Research Article

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The Adult Learner: Self-Determined, Self-Regulated, and Reflective

Abstract: This article refers to the increasing importance of lifelong learning due to changes in the structure of work and society. Learners, teachers and companies need to understand how successful adult learning can look like, which factors of influence exist, and which models are to be applied. As the current academic discussion shows, the area of self-determined and self-regulated learning is becoming increasingly important. Another relevant success factor in this context is the competency to reflect. This article deals with the question of how the three recognized success factors can be linked with each other and brought into line with adult learning.

Based on literature review and the author's experience as an adult educator, this article discusses the importance of self-determination, self-regulation and reflection for the successful learning of adults, and highlights the connections between these three influencing factors. The discussion begins with the elaboration of the peculiarities of adult learning in the context of lifelong learning. The three identified influencing factors – self-determination, self-regulation and reflection – are then examined in more detail. These three factors and their influence on adult learning are presented and explained in a basic model. The associated implications for the application in teaching-learning process provide indications for the successful design of learning processes as well as an outlook for future research questions.

Keywords: adult learning, lifelong learning, reflection, self-determination, self-regulation

Introduction

In a constantly changing and complex world, individual lifelong learning is becoming increasingly important in private and professional fields. As old structures dissolve, the individual is becoming more and more responsible, especially in professional fields regarding personal and educational factors, influencing "employability". Yet, lifelong learning is important for other reasons as well. By improving the ability of people to function as members of their communities, education and training increase social cohesion, reduce crime, and improve income distribution. (The World Bank, 2003; Kuit, Fell, 2010).

Schober, Klug, Finsterwald and Spiel (2016) originally position the term "lifelong learning" in the context of social and educational discourse, which is primarily concerned with overcoming the challenges of the knowledge society. Taking their perspective, lifelong learning focusses on the continual development of individual competencies in the course of various professional, technical and social changes. From an educational psychology perspective (despite the diverse literature), lifelong learning can be understood, regardless of age and specificity, as: (1) the motivation for and the interest in education (learning motivation, intrinsic and extrinsic), and (2) the competence to apply these successfully in concrete learning situations. In this context, self-determination, self-regulated and reflective learning, all play an important role and will be introduced in the next part.

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Material and Methods

This article provides an overview of self-determination, self-regulation and reflective learning. In approaching the research, the authors sought to establish a basic understanding of the three concepts and how these can be applied within the education environments. The review incorporates discussion on the reasons for the importance to connect these three concepts as a basis for an approach to face current and future challenges of adult learners and introduces a basic model that can help adult educators to design appropriate educational programs by introducing a "reflection question tool" (Kellenberg, Schmidt and Werner, in press). The article provides a basis for further discussion and research into adult learning education practice.

Self-Determined Learning

Self-determination theory represents a general theory of motivation, applicable to many areas of life (e.g., friendship or health). Richard M. Ryan and Edward L. Deci have made the theory well-known internationally through their intensive and extensive research (Deci, Ryan, 1987, 2000; Ryan, Deci, 2000).

Self-determination theory stands in the tradition of humanistic psychology with the focus on updating tendency and self-development (Maslow, 1955; Rogers, 1963). It is a dialectical theory, which means it provides the interaction of two variables: the self is centered and interacts with its social environment. Deci and Ryan understand the meaning of "self" to be a person's "inner representation of themselves and their world" (Deci, Ryan, 2000, 248). Through the interaction between self and environment, the self is constantly evolving, forming "the basis for a coherent sense of self – a sense of wholeness, vitality, and integrity" (Ryan, Deci, 2002, 3). The "organismic tendency", the "fundamental tendency to the continuous integration of human development" (Deci, Ryan, 1993, 223), leads the self to seek challenges and tasks in order to cope with them and to reintegrate the experiences, new skills and abilities into their self. Under the metatheoretic presumptions, the concept of self can be subsumed in the sense of an internal representation of the person and the environment, as well as the tendency of the self for ongoing development. The two factors that influence this development process are motivation and social environment. In this context, fundamental psychological needs postulated by self-determination theory play a major role, which, depending on the extent of their satisfaction, influence the degree of integration. These fundamental needs include the need for autonomy, competence and social integration.

In order to understand the theoretical assumptions of self-determination theory, it is helpful to examine the framework that uses four logically coherent and closely connected partial theories, so-called "mini-theories" (Ryan, Deci, 2002):

1. The "theory of basic psychological needs" explains the context between basic psychological needs and mental health or well-being.
2. The "theory of organismic integration" focusses on the internalization process, thus the integration of values into the coherent self (intrinsic motivation becomes important).
3. The "theory of cognitive evaluation" includes phenomena related to the question of how situational factors (especially rewards) affect the intrinsic motivation.
4. The "theory of the causality orientation" describes the individual differences of persons regarding perception of autonomy support in the social environment.

Intrinsic motivation, which can be seen as a prototype of self-determination, arises in activities for which there is an inherent interest, often resulting from subjective perceptions of novelty, challenge or aesthetic value. Intrinsic motivation can be encouraged by freedom of choice, but can also be reduced by circumstances (e.g., threats, deadlines, self-observation, or observation or assessment, as well as forms of rewards or feedbacks).

This article applies the self-determination theory into the design of adult training programs with the goal for effective integration with self-regulation and reflective learning.

Self-Regulated Learning

The regulation of learning processes, which is addressed under the heading of self-regulated learning, is a further central construct in pedagogical psychology. Even if different models are available for self-regulated learning (Boekaerts, 1999; Pintrich, 2000; Schmitz, Schmidt, Landmann, Spiel, 2007), they all consider the common approaches of cognitive (prior knowledge and knowledge about learning strategies and their application), motivational (motivation regulation, self-efficacy, self-protecting, causal attributions of possible failure), affective (regulation of learning-accompanying emotions) and metacognitive (observation, reflection and possibly adaptation of the learning process) components. A learning session is conceptualized as a cycle in process model, starting with objectives and planning, moving to implementation and monitoring, and the final evaluation of the results of action. This means that self-regulated learning "is a form of learning in which the person self-determines one or more self-management measures, depending on the type of learning motivation (intrinsic or extrinsic), cognition, metacognition, volition, and behavior, and supervises the progress of the learning process itself" (Schiefele, Pekrun, 1996, 258). Therefore, learning is an independent process for each individual, especially in terms of what, when, how and where. Thus, an individual's metacognitive control of the learning process is an essential prerequisite for self-regulated learning.

There are numerous approaches and framework models of self-regulated learning. In his social-cognitive perspective, Zimmerman (1989) describes self-regulation as a triadic interaction between individuals (e.g., beliefs about their own success), environment-related (e.g., teacher's feedback) and behavioral (e.g., perseverance and commitment to work the task) components. From the perspective of information processing, according to Winne and Hadwin (1998), self-regulation occurs on the basis of four phases: task definition, goal setting, actual task performance and adaptation. In the integrative model, according to Boekaerts (1999), self-regulated learning is divided in three areas that influence each other: the regulation of the processing mode, the learning process (regulation of the learning process) and the self (regulation of the self). These foundational models are being applied to new educational contexts including online and mobile learning environments using digital technologies, as well as in different domains and cultures (Kizilcec, Pérez-Sanagustín, Maldonado, 2017; Sletten, 2017; Liu, 2017). These different models illustrate the complexity of self-regulated learning, but also indicate the importance of self-regulation for adult learning activities (cp. Kopp, 2016).

Reflective Learning

In reflective learning, reflection means much more than just thinking; it is a process that is usually initiated in problem situations and is aimed at solving the relevant problem. Reflection, therefore, represents a critical consideration of an object that involves increased consciousness. The ability to reflect is not at all trivial, as illustrated in the case of self-reflection, in which one's own person becomes the subject of critical analysis, including not only actions and personal learning competency, but also a critical consideration of thinking.

Stangl (1997) describes that reflective learning is based on problem-solving action, because the reflection cannot end in simply finding a solution approach, it must continue and engage with an implementation of the intended solution. This means a concrete new behavior must be performed and then critically evaluated. Consequently, reflective learning must be learned. Yet, this type of learning is hardly taught in traditional forms of schooling, which, given the focus on teaching and questioning content, do not encourage the implementation of this knowledge in concrete problem situations. In the case of reflective learning, the learner focuses on personal competency development; meaning that learners define individual problem by developing different approaches to a solution, which can then be applied and assessed in everyday life. These result in the gradual development of problem-solving competence, which cannot be represented and presented in theoretical knowledge alone (see ibid., 1997).

John Dewey (1997) developed an early conceptualization of reflective learning, which has encouraged the sensible handling of pupils' experiences in learning contexts within the fields of reform and traditional

pedagogy. In doing so, he attached an importance to the shared and sensitive reflection of these experiences. Donald Schön (1987) further developed the term in the context of education and training as he addressed the question of how people, who have acquired theoretical and systematic knowledge at universities, can learn and develop themselves in the partially complex and unsystematic practice environment. While it is best to learn the standardization of procedures for clearly defined practice situations, it is often necessary to analyze the underlying complexity of difficult everyday situations in order to develop adequate solutions. For these situations, an unreflected application of standardized procedures often results in low-quality solutions, whereas a reflected and differentiated analysis of the situation, taking into account all possible perspectives, has a greater prospect of adequate solutions and, thus, improved results.

The cyclic reflection model, most frequently used today in adult education, is the Kolb's four-phase model (1984), which is based on a concrete experience (phase 1) and its deepened perception and reflection, including all those involved (phase 2), a new and more differentiated understanding of the situation, but also of one's own learning needs (phase 3). Among the included perspectives are subject factors (such as mental concepts, affective factors, cultural influences, etc.). On the basis of the conclusion made by reflection, a new experience can be planned, implemented and, if necessary, reflected again (phase 4). Reflection is used in the formation of adequate professional skills and attitudes, as well as in general in learning practice. The area of self-reflection is well established in education. Current research attempts to apply findings gained in traditional western classroom contexts to other cultures as well as subject domains, such as science and health education (Wang, Chen, Lin, Hong, 2017; Mirlashari, Warnock, Jahanbani, 2017).

Results and Discussion

In this part, the important aspects of the three described learning concepts are combined in an integrated dynamic model, providing the basis for a checklist of guiding questions, which can be used as orientation for designing effective adult learning programs.

In practice, each of the three concepts is used individually to design adult learning activities. In the next step, the respective core points of the three influencing concepts are transformed, thereby generating a list of sample questions that can be used as an orientation to design adult learning programs and reflect on the process. With this guide, teachers, trainers and adult educators can design, develop and reflect on learning activities more effectively and in a more demand-oriented manner.

For a better understanding of the dynamic interaction between the three concepts, a triadic framework has been developed illustrating the factors influencing the adult learning in an integrated model.
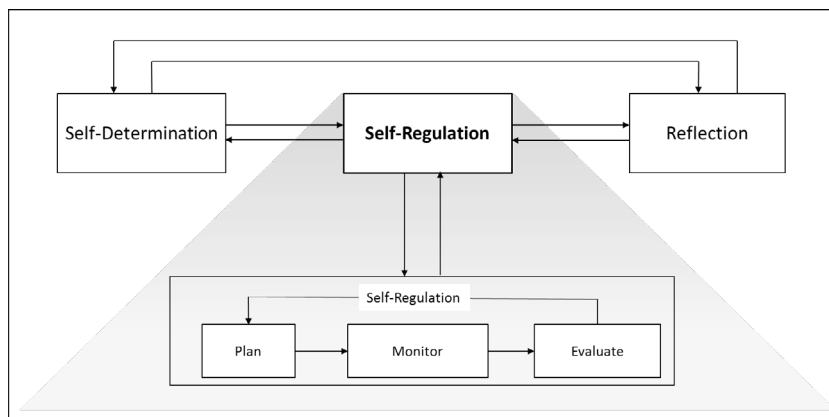

Figure 1. Integrated model of influencing factors of adult learning

Table 1. Reflection question tool

Self-Determination	Self-Regulation			(Self-)Reflection
	Plan	Monitor	Evaluate	
Adult Educator Perspective				
What choice in terms of topics can be offered?	What is the goal of the task?	Are the strategies offered effective for this task and the adult learner?	How well did my approach work for the adult learner?	When else could I use this approach? How could I improve this approach?
What are the possibilities to introduce further personal topics?	What strategies are most effective with this type of task?	Is this an interesting lesson/task for the adult learner?	How much effort was required to complete the task?	Did the adult learners achieve their goal?
To what extent is the adult learner free in planning, timing, process etc.?	What do I know about the target group? What useful skills do they have or need?	How am I feeling as I work on this task? What is my level of confidence?	How did the adult learner stay motivated?	What did I learn about this topic/task/target group?
What needs can be satisfied within the learning process?	Does this task require a great deal of concentration and effort?	How supportive is the learning environment?	How did the adult learner remedy the problem(s)?	What would I do different next time?
What is the personal freedom of work within the required tasks?	What kinds of study conditions are best for meeting the requirements of the task and to support the adult learner?	What outside materials or resources should be added?	Did the adult learner enjoy the task? Yes or no and why?	
Adult Learner Perspective				
What choice in terms of topics do I have to offer? What is my motivation about the task?	What is my goal of the task?	Do I understand what I am doing? Am I making progress toward the goal?	How well did my approach work for the adult learner?	How do I feel about the outcome?
What are the possibilities to introduce further personal topics?	What useful skills do I have or need?	Is this an interesting lesson/task for myself?	What did I do when strategies didn't work?	Did I enjoy this work?
To what extent am I free in planning, timing, process etc.?	Does this task require a great deal of concentration and effort?	How am I feeling as I work on this task? What is my level of confidence?	Did I encounter any unexpected obstacles in completing the task?	Did I achieve my goal?
Can I satisfy my needs within the learning process?	What do I need to feel comfortable?	Am I planing appropriate time for the adult learners to work on the task?	How did I remedy the problem(s)?	What did I learn about myself?
What is my personal freedom of work within the required tasks?	How do I feel about this kind of task? Do I like this kind of work?		Did I enjoy the task? Yes or no and why?	

The following 'reflection question tool' consisting of sample questions is by no means comprehensive, but provides ideas and direction for further consideration as a tool for educators, trainers and teachers.

The "reflection question tool" offers sample questions in the three areas of self-determination, self-regulation and (self-)reflection. It is divided into two sections; the section "Adult Educator Perspective" focuses on the preparation of the learning task and the adult learner. The second section the "Adult Learner Perspective" focuses on the adult educator as a learner and supports their self-reflection. This

emphasizes the different roles the adult educator can take, because, even in their own learning processes, it may be helpful to reflect on terms of the "educator" and "learner".

The main advantage of using such a triadic framework is that it reflects all levels of the learning process: preparation, performance and reflection. The "reflection question tool" can be regarded as a basis for further developments through trial and examination in practice.

Conclusions

In this paper, the characteristics for successful adult learning programs were described and a triadic model illustrating how self-determination, self-regulation and reflective learning can be used in an integrated approach to design adult learning programs was presented.

It is hoped that the understanding of the topic reflected in a pragmatic "reflection question tool" will influence not only ideas of what adult learning means, but also the conceptions of what it means to teach. Adult learners must be actively engaged in their own teaching, learning and knowledge building; adult educators and trainers must be able to effectively direct the adult learners and their personal quest for knowledge and skills, to assess and evaluate understanding, and to know what to do when the adult learner (and themselves) needs more information. Another important focus is on the reflection of the adult educator, as it is important also for the adult educator to learn in respect of lifelong learning. A major function of education must be to help create adult educators and adult learners who know how to learn. By fostering the development of self-determined, self-regulated, and reflective adult educators as well as adult learners, it is hypothesized that this goal can be achieved.

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