying principles of the topic at hand. These are high-cooperation tasks where students must interact as they work together, discuss planning, decision making, and division of work, as well as substantive content (Hertz-Lazarowitz, 1989).

Cooperative tasks could be open-ended in two ways; in their solution as well as in the process by which students arrive at the solution. Open-ended and inherently uncertain tasks increase the need for interaction (Cohen et al., 1999).

### **Mixed-ability groups**

Creating mixed-ability groups will increase possibilities for the students to use each other's capabilities in the group-work. The heterogeneity of the group and the students' rich and varied repertoires of different strategies and abilities are something group members can draw upon. When working with open-ended collaborative tasks, students have opportunities to use each other as resources, to explore alternative solutions, to communicate their thoughts effectively, to justify their arguments, and to examine issues from different perspectives (Lotan, 1997b).

When the mixed-ability group is given a collective cooperative task, students with high academic ability will be expected, by the others, to be more competent. If they could help to increase the others' knowledge and give help in a way that encourages reorganization and clarification, it could also give the explainers possibilities to understand the material better, develop new perspectives, and construct more elaborate cognitive understandings than they had previously (Gillies, 2003). The students with less academic ability could also be winners being given the possibilities to increase their knowledge by listening to the explanations and clarifications from the students with higher ability. But they could also be given just the right answers with no explanation, which is related negatively to achievement, both for the explainer and the others in the group (Gillies, 2003).

### **Fostering cooperation**

According to Sharan and Shachar (1999) real group-task is designed to foster cooperation among group members. One way to do this is to have different students studying different aspects of, or perspectives in, the topic rather than having everyone study all aspects of the topic at the same time. The final products of these efforts incorporate the synthesis of information and ideas contributed by group members. Therefore, the students are dependent of each other's information and knowledge to do or solve the group-task. In order to facilitate and realize cooperation among the students, one important aspect is to set group-goals so as to direct collective and individual efforts. Goal clarification is one of the most constructive ways to facilitate productive work by student groups. The group's goal also defines the relationships between its members in terms of who does what and when, as well as setting the criterion for groups to assess their own progress. Goals also make it possible for groups to benefit from the heterogeneity of their members by directing their diverse personal talents, interests, and knowledge toward the accomplishment of the collective purpose (Sharan, 1999). According to Johnson & Johnson (2002) effective cooperation is influenced by whether or not group members reflect on how well they are functioning and how to improve their work processes.

### **Methodological framework**

The result presented in this text is part of a larger fieldwork within my dissertation, which is under production. The focus has been on different forms of group-work taking place in

diverse classrooms of students in year 7 and 8 in a Swedish comprehensive school. The data collection was carried out during a little more than one semester with observations during 2-3 days a week and interviews with 13 students. Grounded theory (Glaser & Strauss, 1967; Glaser, 1978; Strauss & Corbin, 1998; Charmaz, 1990, 2005, 2006; Hartman, 1997) has been used as the methodological framework. The present text contains the part of the study, where focus is on the task in interactive group-work. Other parts in the larger study include; (a) how group-work is carried on; (b) how group-work is shaped by the students; (c) aspects with major impact on the students' shaping of the group-work.

The grounded theory methodological framework is based on symbolic interactionism according to which everything is social, and the human being exists, constructs and acts in interaction with his environment, i.e. other people (Blumer, 1969; Mead, 1995). That is why the study is carried out using observations and interviews in classrooms settings, to get knowledge about the students' interaction, communication and creating of group-work. From a symbolic interactive perspective, the individual acts in close connection with the meaning he or she gets from the situation (Blumer, 1969; Sharon, 2004). From that perspective the students are active producers of their own group-work as well as the task of the group-work.

### Results

The design of the task in its diverse aspects will define the students' possibilities in creating the task but it is their interpretation of it and their peers' actions, which determine their own action and in turn the realization of the task. The task is realized in the interaction between the students and their interpretation of the task, and the social environment. It is the realized task and the way it is carried out, which will be described in this results section. The realization (or implementation) of the task gives rise to different behaviours, perceptions, ambitions and ways of being with peers in the group, which in parts will be portrayed as well. In the classrooms, where the study has taken place, construction of individual work in groups was quite common, in contrast to construction of cooperative group-work, which was rather unusual.

Table 1 presents different aspects of the task and dimensions within the aspects, which have influence on the students' group-work. Every aspect has a number of different variations, which could create a lot of diverse tasks. The task created by the students will have an influence on their work, i.e., if it is going to be more cooperative or more individual. It will also influence their peer behaviour and how they will perceive the group-work. Each aspect is presented in its diverse parts.

Table 1. Different aspects of the task that influence the students' work in group-work

Aspects which have an influence on the created task	Characteristics
Type of task	Coherent -----Divisible
Outcome	Collaborative-----Individual
Structure of content	Unspecified-----Specified
Structure of form	Vague-----Firm

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### Type of task

Type of task makes up the frame for what possibilities the students have to work individually or in cooperation with the others in the group. If the task is coherent it will give the students no chance to work individually. Instead the design makes them work cooperatively in order to succeed with the task. However, if the task is divisible, the students could divide it and each takes an individual part to work with, alternatively, one or some of the students in the group will do the whole work and the others can get a free ride by hitchhiking. If there are possibilities to divide the work in individual parts the students gladly do so, as Joanna says: "When you get a task you divide it and you do different parts of it". Sandra's utterance has the same meaning: "It's like this, you make a schedule which says that you do that and I do this". It is like a norm for the students that as soon as it is possible, the group-work will be divided into individual pieces.

But sometimes the task is coherent and the students have to work cooperatively. Oscar tells us about one such task:

We have a rather short task about the Industrial Revolution and in the first group that I joined we have communication, yeah, we had. Though, you try to find different ways of communication, which has had influence on the Industrial Revolution. You must find out what's happened with the communication and it was a different kind of group-work. But it was quite fun because then you learned how different things influenced, such as for example clothes and coal and it was a totally different way to learn. Then everyone tells each other what they have learned about what has the greatest influence. It was of course important to really tell the others in a way that it could be understandable. /.../ It was like a little competition about who tells the best story and who did the most. That's why we try to encourage each other with words like "come on, we will be those who have the most facts". That's why we searched a lot for facts on the Internet and came up with strong arguments.

Oscar's statement shows both cooperation and competition among the students. He finds it stimulating to have the competitive element in the cooperation, which not all students agreed with. Most times the task design was not of a coherent type, instead it was divisible and then, as you could see above, the students constructed and implemented the group-task as individual parts.

### Outcome

In this part I will turn from the task type to its outcome or product. The outcome could be more or less collaborative or individual, and the larger the degree of jointly performed outcome, the more interdependence between the students and their performance. In the present study, the high ability students appreciate if the task product is individual because it makes them less dependent on those students who perform on a low-ability level. When the outcome from the group-task is individual the students need not take responsibility for the others' performed outcomes. This is perceived quite differently by the students depending on the academic level of the individual student. In the following, two students with rather different opinions give their words on how they perceive the interdependency and the fact that they can be responsible for both their own and others' performed products. We start with Henric.

You know, I'm a guy who likes to cooperate, you feel pleased to cooperate. /.../ I don't know why it feels so pleasant, you know I'm not so good at working alone or how should I put it, I think it's

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comfortable. I don't know how to explain it, I feel that when I'm cooperating I get a task, which I do and it's easy in some way.

Henric likes to cooperate because the interdependency in the group-work gives him a feeling of common responsibility for the task and he likes that feeling, which gives him opportunity to share the responsibility and get some help in his work. Jennifer has quite contrary thoughts and perceptions:

You know, I don't like to work cooperatively in group-works because we are sort of five or six persons but each has their own goal to reach, some go for passing, others for reaching really high marks. Then when we cooperate it's the one who want's to reach the high marks who has to do almost everything. It's so heavy when some people do nothing. /.../ When some people don't take their responsibility the work doesn't progress and nobody knows what to do and you don't know if there's going to be any work at all. Then you will stand there with just one page and you are supposed to have five pages. Just because they don't take their responsibility I can't do the stuff they should have done. Then it would be me who has done the whole work. In the end it's no good for me either when you stand there in front of everybody presenting the whole work.

Jennifer, unlike Henric, does not like to cooperate and take full responsibility for the task outcome. Her experience from cooperative work is that it is too easy for some individuals in the group to rely on others to do the job. Her explanation of this phenomenon is their different ambitions to reach high marks and the one who wants to have the high marks is the one who has to do the work. Depending on your perspective and the academic ambitions your experience of group-work will vary.

### Structure of content

The content of the given task could be more or less specified and directed towards specific pages in a schoolbook or specific websites. It could also be given as a concept or an area for the students to work with. Both the concept and the area could, as well as the schoolbook/websites, be more or less specified. Well-specified structures imply that the task has obvious frames in reference to pages, the area, or the concepts of work, and thus the consequence is that the students are controlled within those frames. One example of a well-structured content is this teacher's statement in a physics class: "Today we will work in dyads and construct an extension lead. On page 54 you have the theory you need. I will fetch the material for you before you start to move". The instruction gives specified structures for the content to work with and the students have little autonomy in the choice of it. An unspecified content of a task implies that the task has a rather open structure in reference to how the substance is chosen. It gives possibilities to choose different forms of content for the task. In the music class there were several examples of work with unspecified content, which gives the students great opportunities to make their own choice of the content. One example was when the students were given opportunity to prepare and write about an artist or a music genre of their own choice. That was the instruction they received and they had a free choice of what they would like to write about. They also had a free choice of where to pick up the information about the artist or the music genre.

The structures of the content have an influence on the process of the group-work. An unspecified structure creates more interaction and communication, since the students have to discuss different kinds of decisions about and in the content. The more intensive interaction shapes also more interdependence between the students, in contrast to the specified structure, which does not create so much interaction and communication between the students and lack interdependence. Precisely as in the other aspects of the task, this variation in interdependency the students will experience in quite different ways.

### Structure of form

The form of the task gives the structure of how the different procedures of a group-work will be defined. It could be more or less vague or firm in its form. A firm structure gives a detailed and comprehensible description of the procedures and how they will be realized. It gives the students clear frames of how the task will be done. It implies a clear planning of the different parts of the work and how they will be performed, but it does not give the students any possibility to influence how they would like to perform it. When the form is vague, on the other hand, the structure does not give the students the same steering, instead they get an opportunity to design the work by themselves. Tasks with vague structures could both shape students' possibilities to influence their work and be sources of frustration, since the vagueness created indistinctness in the cooperation around what to do and who will do what. But the vagueness gives the students' interdependency and they have to cooperate to find solutions as to how they will work with the task.

Many students want the group to have some sort of leadership in these questions. Someone or some who take more responsibility than others to lead the work is what Eric talks about: "You should have somebody who decides how the work will look like at the end, because otherwise the work will stop growing and much time will be spent on discussing what to do and how it should look like". But the students who often take or will be given the leadership role think it is a burden to have this responsibility for the collaborative work. Sophie tells us her views on this issue:

At the beginning I took a great responsibility, otherwise nothing was happening in the work. /.../ You know, some don't take their responsibility and then you have to check all the time so the work will progress. But now I have learnt to lay back and let some other take that role because I don't like to have it. /.../But at the same time if I feel that I have to I will do it.

The students do not see this as an opportunity to cooperate and together decide what to do and how to do it. Instead they get frustrated and think it is better to work alone than work together. Sophie continues her story:

When you work alone you can choose how much time you will spend on it. /.../ That's why I sometimes rather work alone than cooperate. I work better alone, then I have full control of what's happening and of the result in the end report. Then you have your own choice on which marks you will reach and can pick out before it starts.

It is a paradox when designing a task that, if you want to create interdependency and cooperation, on one hand, the structure of the task has to be vague, but, on the other hand, this will create frustration among the students, as they do not want this vague structure, i.e., they do not want to do collaborative work where they are interdependent of each other and have to cooperate through the task.

### Summing-up

We have seen in all four described aspects of the task (type, outcome, content and form) that ill-structured tasks will create more interdependency, in contrast to well-structured tasks which will construct less interdependency. Ill-structured tasks create more collaborative processes between the students because they have to cooperate to succeed with the task. Well-structured tasks, on the other hand, do not create the same need for cooperation among the

students in order to succeed with the task, because they can divide it in separate parts and work with each part individually. Depending on their academic and social ambitions the students perceived this interdependency differently and therefore tried to construct a group-work from their perception of the design of the task and their own ambitions. As the results show, most students want the group to have some sort of leadership and the one who take this responsibility will also have the power to influence the group-work in the way he or she wants. The one who takes the leadership is usually a student with high ability and academic ambition who also thinks, as Sophie's statement demonstrated, that it is a burden to have the responsibility both for their own performance and for the group's performance. Therefore, they think it is better to work individually with the task if the task design allows it. As soon as it is possible, the group-work will be divided into individual pieces, and group-work in the classroom is generally constructed as individual work within a group-task.

### Conclusion

The *aim* of this paper was to explore and describe the students' creation and realization of the different aspects in a given group task and the diverse behaviour and perception this produces. According to Sharan and Sharan (1999) and Lotan (1997a) the task is very important when encouraging cooperation work in groups. It may be designed to create interdependent work among the students. If the task is designed to create interdependency it will make the students depend on each others' efforts in the collaborative work, and, in consequence, they have to cooperate to be successful with the task. In my study far from all tasks were cooperation tasks, instead, most of the tasks the teachers gave to the students in the groups were by character divisible and gave the students a possibility to work with them individually. When this happened most of the students took that chance. The reason they gave for this was that "it's easier to work alone than to work cooperatively".

On some occasions in the study the designed task gave the students no other opportunity than to work cooperatively. On these occasions the character of the task was coherent, and if the students were to succeed with it, they were forced to take individual responsibility in order to learn their own part of it and then extend their knowledge to the others by telling them what they had learnt. They also had to listen to the others' knowledge about their part of the collaborative task. To do this the students could collectively reach an answer to the questions they had without doing the whole task, just their own part, which at the same time was important to all, in order to reach the full answer or solution to the group-task. In cooperation different individuals will meet and become dependent of each other in the collaborative task. According to Sharan and Shachar (1999) a real group-task is designed to foster cooperation among group members. One way to do this is to have different students study different aspects of, or perspectives of, the topic rather than having everyone study all aspects of the topic at the same time. The final products of these efforts incorporate the synthesis of information and ideas contributed by group members. Therefore, the students are dependent of each others' information and knowledge to carry through or solve the group-task.

Research has shown that mixed-ability groups could create certain advantages, since they give possibilities to use each other's different perspectives (Cohen, 1994; Gillies, 2003). To construct heterogeneous intellectual groups of students (Cohen et al, 1999) could, thus, make it possible to draw on each other's different knowledge and solution strategies. It could be a challenge to prove one's own understanding in front of the others (Cohen, 1994). However, at the same time research has shown that there are disadvantages with mixed-ability groups, where different academic and social ambitions could create frustration, above all in the students with high ambitions (Forslund Frykedal, in production). A fear to show one's own

inability in front of others, who are perceived as having a higher ability, could construct an escape from the work and the peers. This is another disadvantage with mixed-ability groups (Forslund Frykedal, in production; Summers, et al., 2003).

A task could have different structures as regards characteristics, outcomes, form as well as content, and in order to create a cooperative task it is important that the task is ill-structured and open-ended, which creates a great need for discussions as it gives no right answers or procedures to follow (Cohen, 1994; Cohen et al., 1999; Hertz-Lazarowitz, 1989; Lotan, 1997b). In contrast, well-structured and closed tasks have little need for discussion because there is, typically, a right answer or procedure to follow. In my study I have inspected different aspects of a task which could be ill-structured with coherent type, collaborative outcome, unspecified content and vague form, and well-structured with divisible type, individual outcome, specified content and firm form. Cohen (1994) does not make explicit differences between type, outcome, content and form of the task, instead she writes about the need of discussion of content or not, and what she calls procedures. My results demonstrate that tasks with coherent characteristics and collaborative outcome create cooperation between the students. Both unspecified content and vague form could create opportunities for the students to cooperate, but it could also create time-consuming cooperation, which takes time from the learning of the content but instead fosters social cooperative abilities.

For the teacher, who is going to construct a cooperative task in mixed-ability groups, where the students have different interests, abilities and ambitions this is important knowledge. As a teacher you must have clear and sharp goals for what the students are supposed to learn from collaborative work and know if you want to create social abilities or academic knowledge or both.

An opposition towards cooperative tasks has been visible in the study, as most of the students prefer to work individually rather than to cooperate. Cohen (1994, 1999), Lotan, (1997b), and Gillies (2003) have, in different studies, demonstrated that ill-structured and vague tasks are important for creation of a cooperative task. Depending on the academic ambitions of the work (as well as the ability) the students behave and perceive the group-work in different ways. Students with higher academic ambitions strive more for individual work and responsibility in the group-work than the students with lower academic ambitions who perceive a common responsibility as comfortable. The students who are taking the leadership role have the power in the group-work to decide, and if there is a chance to work individually they will take it. They think it is easier to work individually with the task, because then they are not dependent on others' work, and each time the task design gives the possibility they will construct individual work within the group-task.

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