



Leading by Learning

# **Suggestopedic Instruction**

## **An Empirical Study of its Cognitive, Motivational, Emotional and Social Implications**

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## Abstract

The normal path further education takes has deficits in respect to the applicability of the acquired knowledge, in regard to motivating students for further learning and in skills for social mediated learning. It is analyzed to what extent suggestopedic instruction avoids the deficits mentioned above and has positive cognitive, motivational, emotional, and social effects. This research question is investigated by an intensive study comprising 14 German participants of an English course for beginners. The results showed that, with regard to cognitive effects, the capabilities for communication in situationally defined contexts and listening comprehension were especially fostered. In addition, the motivational variables "intrinsic motivation", "perceived competence", and, to some extent, the "sense of control", which had already had very positive scores in the beginning, increased throughout the course. Furthermore, a learning climate was established that was free from anxiety and cooperation within the group was perceived as supportive. Thus, suggestopedic instruction is a promising approach that can supplement common forms of further education.

## Current Problems in Further Education

Because of increasing changes in society, technology and culture, the need for further education is also changing and growing. Especially adults are faced with the task of lifelong learning and of learning on their own today. On the one hand, they have to acquire additional professional skills in the workplace. On the other hand, in order to cope with those demands, they have to develop additional reflective and interpretive skills in the private area as well. This creates a quest for new forms of

learning that are able to meet the needs of adult learners and the demands of professional life in various ways (Weiss, 1990).

The knowledge acquired has to be applicable and adapted to the complexity of real life situations. It isn't sufficient to transmit so called "book knowledge", which is testable and well adapted to school purposes but can't be used in real-life situations - as it was frequently the case in traditional school-oriented settings (Baldwin & Ford, 1988; Bundesminister für Bildung und Wissenschaft - Federal German Secretary of Education and Science, 1990; von Papstein & Frese, 1988; Resnick, 1987).

It is no longer possible to teach all relevant knowledge in a traditional course system. Thus there is a growing need to support self regulated learning and the motivation to independently develop the knowledge acquired further. In this context, forms of instruction are needed which help adults to compensate their frequent lack of self-confidence in the field of learning (Baltes, 1990; Baltes & Smith, 1990), to create positive learning experiences and reinforce the desire for further learning.

Furthermore, it is important to ensure that new forms of continuing education offer sufficient opportunity for developing social learning competence, especially since most everyday learning takes place through social exchange (Jordan, in print; Lave, 1991; Lave & Wenger, 1991; Schegloff, 1991).

In summary, one could say that instruction must no longer limit itself to simply imparting knowledge, especially if it is to be effective on a longterm basis. There is a need for new forms of learning that create applicable knowledge and that support the

learning process of adult learners in social, motivational and emotional respects.

To cope with the need mentioned above, many different forms of learning have been developed and tried out in practice, some of which are quite promising such as training on-the-job ("*coaching*"), quality circles ("*Qualitätszirkel*", Bungard, 1990), or the "*Lernstatt*" principle (BMW, 1990). As a supplement to traditional school-oriented instruction, suggestopedic forms of teaching and learning have also received a lot of attention. Evidence from the classroom as well as initial theoretical studies point to positive results in the motivational and emotional area and partially in regard to learning results as well (Dieterich, 1991; Edelmann, 1988, 1991; Felix, 1991; Holtwisch, 1990, 1991; Schiffler, 1991). Some reports even suggest that knowledge thus acquired can more easily be applied and that the social competence of learners is increased (Dhority, 1989; Felix, 1988, 1989).

In the following text, a study will be presented which tests the assumption that suggestopedic learning environments of the kind examined here have positive cognitive, motivational, emotional and social effects.

## **Suggestopedic Forms of Learning and Instruction**

### ***Characterization***

In practice the term "suggestopedy" stands for a heterogeneous collection of different forms of instruction. The term "suggestopedy" was originally coined by the Bulgarian physician and psychotherapist Georgi Lozanov (Lozanov, 1978). His approach aimed at reducing learning impairment ("learning blocks") or inhibitions in

working adults. This reduction was to be achieved through the careful design of the classroom, the instructional material as well as the instructor's presentation. Here the attempt was made to avoid all reminders of traditional school instruction since prior negative learning experiences, especially in school, were held responsible for the learning impairment of adults. This instruction focused on fostering the participants' ability to memorize using learning techniques which were partly inspired by Eastern tradition. In addition, it was equally important to improve the participants' emotional state and their motivation for learning.

In reference to Lozanov's suggestopedy, various forms of instruction and learning have developed, everything from 'Superlearning' (Ostrander, Ostrander & Schroeder, 1979) which is somewhat parapsychologically inspired to SALT (Schuster & Gritton, 1976), suggestopedy (Philipov, 1981), Psychopedy (Baur, 19984, 1990) and Dhority's (1986) "Aquisition through Creative Teaching" as well as to adaptations to the school system, such as those developed by Wagner (1986) and Wittich-Harz (1988). Lozanov's original approach was also modified by alternative methodological approaches such as Total Physical Response (TRP), Neuro-linguistic Programing (NLP; Dhority, 1989) or the element of rhythmic breathing during information intake (Ostrander, Ostrander & Schroeder, 1979). On the surface, these various versions of suggestopedy could be seen as connected to one another by the formal principle of the "suggestopedic cycle". This cycle consists of a "active" and "passive" i.e. receptive elements. In general less time is allocated to the more passive elements of instruction than to the active ones (Lozanov 1978).

Exercises which have a more receptive character are mostly used to reinforce

knowledge as well as to create a relaxed learning atmosphere. An example for such forms of learning is the "session" where participants relax and listen to classical music which underscores the lecture of the instructor.

Exercises which have a more activating character often create a situative basis to foster the applicability of the acquired and practised knowledge. Examples of these elements of suggestopedic instruction are the "pre-session" and "post-session". In the "pre-session" learners first familiarize themselves with the material which is presented immediately following during the session. A positive attitude towards the subject matter, motivation to learn and curiosity for additional information are focussed upon in this phase of instruction. The "post-session" comprises various activating and playful practice periods during which the information presented is elaborated and creatively processed. During this phase, the emphasis is on the individual mastering of the material presented and on creating possibilities for the application of the material to the lives of the learners.

Independent of the amount of time allocated, according to Lozanov, the session is to be seen as the central element of suggestopedic instruction: "(... ) the other stages are more or less subordinate to this focus" (Lozanov, 1978, p 286). While some of the suggestopedic forms stress the importance of a solemnly devout attitude on the part of learners as well as the authoritarian "instructor's appearance" (Lozanov & Gateva 1988, 1987/1989), the practiceoriented discussion among the DGSL (Deutsche Gesellschaft für suggestopädagogisches Lernen und Lehren gem. e. V., German Society for suggestopedic Learning and Instruction) has created new suggestopedic forms of in-

struction which in many ways have surpassed Lozanov's original concept. This form of suggestopedic instruction has so far been developed and spread primarily by the workshops of the DGSL (1991).

It offers a practice-oriented framework for the concrete design of suggestopedic instruction by the individual instructors and learners but has not been made explicit or analyzed theoretically.

It is precisely these new forms of suggestopedic instruction which appear to be particularly interesting against the background of the initially mentioned dearth of learning designs which meet the needs of adult learners not only in a cognitive, but also in a social, motivational, and emotional respect. These particular forms will correspondingly be the subject of the study at hand.

### ***New forms of suggestopedic instruction***

The above mentioned new forms of suggestopedic instruction are putting more stress on the activity and responsibility of learners while focusing on their social cohesion. The instructor is less concerned with being the center of attention than with shaping the learning environment as well as the pronouncedly communication-oriented instructional processes. According to the training manuals of the DGSL (Delphin, no date), the consciously designed learning environment, consisting, for example, of a bright, cheerfully decorated room, flowers, and a seating order which allows eye-contact among learners as well as maximum freedom of mobility is designed to increase the joy of learning and to create a positive learning environment. Another central feature of this approach is its emphasis on the qualitative aspect of the applicability of the acquired knowledge

(Dhority, 1979) rather than the quantitative aspect of teaching a large amount of rote knowledge (Ostrander, Ostrander & Schroeder, 1979). The above mentioned forms of suggestopedy require that knowledge be offered in a "learner-centered" way, i.e. its content as well as structure are to be presented in many different ways and designed to meet learner's needs (Heidenhain, in press).

Thus for example, in suggestopedic language courses, linguistic means are used authentically i.e. corresponding to the respective communicative situations. "*Situations which are natural and able to hold learners' attention and at the same time contain all speech acts that might occur in these situations are more important than an artificial progression of the vocabulary and grammar of a language*" (Delphin, no year, 5.3.2; author's italics).

By means of various exercises, individual learners are also continually encouraged and instructed to choose and focus on those linguistic means out of a multitude of choices that relate to their *fields of interest and intended applications*. Frequently, the design of exercises already creates interest in specific linguistic phenomena which are consequently explained or offered by the instructor upon participants' request.

Another typical feature is the *diversity of exercises of the "postsession"*, during which the learner "is able to practice the material in a playful manner in order to be able to apply it freely and creatively in new contexts" (Delphin, no date, 4.6.1). These exercises are designed to promote learning "with all the senses" (Heidenhain, in press, p 3) and through the application of the learning in life-like contexts. Thus, the room may be decorated to resemble a market

place. Students, working in competing groups, will then try to achieve as many points as possible through skillful buying and selling. Besides these situational role-playing exercises, other exercises are offered which resemble board or even party games. An example is a kind of memory game consisting of matching question and answer cards. First, students have to find out which question matches which answer, then they must try to win as many question and answer cards as possible.

Instructors choose exercises not only for their content but also according to the needs of students for *stimulation or relaxation*. Corresponding to their degree of tiredness or nervous tension (Heidenhain, in press) students are either encouraged to perform a more activating, movement-oriented learning activity, such as a dance or a paper-chase, or an exercise which will relax and calm them down, such as the "session" or a "guided visualization".

Other exercises are chosen in order to promote the *social cohesion* of a group of students (Heidenhain, in press). An example of these is the following game of association: each participant chooses one favorite card out of a set of picture cards. He or she then tells the other students, if possible in the target language, what this chosen symbol means to him or her personally.

According to a central principle of suggestopedic instruction, exercises are supposed to fulfil as many functions as possible (Heidenhain, in press). They are to be designed and used not only to achieve development of knowledge but also for example to reduce learning inhibitions, to motivate for learning activities or respectively to promote social cohesion.

## Effects of Suggestopedic Instruction

The design of suggestopedic instruction, outlined above, leads to the assumption that this kind of learning environment has positive cognitive, motivational, emotional, and social effects. Individual differences between learners are taken into consideration as well, since it is the declared goal of suggestopedy to give special help to those learners with a somewhat more negative approach to learning, such as, for example, a high degree of dispositional anxiety.

**Cognitive effects: development of knowledge.** Recent theories of situational learning (Bransford, Franks, Vye & Sherwood, 1989; Brown, Collins & Duguid, 1989; Cognition and Technology Group at Vanderbilt, 1990, 1991; Collins 1990; Collins, Brown & Newman, 1989) require as a condition for the acquisition of applicable knowledge learning environments which provide learners with authentic, complex situations. The situational design of suggestopedic exercises as well as extensive exposure to the complex, authentic system of the target language in suggestopedic language instruction should lead to knowledge which can be easily activated in relevant situations. It can be expected that this exposure to complex, authentic language has an especially positive effect on the development of listening comprehension and the ability to communicate in a foreign language in everyday situations.

**Motivational effects.** According to the motivational approach of Deci and Ryan (Deci & Ryan, 1987; Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan, Connel, & Deci, 1985), the experience of enjoyment (intrinsic motivation) autonomy and competence in learning is the decisive factor in the development of *long-term* learning motivation.

The playful design of many exercises in

suggestopedic instruction is likely to produce a kind of flow-experience (Csikszentmihalyi, 1985), a joy of learning and curiosity. Therefore, we might expect an increase of intrinsic motivation during the course of suggestopedic instruction. As suggestopedic instruction offers frequent opportunities to select the acquired knowledge according to personal interests or intent to apply the learning, learners should quite often experience the feeling of autonomy and self-determination.

The manner in which different forms of practice are embedded in rich situational contexts helps the learner understand rather complex remarks even with a limited vocabulary. Experiences of success such as those are likely to frequently let learners experience a feeling of competence.

Thus, overall, suggestopedic instruction can be expected to have positive motivational effects.

**Emotional effects: Anxiety.** In regard to emotional effects, one important way to facilitate the learning process of adult learners is to reduce their nervousness and anxious tension (Baltes, 1990; Baltes & Smith, 1990). Suggestopedic instruction responds to this emotional need through the frequent use of relaxation exercises as well as through reducing nervousness in movement-oriented exercises. We can therefore assume that suggestopedic instruction has a positive effect on the emotional dimension of the learning process. It is the learner with a relatively high level of learning and achievement anxiety who stands to profit the most from this kind of instruction.

**Social effects.** By motivating independent groups of learners to work on a certain subject matter even after a corresponding course has ended ("groups of practice"), self regulated and autonomous development of knowledge, especially on a long

term basis, is promoted. A positive view of the shared process of learning is vital for the formation of such groups. Suggestopedic instruction frequently uses exercises which provide a high degree of social interaction and authentic communication. It is seen as very important that learners become acquainted with each other. Therefore we can expect that students in a suggestopedic course will experience cooperation with other students as well as with the instructor in a positive way.

In the study at hand we will examine the above mentioned effects of suggestopedic instruction (DGSL) by examining a suggestopedic language-course (English for beginners).

## Method

### **The Course**

The study at hand deals with a suggestopedic English course for beginners which was held as part of the continuing education program of Siemens Inc. This course was conducted by Gail Heidenhain, an expert of the DGSL (German Association for suggestopedic Learning and Teaching). The course was held for four hours a day (from 4 to 8 p.m.) on 13 weekdays after working hours in a video viewing room at the University of Munich. It consisted of a total of 52 hours of instruction.

### **Sample**

The sample consisted of 7 female and 7 male participants all of whom were employees of Siemens AG. They had originally signed up for a traditional course in basic English as part of the in-house program of continuing education at Siemens AG but had later agreed to participate in a suggestopedic instruction course instead. Two of the participants had some previous knowledge of the English language while the rest were beginners. As far as educa-

tion and age were concerned, the group was a rather heterogeneous one. The youngest participant was 21 years of age, the oldest 44. Four of the participants were from the former Communist part of Germany, two were from former Eastern Block countries; many of the participants were university graduates (5 subjects out of 14) and had knowledge of other foreign languages (6 subjects out of 14). All of the participants had learned a profession and had changed careers before.

### **Instruments**

#### ***Examination of knowledge development.***

English language knowledge was tested by administering a communicative and application-oriented test (Prüfungszentrale des Deutschen Volkshochschulverbandes 1987a, 1987b, 1992) which was created by the International Certificate Conference and is used by the various branches of the Adult Education Association. The test consists of five sub-tests which evaluate the ability to master communicative tasks (test 1: *Communicative Tasks*) as well as listening comprehension (test 2: *Listening Comprehension*). Further sub-tests examine reading comprehension (test 3: *Reading Comprehension*), communicative performance in everyday situations (test 4: *Questions on Everyday Situations*), as well as the ability to converse in that foreign language (test 5: *Guided Conversation*). In order to pass the test on the level Basic English, a student has to achieve a minimum of 45 points for the written sub-tests (tests 1 to 3) and a minimum of 18 points for the oral tests (tests 4 and 5). This represents the equivalent of at least 60% of the maximum number of points. In this evaluation, the amount of grammatical knowledge is less important than the ability to understand and make oneself understood, i.e. communicative success in the foreign language.

#### ***Questionnaire on motivation for***

***learning.*** The instrument used to investigate changes in motivation was a question-

naire which tests motivational processes that occur during learning (see Prenzel, Eitel, Holzbalch, Schoenheinz, & Schweiberer, in press). This questionnaire contains not only indicators of intrinsic motivation but also two more dimensions of Deci and Ryan's theory (Deci & Ryan, 1987), namely the experience of autonomy and competence.

**Anxiety Questionnaires.** Dispositional anxiety was tested through a questionnaire dealing with elicitation factors of test anxiety (Rost & Scherrner, 1991). Here knowledge-oriented and social situations are taken into consideration as elicitation factors. The immediate level of anxious tension is tested by means of the STAI (Laux, Glanzmann, Schaffner, & Spielberger, 1981).

**Ratings for social interaction.** To evaluate the social interaction, two ratings were used, through which the quality of cooperation among the students as well as between students and instructor was estimated.

**Design and execution.** In order to examine suggestopedic instruction (DGSL) an intensive study regarding the course of learning processes was conducted. Prior to the beginning of the instruction, the above-mentioned test for Basic English as well as the questionnaire concerning dispositional anxiety were administered. After each session we administered the motivational questionnaires (dimensions: intrinsic motivation, feeling of autonomy, feeling of competence) as well as the questionnaire of state anxiety and the ratings concerning social interaction. To evaluate the degree of achieved learning, the above-mentioned English test was administered once more at the end of the course.

In addition to this, the entire course was video-taped. Half-standardized interviews were conducted which allow detailed analy-

sis of the instructional processes involved. These analyses are being conducted at the moment and will be presented in the future (Beitinger, in preparation). The present study is solely a first step in the evaluation of data from quantitative instruments for the evaluation of the cognitive, motivational, emotional, and social effects of suggestopedic instruction.

### **Statistical Analysis**

Besides standard statistical procedures, the Hierarchical Linear Model (HLM) of Bryk and Raudenbush (1987) was used to model changes during the course of instruction. This avoids the well known problems of traditional methods of measuring change (e.g., simple difference scores, residual growth scores), such as doubtful reliability. This statistical procedure allows for following analyses: (1) modeling of the average growth-curve (e.g., the increase of the group average of intrinsic motivation); (2) the significance and reliability of interindividual differences in the base level (e.g., initial differences of intrinsic motivation); (3) the significance and reliability of interindividual differences in the growth curve (e.g., differences between subjects in an increase of intrinsic motivation); (4) estimation of the *true* correlation between starting level and increase (e.g., between the starting level and an increase in intrinsic motivation); (5) correlation between personal characteristics and interindividual differences in the starting level respective to the growth (e.g., the correlation between the level of dispositional anxiety and an increase in intrinsic motivation) (for a more detailed discussion of the modeling of changes by means of HLM see Bryk & Raudenbush, 1987; Renkl, in press).

### **Results**

Due to time restrictions the results of the statistical analysis can't be presented in detail and are just summarized here.

**Development of Knowledge in English (Target Language).** The results of a pre-test showed that the initial level of knowledge in the target language differed widely among participants. While 12 subjects were beginners, 2 participants were able to meet the requirements of the Basic English Test even prior to the start of the course. All participants, however, showed noticeable improvement in the posttest: In the written tests the results ranged between 29% to 76% of the maximum number of points possible (75), in the oral tests from 20% to 68% of the maximum number of points (30).

Comparable data from a rather traditionally oriented kind of instruction was made available to us by the central testing department of the Deutscher Volkshochschulverband (German Adult Education Association) as well as by a private institution. The control group consisted of 98 individuals from the former GDR, all of whom were university graduates. Both groups were roughly comparable as far as age distribution was concerned. The control group had completed the Basic English Test in 1993, after receiving 18 months of traditional English instruction consisting of 8 weekly lessons of 45 minutes each (which amounted to a total of 256 lessons of 45 min.) which had been part of an all-day vocational rehabilitation training in business administration. The suggestopedic training, on the other hand, consisted only of 52 hours (corresponding to 69 lessons of 45 mins. each). In comparing the test results, which did not include those of the two *false beginners* of the suggestopedic group, for communicative performance in everyday situations (test 4) there was a trend for the 'suggestopedic group' to show superior performance. In the subtest for mastering communicative tasks (tests 1) the 'suggestopedic group' was significantly better. The test for listening comprehension (test 2) also indicated a slight advantage for the 'suggestopedic group'. For conversation skills (test 5) and reading comprehension (test 3), the control

group gave a significantly superior performance. Overall, the suggestopedic group was found to be particularly successful in auditive and verbal subtasks, which were situationally embedded. Their slightly inferior results in understanding written material may have been caused by the brief duration of the instruction which focused on written language skills only during the latter part of the course.

In summary, the results of the communication oriented test show that, compared with more traditional instruction, suggestopedic instruction enables students to acquire applicable knowledge in a very short period of time.

**Motivational Changes.** Individual values for the various scales of learning motivation can theoretically vary from '1' to '4', with high numbers indicating a favorable direction of the motivational variable. Changes in the individual motivational and emotional variables over the period of the 13 lessons were modeled by the Hierarchical Linear Model of Bryk and Raudenbush (1987).

From the beginning, the variable *intrinsic motivation* showed a relatively high mean value (3.00) on the corresponding scale. This means that items such as "I really enjoyed learning during the course" received largely positive responses. In spite of this, the group average for intrinsic motivation rose considerably during the duration of the course. There were, however, significant and reliable (reliability estimate 0.73) individual differences as far as this growth was concerned. Thus, learners whose intrinsic motivation was rather low in the beginning displayed an above average increase. What increased most was intrinsic motivation in students with a strong tendency towards knowledge-related anxiety.

Feeling of competence was another variable which showed a high mean at the outset. Nevertheless, its group average, too,

showed a significant increase across all of the 13 lessons. The increase indicated meaningful and reliable (reliability estimate 0.73) individual differences. The feeling of competence increased especially in those who initially showed low 'objective' (pretest) and subjective competence.

The initial measurement of the experience of autonomy' showed a starting mean of 3.27. There was only a slight trend for the average of the experience of autonomy to increase. Here, too, were significant and reliable (reliability estimate 0.75) interindividual differences as far as changes in experience of autonomy were concerned. It increased most in those who showed low initial competence.

***Emotional well being: Anxiety.*** The variable 'anxious tension' showed a mean of 1.55 (theoretical limits: '1' = 'low anxiety'; '4' = 'high anxiety') at the beginning of instruction, i.e. a rather low level of anxiety already at the start. In spite of this, the anxious tension experienced during the course of instruction by the group tended to decrease even further. Individual differences in decrease of anxious tension over time proved to be significant and reliable (0.65). Students with a high tendency towards social anxiety displayed relatively high anxiety at the outset of the course yet decreased their anxiety during the course of instruction at a larger than average degree.

***Ratings for Social Interaction.*** Cooperation between participants as well as between participants and instructor showed positive evaluations on a four point scale (from '1' = 'very good' to '4' = 'unsatisfactory') during the whole duration of instruction, i.e. the question "How did you like cooperation and interaction with other participants today?" was largely answered by comments like 'very well' or 'well' (mean value for all days 1.31). Equally, cooperation with the instructor was rated as very good (mean for all days 1.21).

## Discussion

The results of this study correspond largely to the requirements set up by the DGSL itself for its form of instruction as well as to our own expectations. From a cognitive point of view, it became evident that there was a particular improvement in the ability to function in situational communication (such as communicative tasks and questions on everyday situations) as well as in listening comprehension. In a relatively short time, participants achieved excellent results in a test which - due to its communicative orientation - was a good indicator of the applicability of foreign language knowledge in everyday situations. Suggestopedic instruction is therefore able to transmit knowledge that can be readily applied.

Noteworthy was the increase in intrinsic motivation and feelings of competence, but there were also trends for the experience of autonomy to increase, and anxious tension during instruction to decrease. In line with suggestopedic goals, most of the learners who improved from an motivational/emotional point of view were those who had shown less promise to be successful at the outset due to higher dispositional anxiety or less initial ability.

As for the goal of suggestopedic instruction to promote the formation of groups which are able to continue learning independently and to support each other in this task, the results of the course lead to the conclusion that favorable conditions for this have been created. The social climate within the group was perceived as positive; long-term motivation to learn was increased (increase in intrinsic motivation, feeling of competence and experience of autonomy, decrease of anxious tension). Applicable knowledge was acquired which permits positive experiences of success even outside the classroom situation. All of this provides - one might even be tempted to say,

optimal - incentives for independent follow-up study. We were also told, on an informal basis, that some former participants of this course have already organized further courses of suggestopedic instruction at their own expense besides encouraging Siemens to conduct additional suggestopedic courses.

In summary, one might say that certain suggestopedic forms of instruction are well suited to meet the initially described need for new forms of continuing instruction. They are able to transmit knowledge of great applicability, encourage the joy of self-directed learning as well as provide opportunities for social exchange during the education process.

These results concerning the effects of suggestopedic instruction correspond to those of earlier studies (such as Felix, 1988, 1989; Krumm, 1991). Most of these studies, however, can only partially be compared to this one, as many studies focused more on the 'passive' aspects of suggestopedic instruction, regarding individual components such as learning with relaxation (Dietrich, 1987), or with music (Schiffler, 1989). Even the results of a series of studies by Felix which looked at suggestopedy as a comprehensive concept can only partially be compared to our results, since in this case suggestopedy was adapted to the school system, and the impact of this kind of instruction on children was examined (Felix, 1988, 1989, 1991).

### **Concluding Remarks**

This report primarily stresses cognitive, motivational, emotional, and social effects, with less emphasis on the teaching-learning processes which occur. Detailed process analyses which are able to explain in more detail how these effects occur are being conducted at present (Beitinger, in preparation). Through the analysis of videotaping,

data will be gained on the social interaction and the specific design of exercises. Further information on the quality of knowledge thus acquired will be gained through the evaluation of a 'situational test' which was conducted after the course had been completed. For this, *native speakers* were invited; the classroom was turned into a kind of party where everyone conversed in English. First evaluations suggested that participants were able to communicate very well, with a tendency to do even better than in the testing situation.

In this research project, which could be described here only in part, processes and effects of learning through suggestopedic instruction have been empirically tested. Furthermore, a contribution of substantial theoretical impact has been made concerning this form of learning and teaching which so far has been argued for using a rather esoterically sounding rationale. In particular, theoretical similarities to the newer models of situational learning (Brown, Collins & Duguid, 1989; Cognition and Technology Group at Vanderbilt, 1990) were addressed.

The intensive examination of learning processes and effects in an actual course of instruction is meant to provide information about the influence of specific forms of learning on processes of learning, i.e. the focus is not on the empirical proof of suggestopedic instruction as a superior to other forms. Further investigations of this topic with larger samples would be desirable in order to supplement this present study. It might further be of interest to examine whether long term effects, such as the ones we suggested, could be established.

With this study we are hoping to stimulate an inquiry into promising forms of learning and teaching such as suggestopedy within empirical educational psychological research. Further research is needed on the

type of learners and domains for which suggestopedic methods are especially promising. Our study examines language instruction for beginners, a domain which is a typical field of application in suggestopedic instruction. The complex nature as well as the frequent opportunities for individual selection of the acquired knowledge suggest that suggestopedic instruction would be useful for more advanced learners as well. Other areas where suggestopedic instruction have been applied are of a more practical nature, such as computer courses (Rittich, 1991), the training of apprentices at Audi (Audi, 1991; Philippov, 1989), and personal development training (DGSL, 1991: Delphin, no date). The mostly positive feedback as well as the results of our study suggest that the special strength of suggestopedic methods lies in domains where the motivation of learners needs to be reinforced, and interest in topics which surpass the course itself needs to be enhanced.

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