Situated Health Promotion: Reflections on Implementing Situated Learning Approaches in Health Promotion

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Introduction

While prevention is aimed, for example, at reducing or even entirely avoiding defined health risks, or at counteracting disease developments, health promotion is primarily understood as a broader principle of action that can certainly also incorporate preventive measures and that aims at a process of allowing all people a greater degree of self-determination with regard to their health, and thus, at enabling them to improve their health. From this perspective, the foremost goal of health promotion, and thus of interventions, is to promote health-related knowledge and action, to enable people to make a self-determined decision for or against health-promoting behavior, and to transform the acquired knowledge into self-determined action. The aim of such health promotion interventions is to promote the use of behaviors that enable a person to effectively manage concrete situations and settings that are relevant for that individual, in the sense of positive selection of the behavior. With this in mind, it is posited that interventions should focus on establishing, maintaining, or restoring individual health promotion skills.

The change toward health-promoting behavior is the subject of many scientific papers, some of which are of a theoretical nature and others of an empirical nature. Some relevant topics include health psychology theories, various behavior therapy approaches, and action theories. Nevertheless, there remains here an enormous gap between the knowledge acquired through health promotion measures and the health-promoting action displayed by the participating individuals, from a pedagogical perspective, it is crucial that current didactic-methodological principles be taken into account. This, too, should be taken into account in connection with an empirical analysis of the reflections in this article. In the following paper, various suggestions for implementation are explained and discussed.

Keywords
health promotion, behavior patterns, situated learning

Abstract

Handing down health knowledge and behavior patterns is a main objective of health promotion. Often, interventions do not bring about the intended change of behavior. This could be due, among other things, to the fact that the majority of intervention programs are not based on principles of instructional design to bridge the gap between knowledge and action. A situated design of health promotion measures is to be considered particularly suitable. That accounts for the fact that the acquisition and application of knowledge is an active construction process on the part of the individuals involved, and one that includes the possibility to improve the quality of learning processes in the area of health promotion, and thus increases the probability that acquired knowledge can be applied in real situations. In the context of the problem that most health promotion interventions frequently do not show the desired permanent behavioral changes of the participating individuals, from a pedagogical perspective, it is crucial that current didactic-methodological principles be taken into account. This, too, should be taken into account in connection with an empirical analysis of the reflections in this article. In the following paper, various suggestions for implementation are explained and discussed.
might, from an educational psychology perspective, shed light on this gap between knowledge and action are almost entirely lacking to date, and it can be stated that the established health behavior models do not take aspects of either developmental psychology or educational psychology into account.7

Health intervention programs are based primarily on 3 fundamental elements: transferring knowledge, influencing attitudes, and practicing behaviors. These measures are aimed at the following8:

- transferring knowledge relating to disease, treatment, and so on;
- imparting skills relating to individual illness or health management;
- using practical exercises to transfer behavioral changes to everyday life;
- improving individual attitudes to illness and health behavior; and
- increasing participants’ compliance (in the sense of willingness to cooperate).

To do this, most programs rely on psychoeducational-type training.9 The strategies according to Somaini,10 which are commonly used in the context of health promotion interventions, are summarized in Table 1. The repertoire of didactic-methodological approaches used in this context ranges from classroom-style instruction and group work to discussions and homework assignments. In this way, it is hoped that the participants will examine a wide array of materials. The majority of interventions are typically not based on didactic-methodological concepts or models. In addition to pure knowledge transfer, it is, implicitly and explicitly, also about learning and training practical skills.11 This approach is based on the idea that the behavior can be changed through knowledge transfer, changes in attitude, and finally, training new behaviors.8,12 However, knowledge and beliefs are normally not sufficient to permanently replace unfavorable behaviors with appropriate behaviors. These are often automatisms, in the sense of habitual practices that, initially, can be modified through deliberate effort. This corrective behavior is usually of a short-term nature. Moreover, false conclusions are often drawn here with respect to the transferability and practicability of interventions in everyday situations.13 Whether the knowledge transfer in the context of health promotion interventions was successful can be recognized, from the educational psychology perspective, by, among other things, the learning outcome that resulted from the intervention, for example, in the sense of the health behavior the participant displays. In this regard, however, the summary must state, unfortunately, that a number of prevention and health promotion interventions continue to not achieve the desired success. This situation will be examined in greater detail in the next section.

### Inadequate Intervention Impact Through Transfer of Inert Knowledge

Analyzing the efficiency and effectiveness of health promotion interventions is generally not aimed at examining the influence of the didactic-methodological or educational psychology aspects used in the measures on the transfer in everyday situations. In the majority of the analyses, the focus is exclusively on medically relevant outcome parameters. In this regard, from the perspective of research on learning and instruction, skill acquisition, changes in attitudes, prior knowledge, the impact of surrounding conditions, the learning outcome, and the actions of the participants would also be particularly relevant.

To what extent the analysis of the above-mentioned effects is consciously excluded, and to what extent short-, medium-, and long-term effects can reverse, usually remain unanswered. In the majority of cases, particularly, the long-term impact of health promotion interventions is estimated to still be very slight.14,15

With regard to the often-lacking permanent impact of health promotion measures, from the pedagogical perspective, it stands to reason that, among other things, the concept of knowledge used in the context of such interventions considers knowledge to be a collection of facts (declarative knowledge) and rules (procedural knowledge) that exist

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**Table 1. Strategies for Behavioral Change in Context of Interventions**

<table>
<thead>
<tr>
<th>Risk Behavior</th>
<th>Aim of Intervention</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Easy to change”</td>
<td>Awareness of problem</td>
<td>Information, education</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td>Information, education</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td>Persuasive communication, consultation, group discussion</td>
</tr>
<tr>
<td>Abilities/skills</td>
<td></td>
<td>Social empowerment, self-empowerment, behavioral contract, self-observation and self-monitoring</td>
</tr>
<tr>
<td>Execution</td>
<td>Maintenance</td>
<td>Self-management, environmental change</td>
</tr>
<tr>
<td>“Difficult to change”</td>
<td>Maintenance</td>
<td>Self-management, environmental change</td>
</tr>
</tbody>
</table>
objectively. This would mean that, upon completion of the knowledge transfer, the learner would possess exactly the same segment of knowledge as the instructor. However, the fact that knowledge acquisition is a constructive and self-controlled process is neglected, that is, the fact that knowledge is not simply transported but rather actively constructed by the learner, making “teaching to practice” possible in the first place (on the authority of instructors and advisors, see Schelsky). 

Modern life skills programs are the closest counterpart to the didactic-methodological reflections on which this paper focuses. But here, too, the acquired knowledge often appears to be “inert knowledge.” Inert knowledge denotes the phenomenon that learned knowledge cannot be used in different situations and settings or for other problems.

Knowledge that was acquired in vitro can be applied in this rather artificial context, but in complex, mostly routine problem situations (in situ), application of this knowledge is unsuccessful or insufficient. Translated to the absence of health action, this means that the individuals do, indeed, possess the health promotion knowledge but that the action displayed diverges from this knowledge. This assumption is supported by a glance at the results of research into nutrition knowledge among overweight and normal-weight children. Here, it can be stated that overweight children do not, as one might assume, have any knowledge deficits in this regard. Among adults, too, comparable studies confirm that no correlation can be established between nutrition knowledge and nutrition behavior.

Situated Learning Environments as an Opportunity to Promote Skills

One suitable possibility for counteracting inert knowledge can be found in situated learning approaches, which are widely discussed in research into learning and instruction and which have already proven themselves in the context of numerous empirical studies in various knowledge domains as suitable approaches to preventing the emergence of inert knowledge. These approaches focus on the learning context or on the activity and interaction of the learners and do not primarily target the systematic promotion of individual knowledge acquisition. In newer situated approaches (e.g., anchored instruction approach or cognitive apprenticeship model), the conditions of traditional instruction are blamed for problems involving knowledge application and transfer as well as problems of inert knowledge and the lack of skill development. In this context, the primary criticism relates to the passivity of the learners that is widely prevalent in traditional instruction as well as the lack of attention to the process-based nature and the interactivity of knowledge. In situated approaches, in contrast, knowledge is not considered to be something that can be transferred from an external source into individuals’ heads, but rather, it is assumed that knowledge is constructed in situ as a relationship between person and situation. Based on these assumptions, it can be posited that knowledge is not present in the form of stored, abstract, and decontextualized representations that can be acquired in a certain context and applied in other contexts. The predominantly used design principles of situated learning environments are shown in Figure 1.

In the following sections, building on the above explanations, 2 approaches to situated skills promotion that appear suitable for implementation in health promotion (perhaps in school) will be presented, and thereafter, a possibility for implementation in the context of health promotion will be developed.

Cognitive Apprenticeship Model

Collins, Brown, and Newman base their model on the traditional apprenticeship and assume that, after strong initial support from a teacher or tutor, learners should be guided step by step to independence. In an apprenticeship environment, manual skills, knowledge, or even domain-specific thinking patterns are acquired under the guidance of an expert. This is intended to ensure that the new knowledge or the new behavior is acquired appropriately right from the start and can then also be used or executed in a self-directed manner. Furthermore, the predominant principles of situated approaches listed in Figure 1 are systematically implemented in learning steps:

**Modeling:** An expert demonstrates the solution. The learners observe the problem-solving process and
construct their own conceptual model of the necessary problem-solving steps.

Coaching: An expert observes the learners at work on a problem-solving task and gives them tips, assistance, and feedback; if appropriate, the expert again demonstrates individual problem-solving steps by way of example.

Scaffolding: This refers to cooperative problem-solving attempts by experts and learners, where the learners are supposed to gradually take on more responsibility.

Fading: The expert gradually withdraws his support in the problem-solving process. In terms of the above-mentioned health action process approach, this and the previous level can make a significant contribution to raising learners’ self-efficacy expectations.

Articulation: The learners are instructed to articulate everything they need in order to be able to state their own knowledge, thoughts, and approach to solving the problem. Targeted questions may help with this, as well as prompts, for example, to redefine things.

Reflection: The learners are supposed to be enabled to assess their own knowledge and their problem-solving strategy compared with the expert or the other learners.

Exploration: The learners solve problems independently after the expert has faded (withdrawn) completely; that is, the health-promotion behavior is displayed. The decisive technique of this model consists in the fact that, by participating in authentic actions and social interactions, learners are admitted into the culture of experts.

Anchored Instruction Approach

In the context of this approach, the overriding principles cited in Figure 1 are implemented primarily through anchors (in the sense of authentic problem situations) that arouse interest and that are intended to direct the attention of the learners to the perception and comprehension of the problems that have been presented. This, too, would be a suitable starting point for training the learners’ risk perception. The given problem situations should be characterized in that they are complex but authentic and relevant contexts in narrative form that touch on a variety of topics and offer varied perspectives. The approach is essentially based on 7 design principles (cf Table 2).

The use of video films has proven useful in this approach. However, in the instruction context, video films are not merely a means to present authentic situations and to promote multidimensionality and plurality but are considered to have an independent function in the learning process. The conceptual considerations include the motivational effect of new media. In the context of this model, for instance, it was shown that purely explorative learning is less effective and that the learning process should be expanded to include phases of direct instruction by the instructor.

However, it should be noted that these results were found in the context of individual learning environments and not in the context of learning in groups, as is common in health promotion measures. To account for this fact, learning is regarded in various situated approaches as a gradual growing into a community (eg, into a community of practice) from which not only cognitive aspects such as problem-solving strategies, but also motivational orientations, as well as norms and values, are assumed. As a result, the difference between knowledge and learning becomes marginal and, strictly speaking, so does the difference between learning and socialization. Furthermore, in contrast to the need posited by Kirschner and colleagues, particularly for the field of medicine, for intense instruction of the learners, the group working with Stark was able to show that situated skill promotion can also be successful in the medical context.

Implementation Opportunity in Health Promotion

The implementation of a didactic-methodological health promotion intervention concept in school based on situated approaches could mean, for example, that various relevant
problem areas are specified and the participants in a health promotion intervention form various communities of practice according to the problem situations with which they must cope. So, for instance, a health promotion intervention relating to smoking among children and youth that is aimed at learners might specify, as relevant problem areas, an individual perspective (health and social consequences of smoking for the individual learner) or the perspective of passive smoking (health and social consequences of smoking for the social environment). In choosing the perspectives, it should be ensured that they address the dominating circumstances and general conditions currently prevailing in the lives and environment of the children and youth. This promotes identification with the problem and enhances the learner’s sense of participating in a self-determined learning process. This could give rise to a community that pursues the goal of coming to terms with the direct consequences of (active) or passive smoking. As the anchor, a video film could be used that paints an appealing portrait of the daily routine of a child or youth of the same age group who smokes and that focuses on the smoking behavior (situations, peer group, etc) (narrative structure). Afterwards, the children and youth should be given the opportunity to independently generate relevant problem areas, for example, independently recognizing what conditions put children and youth at particular risk of taking up smoking (parents who smoke, peers who smoke, or in the context of a dare, etc) (generative problem solving). Then, for example, the motives for taking up smoking (initial phase/experimental stage) can be presented to the children and youth by an authentic expert (nonsmoking teacher, health adviser, physician, etc) as examples, using the film or their own interventions (implementation of all relevant information). The expert can, for example, authentically present the (short-term) advantages and disadvantages of smoking (cf Table 3) or introduce coping skills for difficult situations in which people frequently reach for a cigarette and establish mechanisms for self-regulation (modeling) in order to positively reinforce the learners’ outcome-competence expectations. To permit systematic promotion, the expert must be able to assess as accurately as possible the individual children and youth in terms of the skills and abilities they already possess or have developed (scaffolding).

Thereafter, the children and youth in the learning group should come up with their own alternative behaviors for situations in which people frequently reach for a cigarette (reflection). Here, each group member takes responsibility for a certain task, but communication should follow group rules that were previously agreed on together (articulation).

The expert observes the group and may intervene to provide support but should gradually withdraw from the activity (fading). In this phase, the children and youth should independently expand their knowledge through social exchange (exploration). As soon as the entire group believes that the findings reached through their work meet all the defined requirements, each participant should, by way of example, act out, possibly in a role-play context, everyday life situations that animate people to smoke. This can raise subjective beliefs about one’s own skills and thus also the learners’ self-efficacy expectations in similar situations. Alternatively, with reference to the basic theoretical assumptions of situated learning, suitable computer simulations could also be used.

In the context of the problem that most health promotion interventions frequently do not show the desired permanent behavioral changes of the participating individuals, from a pedagogical perspective, it is crucial that current didactic-methodological principles be taken into account. In future work steps, an interdisciplinary or transdisciplinary working group (physicians, psychologists, teachers, parents, social workers, school nurses, etc) should plan in detail how a health-promotion learning environment described here will function, implement it in school, and evaluate it based on transparent quality criteria, especially with regard to long-term behavioral changes.

A situated design of health promotion measures is to be considered particularly suitable, especially one that accounts for the fact that the acquisition and application of knowledge is an active construction process on the part of the individuals involved and one that includes the possibility to improve the quality of learning processes in the area of health promotion and thus increase the probability that acquired knowledge can be applied in real situations.

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