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RESEARCH

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Promoting Constructive Collaborative Conflict Management Through a Game Theory Inspired Approach

Rozwijanie umiejętności konstruktywnego, opartego na współpracy rozwiązywania konfliktów przy pomocy metody inspirowanej teorią gier

Introduction

The purpose of this study is to test a conflict management approach inspired by game theory among upper secondary school youth. Conflict management research based on game theory is scarce. Gummerum, Hanoch and Keller (2008) claim that influences from game theory are rather unusual in behavioural science altogether. Game theory inspired research specifically aimed at conflict management among youth is practically non-existent, and prerequisites for using concrete game theoretical methods have not previously been investigated in youth research. This study can, therefore, contribute some new empirically based knowledge to this research area. With research as a

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point of departure, it could be concluded that destructive conflict management is common among children and youth. Another conclusion is that it is possible to teach young people constructive conflict management using deliberate interventions. (Burton, 2012; Crawford & Bodine, 2001; Deutsch, 2015; Hakvoort, 2010; Longaretti & Wilson, 2006; Malm & Löfgren, 2007; Roczen, Abs, & Flisecker, 2017; Thompson & Hrebec, 1996)

Johnson, Johnson, Dudley, Mitchell and Fredrickson (1997) tested the possibility to train adolescents to cooperate and avoid fighting in conflict management. The results showed significant differences between the untrained control group and the trained experimental group. The participants in the experimental group chose negotiation as a conflict management method much more frequently than the control group. Furthermore, training in integrative negotiation had strengthened a number of competences that are important in constructive conflict management, as, for instance, control of stress and feelings of hostility. Competence in building and maintaining good relations with peers had also improved.

In another experimental study, Graves, Frabutt and Vigiliano (2007) tested the possibility to develop skills in constructive conflict management by using interactive drama and role play among upper secondary students. Based on earlier research and theory, the researchers formulated three hypotheses: (1) training by use of drama and role-play would lead to increased knowledge about constructive conflict management; (2) training would result in decreased aggressive attitudes and behaviours; (3) training would lead to improved communication skills in conflict management. The research results were in line with the hypotheses. The participating students learned to distinguish between constructive and destructive conflict management. They also understood the importance of being able to identify and cope with one's feelings, as well as carefully consider the situation before acting in a conflict. The researchers noted a decline in both verbal and physical aggression, such as rumours and fights, as well as generally improved communication skills in conflict situations.

Based on a study they conducted, Canary, Cupach, and Serpe (2001) have stated that the quality of communication may influence both conflict management and relations between the parties involved. The impact of communication in conflict management is also emphasized by Olekalns, Robert, Probst, Smith, and Carnevale (2005). Their conclusion was that obscure messages increase the tendency towards non-cooperative conflict

management, whereas clear messages increase the tendency towards cooperation. The study demonstrates that continuous use of ambiguous messages impairs the moods of the parties while making destructive conflict management more likely. Relations between the parties also have an impact on the orientation in conflict management, according to Johnson and Johnson (1995). Weak relations make it less likely that the parties are prepared to pay attention to, or cooperate with, each other. The conclusions drawn in Pistole and Arricles' (2003) study correspond with those drawn by Johnson and Johnson. Their results demonstrate that relations between the parties have an impact on how conflicts are managed. Parties that experience positive relations between them do not avoid argumentative disputes and do not perceive conflicts as an immediate threat to their own wellbeing. The tendency to force or escape is also less prominent among parties that experience a safe relationship. A safe relationship also makes the conflict feel less dramatic and emotionally loaded.

Conflicts are often linked to strong negative emotions. The most immediate emotion in conflicts among youth is anger. Anger is difficult to control and often leads to some form of overt expression. Among the most common expressions are shouting, cursing, or insults, and the most drastic expression of anger is physical violence. (Szklański, 2007) Feindler and Engel (2011) see anger as the most important stimulant for strong affective behaviour among youth and argue for training in anger control with social cognitive theory as the point of departure. Anger control through cognitive processes, such as, attributions or problem-solving strategies, may ease both frequency and intensity in expressions of anger.

There are several complex methods or programmes with the purpose to teach skills that may facilitate constructive conflict management, including anger control. (Catterall, 2007; Davidson & Wood, 2004; Galley, 2004; Goldstein, Glick & Gibbs, 1998; Johnson & Johnson, 1995; Kimber, 2007; Rosenberg, 2015; Selfridge, 2004; Woody, 2001) Some methods, e.g., Aggression Replacement Training (Goldstein et al., 1998), have been used in several schools in Sweden, in order to enhance constructive conflict management. However, the Swedish National Agency for Education (Skolverket, 2011) conducted an investigation that shows that this type of complex methods has relatively small effects in relation to the resources that are invested. A possible alternative to such complex methods may be more focused efforts that are inspired by proven experience or scientific theories. In the present study, such a focused approach, related to game theory, is tested.

The aim of the present study is twofold. The first aim is to investigate whether training in the use of an approach based on a game theoretical method, known as Tit For Tat (TFT), may promote collaborative, constructive conflict management among secondary school students. The second aim is to explore how participants in the study experienced the TFT-based approach after it was used.

Theories of relevance

Game theory and the theory of conflict strategies are relevant to this study.

Game theory analyses and investigates interplay among the involved parties, as well as the parties' views in conflict situations. (Axelrod, 1980; 1984) In game theory, the conflict parties are regarded as rational players. The rationality is shown by the parties' purposeful actions, according to their understanding of the situation, and how they react to each other's moves, in order to arrive at a satisfactory result. Conditions for people's choice to cooperate or not in conflict situations have also been studied within game theory. One conclusion is that iterated situations, i.e., situations with several rounds and repeated interactions between the parties, tend to counteract egotism and facilitate cooperation in conflict management. Step by step, such situations typically conjure up an insight that the key to success is not a matter of fighting and winning, but rather of cooperation and consensus.

The Tit For Tat (TFT) method requires iterated interaction between the parties. In experimental studies, this method has proved to be efficient in promoting cooperation in conflict management. (Axelrod, 1997) It always involves initiating cooperation with the counterpart, then to adjust to the counterpart's actions and, in accordance with the principle of tit for tat, balance with both mutual and egotistical moves. Druckman (2008) holds that the tit for tat principle needs to be practised in a flexible way so as to counteract fixations in an uninterrupted spiral of egotistical views. A firm interruptive reaction on the counterpart's egotistical move therefore needs to be followed by openings that invite cooperation.

In the theory of conflict strategies (conflict styles) various approaches to conflict management are distinguished and defined. (Johnson & Johnson, 1995; 2014; Thomas, 1976; Thomas & Kilmann, 2007) The approaches are decided based on two dimensions that deal with the parties' intentions in the conflict management process. The first dimension reflects a regard for

the individual's own interests and needs. The question is to what extent one is prepared to push through one's own will. The second dimension reflects a regard for the counterpart's interests and needs. The question here is to what extent one is prepared to take the other party's will into account. A dual concern situation occurs with a need to balance the two dimensions. Different strategies for conflict management are thus a result of balancing between, on one hand, the drive to achieve one's own goals, and, on the other hand, the drive to show concern for maintaining or developing a desirable relationship to the counterpart. With these dimensions as a point of departure, five strategies for conflict management are distinguishable: forcing, withdrawing, accommodating, compromising, and collaborating.

Forcing is an egotistical approach. The purpose is to get one's own will without considering the interests of the counterpart. Care for the other party is slight; one's own goals are to be fulfilled to the utmost, even at the expense of the other person. Withdrawing is an avoiding approach. Escape is practised when the question of conflict is judged as relatively unimportant or when the expectations of reaching one's goals are considered as relatively low. Care for the other party is slight; one refuses to try to manage the conflict, even if it is important to the counterpart. Accommodating is a courteous approach. Care for the other party is substantial. Accommodating means that one easily gives up one's own interests to benefit the interests of the counterpart. This approach is relation-oriented and often used when the relationship to the counterpart is important. Compromising is an adjusting approach. Compromise is built on mutual concessions and results in both parties not fully achieving their goals. Care for the other party is moderate, one is prepared to give up some of one's own interests although under the premise that the counterpart does the same. Collaboration is a cooperative approach. The point of departure is an assumption that negotiations with the counterpart can result in an agreement that is satisfactory to both parties. Care for the other party is substantial, as is the wish to forward one's own interests.

Method

This is an intervention study using mixed methods with quantitative, as well as qualitative analyses of the collected material. The empirical material was collected in two phases. The first phase is named the baseline phase, and the second the intervention phase. Fourteen young people between the ages

of 17 and 18 took part in the study. Both males and females were represented in the group, although with a female majority. All participants were second- or third-year students at upper secondary schools in Sweden. Contact with potential participants was established through visits at the schools, and all meetings with the recruits took place in rooms available at their respective schools. During the first visits, the aims and proceedings of the study were presented. The researcher emphasised, among other things, that participation was voluntary and that the collected data would be treated with confidentiality. After the presentation, the students who agreed to take part in the study were asked to sign a written statement of consent.

Data Collection: Baseline phase

This phase in the data collection is divided into two steps (steps 1-2).

In the first step, the participants were asked to report concrete everyday conflicts that occurred between themselves and other young people (for instance, classmates, friends, or siblings) for seven days. Each situation was to be described in depth with a focus on conflict management; the description to be sent electronically to the research the same day as the conflict had occurred. If needed, the participants were asked to add to the descriptions. This first step of data collection generated sixty-three descriptions of everyday conflicts (three to seven descriptions per person) and constituted Pre-Test 1.

In the second step of the data collection, the participants were asked to reflect on the described situations. All descriptions were brought back to respective participants after two weeks accompanied by the following question: If you were able to change anything in how each conflict was managed, what changes would you make? The task, thus, was to reflect on the everyday conflicts they had described earlier and make suggestions for possible changes in how to manage each conflict. This step in the data collection constituted Pre-Test 2.

Data collection: Intervention phase

This phase in the data collection was carried out in three steps (steps 3-5).

The third step was prepared in a training session. During this session, the TFT-based approach, which the participants were to later use in managing everyday conflicts, was presented. The principles of the approach were summarised in five points: (1) always start managing the conflict yourself with negotiation in order to accomplish a satisfactory solution for both parties; (2) meet the counterpart's wish to negotiate with negotiation; (3) never try to force

through a solution to the conflict yourself; (4) stop the counterpart's attempts to force through a solution; (5) after having put a stop to the counterpart's attempts to force through a solution, offer negotiation. The principles were handed out in writing and explained by the researcher verbally, followed by questions and answers. The session was finished after the participants confirmed that they had understood the contents and could explain the principles in their own words.

After the training session, the participants were given the task to practise the TFT-based approach when dealing with everyday conflicts with other young people. During the training period, the participants were supposed to make notes every day concerning how they experienced the approach. At the end of the training period, they sent their notes to the researcher. This data collection step, thus, generated written narratives of the participants' experiences.

In the fourth step of the data collection, the participants were given the task to once again reflect on the conflict situations that they had described in step 1. Straight after the training period, the original descriptions were brought back to the participants with the demand to once again give suggestions as regards possible changes in the management of each conflict. This step in the data collection constituted the Post-Test.

In the fifth step of data collection, focus group interviews were conducted concerning the participants' experiences of the TFT-based approach. Focus-group interviews make continuous interaction possible and, thus, have a stimulating influence on the informants. A suitable number of participants in a focus group interview is four to six persons. (Morgan, 1996; Kitzinger, 1994) All of the participant students took part in the interviews. They were divided into three groups – two groups of five students, and one group of four. The interviews were based on the notes taken during the training period (step 3 in the data collection process). The researcher took the role as moderator and initiated the dialogues, thereby promoting open communication. The interviews were recorded and transcribed verbatim. This step in the data collection generated deep knowledge concerning the participants' experiences of the TFT-based approach.

Data analysis

Below the procedures used in this study are presented, as well as both the quantitative and qualitative analyses.

Quantitative analysis

The material that was analysed by quantitative measures consisted of written records of everyday conflict situations that were collected on three occasions. Two of them took place during the baseline phase (Pre-Test 1 and Pre-Test 2), and one took place during the intervention phase (Post-Test). The quantitative analysis was carried out in three steps (steps 1-3).

The first step started with a meticulous investigation of the described conflict situations. The aim was in each situation to identify the use of the five conflict management strategies (forcing, withdrawing, accommodating, compromising, and collaborating). First, the use was identified in the Pre-Test 1 descriptions, and after in the Pre-Test 2 and the Post-Test descriptions.

The second step of the analysis started by making a list of frequencies for each strategy and construction of a matrix containing values for all three measures (Pre-Test 1, Pre-Test 2, Post-Test). Based on the matrix, an Average Score for each strategy was calculated, as was a Change Score between the measures in Pre-Test 1 and Pre-Test 2, as well as between the measures in Pre-Test 2 and the Post-Test.

In the third step, a Paired Samples T-Test (p) was carried out in order to find out the statistical significance of changes between measures in Pre-Test 2 and Post-Test. Finally, Cohen's effect size test (d) was used to establish the strength of the changes.

Qualitative Analysis

The basis for qualitative analysis was the contents of the focus group interviews and the participants' written accounts of their experiences during the training period. The analysis was made using Braun and Clarke's (2006) method of thematic analysis, which contains the following six steps:

Step 1. Familiarising oneself with the data – aims at getting to grips with both breadth and depth of the material through repeated reading, which includes taking notes of initial ideas for coding.

Step 2. Generating initial codes – aims at delimiting meaning units in the material and organising them in meaningful groups or codes.

Step 3. Searching for themes – aims at elaborating codes and sorting them into potential themes. All data that seems relevant to each theme is defined and collected in groups.

Step 4. Reviewing themes – aims at developing, through focused scrutiny, a satisfactory thematic map of the data with different kinds and levels of themes.

Step 5. Defining and naming themes – aims at delimiting the core of each theme and finally naming or labelling the themes.

Step 6. Producing the report – aims at developing and clarifying accounts of the themes, using a combination of narratives and illustrative data extracts.

Results

The results are described in two parts. In the first part, the results of the quantitative analysis are presented, and in the second part, the results of the qualitative analyses are presented.

A TFT-based approach and collaborative conflict management

The research results in this section are related to the first aim of the study, i.e., to investigate whether training in the use of an approach based on a game theoretical method, known as Tit For Tat (TFT), promotes collaborative constructive conflict management among secondary school students.

The results demonstrate that training in the use of the TFT-approach can promote constructive collaborative conflict management. This conclusion may be made when comparing the values presented in the tables below. The scores in tables 1 and 2 demonstrate the tendency of the participants to use the respective strategy before (baseline phase) and after (intervention phase) training on the TFT-based approach.

Table 1. Use of conflict strategies: Baseline phase

Strategy	Pre-Test 1 Average Score N=14	Pre-Test 2 Average Score N=14	Pre-Tests 1/2 Change Score (SD) N=14
Forcing	3,64	2,43	-1,21 (1,05)
Withdrawing	2,21	1,43	-0,78 (0,97)
Accommodating	0,36	0,43	+0,07 (0,61)
Compromising	0,43	0,64	+0,21 (0,42)
Collaborating	0,57	0,93	+0,36 (0,84)

Table 1 presents the average score for each conflict management strategy, as well as the change score between the measuring points, together with the standard deviation (SD) in the baseline phase of the study. Negative values in change score indicate a decrease and positive values indicate an increase in the use of a certain strategy between Pre-Test 1 and Pre-Test 2. The participants' tendency to use the forcing strategy decreases substantially; their tendency to use the withdrawing strategy is also decreasing, although to a lesser extent. The use of the other three strategies demonstrates a somewhat increasing tendency.

Table 2 presents the average score, change score and standard deviation (SD) between measuring points in the intervention phase of the study. Negative values in change score indicate a decrease in use of a certain strategy from Pre-Test 2 to Post-Test, whereas positive values indicate an increase in the strategy use. Three strategies show a decreasing tendency after the intervention whereas two strategies show an increasing tendency.

Table 2. Use of conflict strategies: Intervention phase

Strategy	Pre-Test 2 Average Score N=14	Post-Test Average Score N=14	Pre-Test 2/Post-Test Change Score (SD) N=14
Forcing	2,43	0,65	-1,78 (0,97)
Withdrawing	1,43	0,43	-1,00 (0,96)
Accommodating	0,43	0,50	+0,07 (0,99)
Compromising	0,64	0,57	-0,07 (0,73)
Collaborating	0,93	2,64	+1,71 (1,20)

In this phase, too, the most obvious decreasing tendency is for the forcing strategy. A corresponding change, although in the opposite direction, is found for the collaborating strategy.

To test the significance of the changes between before and after the intervention two measures were used, i.e., a Paired Sample t-test and Cohen's Effect Size test, the results of which are presented in table 3.

Before the analysis, the limit for statistical significance (alpha level) was set at $p < .05$. The results of the t-test show a significant change for the collaborating strategy ($p = .002$, $d = 1.61$). No significant change in use had occurred for any of the other strategies, as their p-values were clearly above the limit for statistical significance. Despite a substantial negative change score for the forcing strategy (-1,78, see table 2), no statistically significant effect of the intervention

was found. It should be noted that the use of forcing had decreased already between Pre-Test 1 and Pre-Test 2 in the baseline phase of the study, i.e., before the actual intervention.

Table 3. Paired Samples t-test and Cohen's Effect Size

Strategy	T-Test (p)	Effect Size (d)
Forcing	.165	0.54
Withdrawing	.648	0.23
Accommodating	1.000	0.00
Compromising	.302	0.67
Collaborating	.002*	1.61

Participants' experiences of the TFT-based approach

The research results in this section are related to the second aim of this study, i.e., to explore how participants in the study experienced the TFT-based approach after it was used.

The results indicate that the students' experiences of using the approach were, for the most part, positive. Expressions, such as "good overall," "you have some procedure to follow," or "it's not strange to use," bear witness to the participants' generally positive experiences of practising the approach. A meticulous thematic analysis of the data material gives, however, a more nuanced picture of the experiences. The thematic analysis has resulted in a demarcation of two main themes, asset and difficulty. The approach could, on one hand, be regarded as an asset and, on the other hand, as problematic. These two overriding themes include a number of subordinate themes (subthemes), which together create a more detailed picture of the participants' experiences. The thematic pattern derived from the qualitative analysis is presented below and illustrated by excerpts from the data material. Excerpt marked with an F and a number emanate from one of the focus-group interviews. The other excerpts, marked with two letters (e.g., WI), emanate from the participants' notes during the training period.

Main theme 1. Asset

The TFT approach is here regarded as positive, in other words, an asset. This main theme includes three subthemes: affectivity, reciprocity, and understanding.

Subtheme 1a. Affectivity

Using the approach may contribute to less affectivity in conflict management. The students express that emotions are much too often allowed to dominate a conflict management, which may easily lead to insults and aggression. Violent emotional reactions are common and difficult to control. “The aggression comes from the conflict itself, conflicts evoke strong emotions,” as one of the participants phrases it. The data material shows that aggressive conflict management is judged by the students as both ineffective and morally wrong.

If there is a lot of fuss, none of the parties learn anything. You say what you need to say and then you just don't care. You just get angry and then nothing comes out of it... If you are fiery and aggressive then maybe you don't hear everything that the other party has to say, you are sort of not present in the same way as if you talk calmly... It's much better when you are calm and collected. You end up with better solutions when you are calm and collected than if you just shout and curse all the time. (F1)

I don't think it's proper to use expressions that are emotional or offensive to the person. I think it's just bad and it makes the antagonism worse and it can hurt people. I think this is quite common in conflicts and it definitely don't make things better. (W1)

In spite of the general attitude, the students confirm that it is very difficult not to react with strong emotions and to control the negative emotions that occur in conflict situations with other young people. Using the TFT-based approach seemed to make emotional control easier. Being aware that they were supposed to use the approach seemed to promote the cognitive attitude and thereby decrease the affective attitude when they tried to manage the conflict. Several testimonies in the empirical material point to a link between the cognitive and the affective attitude in the students' described experiences.

You think carefully when you are supposed to use a certain method, then you have to think carefully before you say anything, because if you don't think carefully you just say what pops up in your head. (F2)

You think carefully, because you know that you want to negotiate, and you know that if you start getting nasty then it doesn't work. Also, you get more sensitive to what the other party wants... You think more logically when you are calm than when you are angry – then you don't think so carefully, but when you are calm you give it a thought. When emotions are running high you don't think before you talk. (F3)

The participants agreed that using the TFT approach may inhibit affectivity in conflict situations. Some of the informants pointed out that the approach is very useful when one has a personal tendency to react with strong emotions in conflict situations. If one has a bad temper and is used to reacting aggressively, this approach can counteract such a tendency. However, sometimes the spontaneous outburst of anger may take over, even if one is prepared to manage the conflict by means of negotiations.

If a conflict occurs I often get irritated. If a family member is involved it is very easy to let a foul word slip out. Me and my sister were going to cook but it didn't go so well when we had to decide what to make. Both of us have a rather bad temper so we used some bad language. I was thinking that I shouldn't attack the other party, but it didn't work out this time. You want to get rid of your aggression through the words, so you use the same language as you usually do. (F2)

Subtheme 1b. Reciprocity

The use of the TFT approach can contribute to an increase of reciprocity in conflict management. The informants are aware that reciprocity is a necessary prerequisite for coming to an agreement with the counterpart. A unilateral, careless stance towards the other person will never lead to an agreement. Based on their experiences the informants point out that reciprocity is difficult to achieve with resolute persons with a tendency to try to force through a solution to the conflict. Such reluctant persons are difficult to negotiate with. The TFT approach could, under these circumstances, be seen as an instrument to stimulate the other party to take on a more reciprocal stance when managing the conflict.

You couldn't just force a response, but it would be very strange if you open up a conversation and then don't get any response. Both parties would think that was strange, people do respond, because that is what one does. (F3)

If I get into a discussion and we start talking, then of course the other one is likely to catch on because he might think it's interesting. That it's logical, not just any stupid thing, but that you say things that are well thought out, so perhaps the other person follows suit and starts thinking about how he behaves himself. (F2)

By using the TFT approach, the counterpart is consistently invited to negotiations. Such a conscious and consistent attitude could work as a model for the counterpart. From the informants' statements, one may infer an optimistic

view on the intentions of the parties in a conflict situation. There are distinct expressions of the idea that parties often have good intentions and would like to agree rather than fight. Confrontation comes about because people do not see or realise that there are other options. Using the TFT approach makes the counterpart open his eyes to negotiation as an option in conflict management.

Negotiation is, most often, not the first thing you think about. You say that this is wrong, and the other one says, no, you are wrong and so you don't get anywhere ... If there is a fight or pressure, then you want to find arguments to show that you are right, so you get selfish. But if you offer negotiations you show that maybe we can come to some sort of agreement, then I think that the other party also reacts positively, that it's possible. You show that you are committed, that you want to solve the situation in a mature way, that you don't show that 'I want to do it my way', but that you show like 'I can agree to do it differently, I do care about what you think' ... If you show that you want to negotiate then the other person wants it too, so there is a better chance if you show that you want to negotiate. (F1)

Subtheme 1c. Understanding

Using the TFT approach may contribute to a better understanding of conflicts. The conflict situation can be mapped out and thus easier to understand. The young people in this study state that it is quite common to judge the seriousness of the conflict erroneously. Initially there might be too much weight on minor things or mistakes in attribution of intentions. During the negotiations such misjudgements can be corrected, and the conflict can be seen in its proper proportions.

If there is a conflict and then you begin to talk about it, and you get the views from both sides, then you may get to the conclusion that, either we must continue with this, or this is no big deal and we should leave it be. Because if you start fighting about something so it gets bigger and it becomes enormous in your head, even if it's just a petty thing really ... Quite often you come to think afterwards that it was really not a big thing, if you had started to negotiate then you would have realised that much earlier. (F3)

Negotiation facilitates a continuous diagnosis and may, thereby, contribute to a better understanding of the situation, as well as the counterpart. Negotiation results in both parties getting a clearer picture of what the conflict is about and how important the issue is to other party. A better understanding of the counterpart's interests and needs could, in turn, facilitate a more rational

management of the conflict. Increased knowledge about the conditions makes it possible to be more thoughtful and more sensitive to the other person's arguments.

My mate was more open to negotiation and I got more conscious of the problem, and because of the discussions I changed my mind. My mate got a chance to express herself, something that she normally has problems with ... Thanks to the negotiation my eyes opened up to what the conflict really was about, and then I could manage it better. (JO)

Main theme 2. Difficulty

The TFT approach is here experienced as problematic. This main theme contains the following two subthemes: time efficiency and competence.

Subtheme 2a. Time efficiency

Using the TFT approach may seem too time-consuming. Such experiences are evoked primarily in connection with the management of conflicts that the informants consider minor or insignificant. "It depends on how important the issue is and if one wants to spend that amount of time if it doesn't matter much" – as one of the participants put it. For some participants, it seemed a little forced to apply the approach in all conflict situations. Minor or insignificant conflicts should be managed in a simpler way without much time-consuming negotiations.

It's a bit strange if you discuss a tiny thing. To get a discussion and negotiation going about something that could be solved in a jiffy feels sort of unnecessary. Like when you are supposed to do something, shall we go shopping now or shall we go shopping in an hour. Shall we buy this chocolate or that chocolate, and then you begin to discuss that a lot. For instance, when you are to decide what to have for dinner, I tried to discuss that, and it took much longer than it normally does. (F2)

The participants give evidence that it could be difficult to use the approach with people who, by definition, want swift decisions. They want to get rid of the problems without delay and without much effort, regardless of the importance of the conflict; they may feel stressed and show symptoms of impatience if the conflict is not dealt with quickly enough. With such parties it can be difficult to maintain negotiations even if they initially respond with reciprocity. The participants also feel that parties who want quick solutions in the course of

time may show a tendency to escape from management of any new conflicts. If they do not believe in prompt and satisfactory solutions, they prefer to escape rather than get into time-consuming negotiations. Dealing with such parties makes it generally difficult to apply an approach that is so clearly directed towards negotiations.

It was difficult to negotiate while the counterpart wanted to find a solution quickly. To start the argumentation was easy enough, but then it was hard to keep it going. What I thought was most difficult was that I had to go on with the negotiation while the others wanted to find a solution quickly. (AN)

What didn't function so well was that a minor issue took quite some time to discuss. It's hard to bring about a negotiation when it's a minor issue and the counterpart wants to get rid of the conflict as quickly as possible ...

So she says, why do we always have to go on negotiating, why can't you just give up. Why do we have to negotiate about this little thing? But it all depends on how you look at it, I myself don't think so. (LI; F1)

Subtheme 2b. Competence

Application of the approach can be experienced as too demanding. Such feelings are evoked primarily as a result of too little experience in negotiations. Lack of experience of negotiations in conflict situations may also lead to reluctance to initiate negotiations with the counterpart despite good intentions.

What didn't function so well was very much due to me, because I often forgot to open up for negotiations. Sometimes I gave a direct response despite my intention to negotiate, when I just didn't think about it. Especially if it was about something that really irritated me. (SI)

Lack of experience leads to poor self-efficacy in situations of negotiation. It may be difficult to initiate negotiations and find the right way to communicate. The uncertainty regarding how to handle the counterpart's silence, for instance, or how to break through communication blocks, makes the use of the TFT approach feel very demanding. In addition, lack of arguments or problems with finding a clear and composed way to communicate may feel stressful. When there is a lack of new entries and arguments negotiations may sometimes feel like a kind of mantra.

It could be that you say the same thing all the time, you stretch it out although you have the same argument. There are arguments, but they are quite similar, so it becomes difficult to keep the conversation going. It's hard to find new argu-

ments. It's like you are going over it again and again, you get stuck in the same tracks in your arguments. (F1)

The counterpart's inexperience in negotiating can also make it difficult to use the approach. Consistent invitations to negotiate can sometimes be regarded as a form of provocation. The situation becomes so unusual and unfamiliar in relation to typical behaviours in conflict management that it evokes the counterpart's suspicion of ulterior motives. Consistent invitations to negotiate may appear as an insidious strategy in order to get on top of things or to belittle the counterpart.

It was difficult with my brother, then it really felt as if it was a play. It was really weird when I behaved in a way I don't normally do. If it's not normal to discuss but just to have a fight, then it gets really strange ... My brother got angry and seemed to think that I'm stuck-up when I try to negotiate calmly without getting angry. It ended up with him leaving without us having reached a solution. (AL)

Discussion

This article reports the results of an intervention, the aim of which was to investigate whether training in using a specific approach may promote constructive collaborative conflict management among upper secondary school youth. The most common design for intervention studies is to conduct pre- and post-tests in two groups, i.e., an intervention group and a control group. Results from interventions studies with tests before and after the intervention in one group are regarded as less reliable, considering the increased probability that factors other than the actual intervention may influence the results. In the present study, however, pre- and post- test measurements were made in one group. The measurements were divided into two phases in order to minimise the uncertainty concerning the influence of the intervention. Before the intervention, in the baseline phase of the data collection, two tests were carried out with a time interval. The second test had a control function, and the intervention group thus functioned, in a way, as its own "control group."

Based on the results presented in this article, it can be concluded that the tested approach is able to promote collaborative conflict management. The difference in results from the second test in the conflict collaborating strategy in the baseline phase (Pre-Test 2) and the test in the intervention

phase (Post-Test) gives evidence for such a conclusion. Furthermore, this is the only significant change that can be observed as a result of the intervention. Even if the Post-Test in the intervention phase demonstrates a clear decrease in use of the forcing and withdrawing strategies, these effects cannot be regarded as significant. Similar decreasing effects were also observed in the pre-intervention tests in the baseline phase.

The results of the study do not give any evidence as to the persistence of the positive collaborative effects that the intervention entailed. The Post-Test was performed straight after the intervention and it is only the effects at this point in time that can be accounted for in the results. Although it is probable that the effects of the training will decrease over the course of time, this type of focused conflict management training seems, nevertheless, worth recommending. Even short-term positive effects towards constructive collaborative conflict management are desirable, especially if they can be achieved with relatively limited resources. The tested approach is characterised by an obvious simplicity compared to complex methods that are much more demanding as regards time and resources.

In addition, this article gives an account of the results from a thematic survey, the aim of which was to find out how the TFT-based approach was experienced by the students after they had used it. The results of this survey demonstrate that using the approach can contribute to less affectivity in conflict situations. It seemed to hamper strong emotional reactions and evoked a calmer attitude, which facilitated a constructive management of the conflict. Even if using the approach does not always help the students to control themselves, according to the results, it still seems to contribute to diminishing the risk of strong affective reactions. This should be regarded as valuable, considering the fact that uncontrolled expressions of anger are described, by researchers, as one of the main reasons for destructive conflict management. (see e.g., Galley, 2004; Goldstein, Glick, & Gibbs, 2000; Simmonds, 2003) Decreased affectivity can be further related to another positive consequence: using the TFT-based approach leads to an increased probability to survey the situation. Thus, a diagnosis of the situation results in understanding, and understanding, in turn, enhances rational management of a conflict. According to Szklarski (2007), a diagnosis is seldom made in conflicts among youth, to which a frequently existing affective attitude gives a pronounced contribution. A survey of the situation can also minimise the risk of misunderstandings. It is worth noting that the

TFT-based approach is characterised by communicative distinctiveness. The messages that the counterpart receives are both clear and consistent, which facilitates constructive cooperation-directed conflict management. (Olekalns, Robert, Probst, Smith, & Carnevale, 2005)

Use of the TFT-based approach can also contribute to increased reciprocity in conflict management. The participants emphasised that curiosity can be aroused when somebody opens up for negotiations. Inquisitiveness is stimulated, and one wants to know more about the counterpart's intentions, their ways of thinking and arguing. The statements of the participants are well in line with Bruner's (1974) ideas about human motivation. Bruner claims that curiosity and a need for reciprocity are built into the natural motives of a human being. The empirical evidence of the present study indicates that using the TFT-based approach had a stimulating effect on these motives. According to Ting-Toomey and Takai (2006), reciprocity can be regarded as a prerequisite for constructive conflict management. When managing a conflict, the parties can take either a one-sided or a reciprocal direction. A one-sided direction is destructive and means that one primarily wants to promote one's own interests and image. A reciprocal direction is connected to constructive conflict management, as such an orientation enhances consideration for the interests and needs of the counterpart. Similar conclusions as regards the link between reciprocity and constructive conflict management are formulated in the earlier mentioned theory of conflict strategies. (Johnson & Johnson, 1995).

Time efficiency was somewhat problematic when using the approach, according to the participants. Negotiating takes time, which means that impatient parties are inclined to give up negotiating unless it leads to satisfactory results. In the training situation, the participants were given the task to try to negotiate with their counterpart in all conflict situations. That they sometimes saw it as unnecessarily time-consuming is understandable under the circumstances. Some everyday conflicts were seen by the participants as so small or insignificant that they could be managed through swift adjustments, often with very limited verbal communication. The inclination to escape from negotiations in such cases can also be regarded as a natural reaction according to the conflict strategies theory. Conflict issues with little significance do not tend to evoke negotiation-directed management, albeit on the condition that a good relationship with the counterpart is not jeopardised. (Johnson & Johnson, 1995)

The most outstanding difficulty in using the tested approach is connected to competence in the negotiation technique. Lack of competence in negotiations is by the participants experienced as a major problem in conflict management. It is quite obvious that the youngsters experienced low degree of self-efficacy in relation to the negotiation task. It is rather common to feel anxiety faced with such tasks and, consequently, try to avoid them. (Bandura, 1997) Poor self-efficacy will reduce the motivation to choose negotiation in conflict management. This, in turn, leads to a lack of experience and competence in negotiating. An interaction emerges where low self-efficacy and lack of negotiating competence reinforce each other. Therefore, it seems to be an important pedagogical mission to use purposive interventions in order to give students experiences in negotiating. The results of the present study demonstrate that rather limited training of negotiations may improve the probability of constructive collaborative conflict management.

Finally, it is worth noting that the difficulties experienced by the participants do not seem to emanate from the use of the approach per se but rather from the premise on which it was used. There are no methods or conditions that are suitable in each and every context or situation. For instance, the problematic issue of time efficiency experienced by the participants was mainly connected to the specific situations where the conflict was so insignificant that it could have easily been managed in a less time-consuming manner. The advantages that the participants experienced, on the other hand, seem to be connected to the use of the approach rather than the premise for its use. The data material indicates that reduced affectivity and increased reciprocity were experienced as consequences of the use of the TFT-based approach.

Abstract: The aim of this study is to find out whether an approach based on a game theoretical method may promote constructive collaborative conflict management among upper secondary school youth. An additional aim is to investigate how the young people involved in the study experience such an approach. It is an intervention study; the research material has been collected both before and after the intervention. The empirical material has been collected in Sweden using written reports and focus-group interviews. Both quantitative, as well as qualitative methods of analysis have been used. The results of the quantitative analysis demonstrate that the approach tried out in the study may enhance constructive collaborative conflict management. The qualitative analysis concerning the participants' experience of using the approach

show that the investigated approach is for the main part experienced as an asset but can also, in certain contexts, be seen as problematic.

Keywords: conflict management, game theory, youths, intervention study

Streszczenie: Celem przeprowadzonych badań było ustalenie, czy zastosowanie metody inspirowanej teorią gier może prowadzić do rozwoju umiejętności konstruktywnego rozwiązywania konfliktów wśród młodzieży licealnej. Celem badań był także opis spostrzegania zastosowanej metody przez młodych ludzi uczestniczących w badaniu. Materiał empiryczny został zebrany w Szwecji za pomocą pisemnych raportów i wywiadów grupowych. Przeprowadzone badania mają charakter interwencyjny, materiał empiryczny został zebrany zarówno przed, jak i po zastosowaniu testowanej metody. Analizę materiału przeprowadzono zarówno przy pomocy metod ilościowych, jak i jakościowych. Wyniki analizy ilościowej wskazują, że metoda zastosowana w badaniach może rozwijać umiejętności konstruktywnego, opartego na współpracy rozwiązywania konfliktów. Analiza jakościowa dotycząca postrzegania metody przez uczestników badań wskazuje, że testowana metoda jest głównie postrzegana jako skuteczna, ale może również w niektórych kontekstach być postrzegana jako trudna do zastosowania.

Słowa kluczowe: rozwiązywanie konfliktów, teoria gier, młodzież, badania interwencyjne

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