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Integrated Model of Effective Adult and Continuing Vocational Education and Training

Kaethe Schneider

Faculty of Social and Behavioral Sciences, Friedrich-Schiller-University Jena, Jena, Germany
Email: k.schneider@uni-jena.de

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Abstract

The learning of adult and continuing vocational education and training is more likely to be effectively transferred when the learning objectives of the program relate to the learning needs identified. Besides building up the target behavior determined, however, for Effective Adult and Continuing Vocational Education and Training, it is necessary to understand the triggers of the behavior preventing the learning from the learning transfer. The goal of this study consists in developing a model of Effective Adult and Continuing Vocational Education and Training. Learning transfer as the behavior to bring over the acquired behavior to both similar and new situations is effective learning. The model to be devised will be a priori and synthetic. Essential properties and generalizations will be established by intuitive reasoning as a direct observation by the intellect and by deductive reasoning as act of deriving the wanted theory from a general theory. The newly developed Integrated Model of Effective Adult and Continuing Vocational Education and Training combines two strands of models: the model of the immunity to learn and the model of intentional behavior. The context as appropriate environment and the trigger as the mental state of the agent are conditions for effective learning.

Keywords

Learning Transfer, Effective Learning, Intuitive Reasoning, Deductive Reasoning, Integrated Model

1. Introduction

The issue of securing learning transfer and enabling effective learning, respectively, has aroused broad interest in adult and continuing vocational education and training research. Haskell (2001: p. xiii) defines learning transfer as "use of

past learning when learning something new and the application of that learning to both similar and new situations".

The continuing vocational education and training seem to be less efficient as companies invested €28.6 billion in vocational education in 2010 (Roussel, 2014; Schneider et al., 2014; Seyda & Werner, 2012) and only 10 percent of the learned material is said to be used in the work context (Schneider et al., 2014; Schneider, 2013). An understanding of the processes that further learning transfer is, therefore, of fundamental interest.

The factors influencing learning transfer are the characteristics of the learner, the design of education program and the program itself, as well as the situation and the climate of learning transfer in the respective organization (a.o. Baldwin & Ford, 1988; Broad & Newstrom, 1992; Lim & Nowell, 2014).

The studies referring to the learner focus on intelligence and motivation (Broad & Newstrom, 1992). Motivation is perceived at different times, before training, during training, and after training. While pre-training motivation significantly interacts with transfer of training (Facteau, Dobbins, Russell, Ladd, & Kudisch, 1995), motivation during training is associated with "the extent to which training meets or fulfills training expectations and desires" (Yamnill & McLean, 2001: p. 200). Post-training motivation generally results from the reaction of the training, the organization commitment and extrinsic rewards (Porter & Lawler, 1968; Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991). The studies that have dealt with the design of the educational program emphasize five areas of processes when developing the education program (Lim & Nowell, 2014): the learning needs analysis (Burke & Hutchins, 2007; Caffarella, 2002), the definition of the behavioral objectives (Wexley & Baldwin, 1986), the selection of content (Noe, 2005; Yamnill & McLean, 2005), the incorporation of practice into the learning process (Kalyuga, Chandler, Tuovinen, & Sweller, 2001; Shore & Sechrest, 1961), and the transfer of the training plan (Broad & Newstrom, 1992). The learning needs analysis refers to assessment of the needs to be accomplished by the education program. The behavioral objectives are to be derived from the skill and knowledge gap identified in the needs analysis. In order to facilitate the learning transfer the content has to be applicable to the setting of practice. Learning transfer can be increased by incorporating practice into the education process in order to establish the connection between the setting of learning and the setting of practice. The transfer of training plan consists of activities of learner, trainer and supervisor before, during and after the education program (Broad & Newstrom, 1992; Burke & Hutchins, 2007; Caffarella, 2002; Lim & Nowell, 2014; Mager, 1997; Noe, 2005; Rodriquez & Gregory, 2005).

The transfer situation and climate can be operationalized by the supervisor support (McSherry & Taylor, 1994), the peer support (Facteau, Dobbins, Russell, Ladd, & Kudisch, 1995), and the opportunity to perform (Clarke, 2002). In the current study, we refer to the design of the study and focus on the learning needs analysis while considering the learner characteristics as well: The first stage of the design is Learning Needs Analysis (LNA) to review learning and develop-

ment requirements. The function of LNA is to support individual, team and organizational development. Occasionally, LNA is also referred to as Training Needs Analysis (TNA) or Training and Learning Needs Analysis (TNLA). The learning results of an educational program are more likely to be effectively transferred when the learning objectives of the program relate to the performance needs determined through the needs analysis (Burke & Hutchins, 2007; Lim & Nowell, 2014).

Although the necessity of a needs analysis is clear (Caffarella, 2002), there is no standard way of conducting it. The existing procedures (e.g. Grant, 2002; Mavroudi & Hadzilacos, 2013; While, Ullman, & Forbes, 2007) focus on learning needs resulting from the missing behavior of a person required for a performance. However, analysis of the behavior interfering with the target performance that needs to be modified is not part of the procedures.

The learning needs do not only result from the missing behavior necessary to cope with the target requirements but also from the behavior interfering with the target needs respectively the intended learning. Besides acquiring new behavior, the behavior and the components of the behavior interfering with the target performance have to be changed, respectively. The learning transfer preventing behavior or components of behavior need to be integrated into the architecture of learning needs analysis. The current procedures of LNA referring to the promoting and not to the hindering behavior may result from a missing theoretical architecture for analyzing the behavior. Despite intensive research on the learning transfer (e.g. Pineda et al., 2014) we lack knowledge of how to enable effective learning through a thorough LNA consisting also of a learning transfer preventing needs analysis.

The main goal of present study is the development of a model of effective adult and continuing vocational education and training. In the sections that follow, I will first describe the methodology and then develop the model.

The theoretical model as a model of the facts about universals will be a priori and synthetic (Steiner, 1988: p. 19). It is a priori because it "… consists of statements whose possible truth is necessary" (Steiner, 1988: p. 19). "An *essential property of an object* is a property that it must have while *an accidental property of an object* is one that it happens to have but that it could lack" (Robertson & Atkins, 2013). Because the analysis treats of essential properties and not of the accidentials, it can only be ascertained by reason (Steiner, 1988). The theoretical model is synthetic, insofar as it is not a theory of form, but a model of content characterized by essential properties and generalizations (Steiner, 1988).

This study makes important contributions to both LNA and the design of effective adult and continuing vocational education and training. First, the understanding surrounding the complex nature of learning needs will be expanded. The second contribution concerns the learning transfer preventing behavior and the immunity to learn (Kegan & Lahey, 2009) as well as the design of effective adult and continuing vocational education and training.

2. Methodology

The model consists of sentences expressing the invariable relations between the properties. In order to establish the essential properties as the basic elements of the model, I refer to the method of intuitive reasoning as a direct observation by the intellect (Steiner, 1988). The method for the establishment of the essential relations is deductive reasoning (Steiner, 1988). I will describe both methods in the next section.

2.1. Intuitive Reasoning

To establish essential properties intuitive reasoning is necessary. "Essential properties must be intuited or directly observed by the intellect" (Steiner, 1988: p. 24). Intuition is a "direct intellectual observation of the essence of what is given in experience" (Steiner, 1988: p. 92). It is a non-inferential form of reasoning and "an immediate apprehension by the intellect of the nature of objects given as phenomena" (Steiner, 1988: p. 93). Phenomena are conceived in the broadest sense as "of whatever appears in experience" (Steiner, 1988: p. 94). Intuitive reasoning is specified through phenomenology that presents the formal patterns for intuition (Steiner, 1988: p. 24) and consists of the following six rules (Steiner, 1988: p. 96):

"Rule 1: Focus on the object

Rule 2: Exclude the subjective

Rule 3: Exclude indirect knowledge

Rule 4: Exclude existence and the contingent

Rule 5: Strive for complete disclosure

Rule 6: Be analytic".

Rule 1, the focus on the object, refers to the contemplation, the intellectual not sensory observation of the things themselves. "Rules 2 and 3 result in a threefold eidetic reduction—indirect knowledge through deduction or retroduction, theory, and tradition are excluded" (Steiner, 1988: p. 96). In order to exclude the subjective according to rule 2 the inquirer has to ask the question about what the object is and not about the purpose of the object. Rule 3 has the function to exclude all the knowledge that is not directly given (Steiner, 1988). Through the application of Rule 4, we will exclude all that is not essential. A high school diploma, for example, is not essential to a humanistic education and should be ruled out of it. In the twofold reduction without referring to empirical observation with each characteristic, one asks "whether without it the example could be considered an example of the same sort of thing as before. One asks what characteristics an object must have in order to be recognized as an example of a certain kind of object" (Steiner, 1988: p. 97). One example for the twofold reduction is reasoning about the question whether a process is education without an active learner and educator (Steiner, 1988). Rule 5 implies the norm to see all the elements that are given in order to strive for complete disclosure. The last rule refers to the description of all essentials (Steiner, 1988: pp. 94-97).

2.2. Deductive Reasoning

A deductive reasoning refers to the process that the wanted theory is to be derived from a general theory that implies not only the wanted theory, but yet another theory (Steiner, 1988: p. 99). According to (Hempel & Oppenheim, 1948; Schneider, 2004), theory T1 implies theory T2, if the concept of the explanand a T1 (A) is the generic term to the concept of the explanand a T2 (B). If the phenomenon of education has to be explained, we can derive the wanted theory from the general theory of action. As education is defined by social action, action theory represents a general theory. Depending on the respective theory, the explaining variables allow an understanding of the specific process to be explained.

3. Analysis of the Phenomenon of Learning Transfer

3.1. Analysis: Intuitive Reasoning

The intuitive reasoning has to be conducted for the phenomenon of the learning transfer as effective learning. Steiner (1988: p. 5) has already accomplished this for the phenomenon of learning: The essential characteristic of learning is the "change in psychical state" (Steiner, 1988: p. 5). Steiner asks for further characteristics, that the object must have in order to be recognized as an example of a certain kind of learning. Learning "…, can either involve consciousness on the part of the learner and so intentionality or not involve consciousness on the part of the learner and so no intentionality…" (Steiner, 1988: p. 15). According to Steiner learning is intended: Non-intended learning will be conceived as a phenomenon in the physical and biological sense. She argues, that "…, where there is no consciousness, there is no phenomenon in the human sense" (Steiner, 1988: p. 15). The intentionality is an essential property of learning. Besides, learning is perceived as a process: Learning cannot be understood in the achievement sense of effective learning (Steiner, 1988: p. 16). "The term 'learning' should be used without modification when the term is used to refer to learning in the process sense" (Steiner, 1988: p. 16). "Learning in the achievement sense adds effectiveness to learning in the process sense". That means that the process of learning is realized. Learning is the intentional change in psychical state.

The concept of "transfer" stems from the Latin: The Latin verb *transferre* means "to bring over". It has to be asked, which object has to be brought over what? In case of this question, it has to be assumed that the product of learning, a specific psychical state is the object. That is to say that the learning transfer relates to the learning in the achievement sense. Hence, an essential property of learning transfer is effectiveness.

It seems to be that the phenomenon of the learning transfer needs to be characterized by a further essential property in order to be effective. If an intentional change in psychical state has to be transferred, the intended change in psychical state should be brought over from the learning setting to the target context. The prefix "trans" "reflects the idea of transport or passage between two situa-

tions" (Roussel, 2014: p. 52) and means that the learner wants to realize the changed psychical state not only in the learning setting as the source situation, but in other settings, the target situations, as well. The phenomenon of the learning transfer is an intentional change in psychical state manifested under specific conditions and not in a single behavioral act.

3.2. Analysis: Deductive Reasoning

Model of intentional stable behavior to explain learning transfer

In order to derive the theory wanted from a general theory it is required to identify the generic term to the explananda of the learning transfer. Besides, the essential relations between the properties will be established with the aid of the theory.

The generic term to the concept of the learning transfer as the acquired psychic state brought over to specific contexts is the intentional relatively stable behavior. The intuitive reasoning of the learning transfer has led to the conclusion that the learning transfer is an intentional change in psychical state manifested under specific conditions.

The general theory to which will be referred to is the model developed by Splitter (2010). According to Laurence Splitter (2010) the relevant intentional behavior can be captured in terms of the following formula:

$$(A)\ C \rightarrow (T \rightarrow B)$$

(A) represents the conditionality of intentional behavior. The relation → stands for a form of subjunctive implication. From a logical point of view a subjunctive implication is a proposition that consists of two further propositions with the sentential connective "if-than". (B) consists of the actual observed relatively stable intended behavior: the environment or the context (C) stands for the conditions that are relevant in the specific case (Splitter, 2010). The causal trigger (T) is a condition "whose descriptions are an essential component of the explanation of the action in question" (Splitter, 2010: p. 222). (T) is a place holder for the mental state of the agent realizing the conditional (Splitter, 2010). Under certain background conditions, such as a learning climate encouraging curiosity, the intentional behavior X will transpire. "T captures those values, attitudes, traits, beliefs, needs, interests, desires, and intentions whose descriptions are an essential component of the explanation of the action in questions" (Splitter, 2010: p. 222). These interrelated elements are summarized as dispositions (Splitter, 2010). "The central place of dispositions as the triggers of our intentional and relatively stable behavior is preserved by and represented in the language we use to describe or refer to 1) the relevant behavior, 2) the mental/emotional elements that trigger the behavior, and 3) the underlying conditionals in which the triggers—along with appropriate background conditions—function as antecedent and the behavior functions as consequent" (Splitter, 2010: p. 224). According to Perkins, Jay and Tishman (1993: p. 4) the disposition is constituted of the ability, the inclination and the sensitivity: "ability

concerns the basic capacity to carry out the behavior. Inclination concerns the motivation or impulse to engage in the behavior. Sensitivity concerns likelihood of noticing occasions to engage in the behavior" (Perkins, Tishman, Richhart, Donis, & Andrade, 2000: pp. 272-273).

Multifaceted essential relations between the triggers and the intentional behavior of the learning transfer can be established based on this model. The intentionality that characterizes the learning transfer is a "type-level term" (Splitter, 2010: p. 214). Splitter sorts events into token or type status: token events refer to concrete, first-level one-off events (e.g. my intention to do exercise right now) and type events are higher level, abstract events or states (e.g. my general intention to do exercise when I am stressed). My general intention to manifest the behavior X in situation Y as a change in psychical state has a type status. The triggers are recurring and the behavior is not manifested in a single behavioral act. Also, the conditions operate at a higher level of abstraction.

The way, Splitter (2010: p. 214) understands intentionality "… is, fundamentally, semantic or linguistic". Splitter (2010) does not conceive the mental state as the triggers of the stable intentional behavior as entities, as only physical entities in contrast to mental ones exist. "… there are no 'law like' connections or regularities between kinds or types of mental states and events (belief, desire, intention, and the like) and the kinds or types of physical events and states that we like to associate with them…" (Splitter, 2010: p. 213). Splitter (2010) argues in the following way: a specific mental token event (e.g. my desire to do exercise) can be seen as the cause of a token physical event (e.g. my running). However, Splitter (2010: p. 214) does not reduce the causal explanation to purely physical terms. "… explanations and the meanings of mental terms such as 'desire' are *intentional.* As type-level terms, they do not refer to or describe actual entities outside the language". That is to say that a mental type-level term such as intentionality only refers to the language. This understanding of intentionality as fundamentally semantic gives LNA jointly conducted by the learner and the teacher an important place in adult education and vocational education and training (VET).

The learning transfer as relatively stable and broad realized intentional behavior does not refer to concrete, first-level one-off events (e.g. my manifested intentional behavior x right now), but to type events as the higher level, abstract events or states (e.g. my general manifested intentional behavior x when facing situation of type y). The formula asserts the twofold conditionality meaning that the broad realized intended behavioral acts are triggered by recurring mental states (condition 1), that are manifested under a certain type of condition (condition 2). When we make a claim about the learning transfer, it is a conditional statement of the form: "If the person is subject to condition C, it will behave thus and so" (Splitter, 2010). Splitter (2010: p. 222) points out, that "… the conditional formula underpinning dispositional behavior still holds for intentional action".

The model of the stable realized intentional behavior is the general theory that explains learning transfer. According to Splitter (2010: p. 224), this model

should explain a lack of action in a given situation: "Students can undertake the often complex task of determining the reasons behind a lack of action in a given situation—for example, they may not know how to act, they may not want to act, they may not see the point of acting or realize the opportunity to act, and so on. A common strategy here will be to 'work backward' from behavior (whether actual or imagined, their own or that of others) to uncover the underlying triggers". Based on the conditional formula, the lack of action in a specific context has to be explained backwards.

Model of constructive developmental theory to explain a lack of learning transfer

For explaining the triggers of a lack of the intended learning behavior in a given situation, we refer to "Constructive-Developmental Theory" that derives its name from the premise that the way we construct meaning can explain a change or an immunity to change (Kegan & Lahey, 2009).

This model consists of three dimensions that explain the *immunity to change* (Kegan & Lahey, 2009: p. 56): The *change-prevention system*, the *feeling system* and the *knowing system*.

These systems interact in their impact on the learning processes and on the processes hindering to manifest the intended learning behavior, respectively:

- By the *change-prevention system*, the first dimension, challenging aspirations are thwarted. (vgl. Kegan & Lahey, 2009) "…we are actively preventing the very change we wish to make" (Kegan & Lahey, 2009: p. 56). This system refers to the behavior that works against the goals.
- The feeling system as the second dimension has the function to control and manage persisting fears of a person. Fears have *hidden commitments* as their consequence that can compete with the *visible commitments*. Depending on strength of fear it can prevent a person from accomplishing his goals. Commitments typically evoke strong sense of intention.
- The *knowing system*, *the third dimension,* preserves the epistemological balance in order to maintain the way of knowing the world and ourselves (Kegan & Lahey, 2009). The way a person knows can be characterized by a specific subject-object relationship (Kegan, 2001, 2000): The subject is in which one is involved, with which one identifies, and one experiences as oneself. The object, in contrast, refers to what a person reflects and he can change. If a person's way of knowing changes, a transformation occurs: the subject becomes an object. Becoming aware of one's own self is a reflexive process that comes about when the individual makes himself his own object (Kegan, 2001, 2000; Schneider, 2010). The transformation from experience to experienced makes clear the objectivation process of becoming aware of one's own self: "Experience is the moment of life in the present …; the experienced is the moment that emerges therein of reflexivity, as the 'I know that I think' that knows about the 'me' in the 'I'. Experience constitutes the experienced as a form of consciousness" (Witsch, 2008: p. 54). The process of objectivation

is about the externalization of the subject: In externalization, the making external of the internal occurs, in that for the person the externalized part of reality becomes the object (Schneider, 2010). While the person creates objects a loss of subject occurs that leads to self-definition, to a qualitative shift—to a new "pair of spectacles" through which one regards the world (Kegan, 2001; 2000; Schneider, 2010). The way of knowing the world, of our mental development, reflects also the way of managing a fundamental anxiety (Kegan & Lahey, 2009). The content of this system will be called "big assumptions". "They are not currently viewed as 'assumptions' at all. Rather, they are uncritically taken as true. They may be true, and they may not be, but as long as we simply assume they are true, we are blind even to the question itself" (Kegan & Lahey, 2009: p. 58).

According to the dimensions of immunity to change learning transfer and learning transfer preventing behavior are multidimensional and interrelated phenomena. This is manifested for example in the interrelation that the hidden commitments (HC) resulting from the big assumptions (BA) may interfere the learning transfer (B_{LT}).

4. Results and Discussions

The intentional change of the psychical state is closely connected to the immunity to learn. It is not sufficient to only model the described triggers as the explanation of the learning transfer, the changed behavior, but it is also necessary to understand the explained triggers of preventing the learning transfer in order to explain effective learning. "… we are less interested in making these behaviors go away, and more interested in how they can lead us to a picture of the real challenge" (Kegan & Lahey, 2009: p. 35). To explain effective learning we integrate both presented models because the model of Splitter meets the conditionality of stable intentional behavior and the model of Kegan and Lahey (2009) explains the hidden competing commitments preventing learning transfer. The big assumptions can explain hidden commitments of a person preventing the learning transfer. Referring to Wadsworth and Ford (1983), these self-related commitments differ above all in the extent of their complexity and in their temporal orientation. While imagoes, possible selves and life goals are general and complex goal constructs that are located on an abstract level and possess the character of higher-level goals personal strivings are likewise mid-level goals and are the relatively lasting behavioral modes typical of a person. The higher-level goals are oriented to the long term, can act across time and contexts and give action stability and consistency (Ford & Nichols, 1987). Personal strivings do not end with actions (Schneider, 2011) and render subordinate goals functionally equivalent for the individual (Emmons, 1989). Striving is a "... unifying construct; it unites what may be phenotypically different goals or actions around a common quality or theme" (Emmons, 1989: p. 92). Based on the examples Kegan and Lahey (2009) present for the hidden commitments it can be concluded

that these commitments are located on a mid-level or even high-level depending on the mental development. Hidden commitments represent the way persistent anxiety is managed (Kegan & Lahey, 2009). An example for such a hidden commitment presented by Kegan and Lahey (2009: p. 58) is "be the hero". These commitments gave an answer to the question why a person does persist with the behavior that keeps him from getting what he wants (Kegan & Lahey, 2009). The behavior preventing the learning transfer is indeed not intentional in terms of the learning transfer goals, but it serves as shown other important personal purposes such as managing persistent anxiety. "An intention is a conscious or preconscious formulation about some future behaviour or outcome the person will attempt to perform or achieve" (Deci & Ryan, 1991: p. 247). Hidden commitments can be regarded as preconscious and intentional.

This analysis makes it clear that the goals of effective learning might be in competition with other self-related goals, the hidden commitments, that are value-laden (Splitter, 2010) automatized higher-level goals. "To have a value… is to care to the point of commitment, but to do so mindfully and reflectively…" (Splitter, 2010: p. 216).

The following formula captures the perspective of explaining effective learning which is eo ipso intentional:

$$(A)\ C \rightarrow [(T_{BA} \rightarrow T_C) \rightarrow B_{LT})]$$

C = Condition

B_{LT} = Learning transfer (Effective learning)

T_{BA} = Trigger big assumptions

T_C = Trigger commitments

(A) represents the conditionality of effective learning triggered by the mental states. As, according to Splitter (2010: p. 214), the meanings of mental terms are intentional, we focus here on the big assumptions and the commitments consisting of the hidden and non-hidden commitments, being characterized by intentionality, that result from the big assumptions. Threefold conditionality characterizes the effective learning as the formula shows. The environment or the context (C) stands for the conditions that are relevant in the specific case and underlines that learning is to be categorized as a higher-order action.

Learning characterized by consciousness and intentionality is a specific human phenomenon that will be defined as psychic development, as a formation of mental structures (Steiner, 1988). In the achievement sense, learning will be called "effective learning" (Steiner, 1988).

To summarize the results of the current study, learning transfer can be understood as bringing over intentionally the acquired psychic state to both similar and new situations. As for the learning needs analysis, we could theoretically show, that it does not only refer to a performance or knowledge gap determined and stated through the use of a needs analysis, but also to the psychical state preventing the change, because the intentional change of the psychical state is strongly connected to preventing the change. There is behavior that works

against the learning transfer that keeps the learner from manifesting learning transfer. Therefore, learning transfer and the behavior preventing the learning transfer need to be analyzed in an integrative way. Both the triggers of learning transfer and of the behavior preventing the learning transfer are to be understood in order to secure effective learning.

5. Conclusion

The developed model consists of the conditionality of learning transfer. The environment or the context stands for the conditions that are relevant in the specific case. The trigger of the learning transfer is a placeholder for the mental state of the agent, which refers following Splitter (2010) to intentionality. Integrating the immunity to change model of Kegan and Lahey (2009) within Splitter's model of intentional stable behavior, we suggest a framework for conceptualizing the mental state as the commitments being a consequence of big assumptions. We sorted the commitments into non-hidden and hidden commitments: some commitments are instrumental to target behavior, here to the learning transfer, some serve other personal purposes and prevent a person here from accomplishing target goals, here learning transfer goals. The analysis for behavior preventing the learning transfer has the aim "to 'work backward' from behavior … to uncover the underlying triggers" (Splitter, 2010: p. 24). As a higher-order action, the behavior preventing the learning transfer is conditional as well.

This model of learning transfer makes it clear that the objective-impeding mental structures, which are in competition with the sought mental structures, assume a central role in effective learning (Kegan & Lahey, 2009; Splitter, 2010).

The question of why a person stubbornly holds on to a certain behavior, although it complicates or prevents achievement of learning objective, is explained by the triggers that are manifested in specific types of situations. Together with the trainer, the coach or the adult educator, the learner explains backwards the lack of action in the specific contexts and the behavior preventing the learning transfer that a person retains although it does not serve the objective. If a person realizes that there is incoherence between his objectives, personal obligations and major assumptions, then he is capable of reflecting on it, questioning it and changing. A change in the major assumptions brings about a reduction in fears on the feeling level.

The newly developed Integrated Model of Effective Adult and Continuing Vocational Education and Training combines two theoretical strands: the perspective of "Constructive-Developmental Theory" from which the immunity to learn is explained and a semantic or linguistic perspective of intentionality from which intentional behavior can be understood. The innovative way of modeling learning transfer within an integrated model as effective learning lays a foundation for systematically promoting learning transfer and offers a theoretical basis for achieving a deeper understanding of effective learning and the process for

developing a methodology of LNA. The processes of planning, implementation, delivery and evaluation of an education program repeat themselves cyclically, (Schneider, 2013) with continuously explaining learning transfer, identifying learning needs and exploring resulting learning objectives and methods until effective learning or learning transfer has been completed.

The major limitation of the model is the simplification of reality that cannot replace the individual reality of the learner.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

Baldwin, T. T., & Ford, J. K. (1988). Transfer of Training: A Review and Directions for Future Research. *Personnel Psychology, 41,* 63-105. https://doi.org/10.1111/j.1744-6570.1988.tb00632.x

Broad, M., & Newstrom, J. (1992). *Transfer of Training: Action Packed Strategies to Ensure High Payoff from Training Investments*. New York: Addison-Wesley.

Burke, L., & Hutchins, H. (2007). Training Transfer: An Integrative Literature Review. *Human Resource Development Review, 6,* 263-296. https://doi.org/10.1177/1534484307303035

Caffarella, R. (2002). *Planning Programs for Adult Learners* (2nd ed.). San Francisco, CA: Jossey-Bass.

Clarke, N. (2002). Job/Work Environment Factors Influencing Training Transfer within a Human Service Agency: Some Indicative Support for Baldwin and Ford's Transfer Climate Construct. *International Journal of Training and Development, 6,* 146-162. https://doi.org/10.1111/1468-2419.00156

Deci, E. L., & Ryan, R. M. (1991). A Motivational Approach to Self: Integration in Personality. In: R. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Perspectives on motivation* (pp. 237-288). Lincoln, NE: University of Nebraska Press.

Emmons, R. A. (1989). The Personal Striving Approach to Personality. In L. A. Pervin (Ed.), *Goal Concepts in Personality and Social Psychology* (pp. 87-126). Hillsdale, NJ: Erlbaum.

Facteau, J., Dobbins, G., Russell, J., Ladd, R., & Kudisch, J. (1995). The Influence of General Perceptions of the Training Environment on Pre-Training Motivation and Perceived Training Transfer. *Journal of Management, 21,* 1-25. https://doi.org/10.1177/014920639502100101

Ford, M. E., & Nichols, C. W. (1987). A Taxonomy of Human Goals and Some Possible Application. In M. E. Ford, & D. H. (Eds.), *Humans as Self-Constructing Living Systems: Putting the Framework to Work* (pp. 289-311). Hillsdale, NJ: Erlbaum. https://doi.org/10.4324/9780429025297-10

Grant, J. (2002). Learning Needs Assessment: Assessing the Need. *BMJ, 324,* 156-159. https://doi.org/10.1136/bmj.324.7330.156

Haskell, R. E. (2001). *Transfer of Learning*. San Diego, CA: Academic Press. https://doi.org/10.1016/B978-012330595-4/50003-2

Hempel, C. G., & Oppenheim, P. (1948). Studies in the Logic of Explanation. *Philosophy*

of Science, 15, 135-175.

Kalyuga, S., Chandler, P., Tuovinen, J., & Sweller, J. (2001). When Problem Solving Is Superior to Studying Worked Examples. *Journal of Educational Psychology, 93,* 579-588. https://doi.org/10.1037/0022-0663.93.3.579

Kegan, R. (2000). *In Over Our Heads: The Mental Demands of Modern Life*. Cambridge, MA: Harvard University Press.

Kegan, R. (2001). Competencies as Working Epistemologies—Ways We Want Adults to Know. In D. S. Rychen, & L. H. Salganik (Eds.), *Defining and Selecting Key Competencies* (pp. 192-204). Seattle, WA: Hogrefe & Huber.

Kegan, R., & Lahey, L. L. (2009). *Immunity to Change: How to Overcome It and Unlock Potential in Yourself and Your Organization.* Boston, MA: Harvard Business Press.

Lim, D. H., & Nowell, B. (2014). Integration for Training Transfer: Learning, Knowledge, Organizational Culture, and Technology. In K. Schneider (Ed.), *Transfer of Learning in Organizations* (pp. 81-98). Heidelberg, New York, Dordrecht, London: Springer. https://doi.org/10.1007/978-3-319-02093-8_6

Mager, R. (1997). *Making Instruction Work: A Step-by-Step Guide to Designing and Developing Instruction That Works.* Atlanta, GA: The Center for Effective Performance.

Mavroudi, A., & Hadzilacos, T. (2013). Learning Needs Analysis of Collaborative E-Classes in Semi-Formal Settings: The REVIT Example. *International Review of Research in Open and Distance Learning, 14,* 211-239. https://doi.org/10.19173/irrodl.v14i5.1544

McSherry, M., & Taylor, P. (1994). Supervisory Support for the Transfer of Team-Building Training. *The International Journal of Human Resource Management, 5,* 107-119. https://doi.org/10.1080/09585199400000006

Noe, R. (2005). *Employee Training and Development* (3rd ed.). New York: McGraw-Hill.

Perkins, D. N., Jay, E., & Tishman, S. (1993). Beyond Abilities: A Dispositional Theory of Thinking. *Merrill-Palmer Quarterly, 39,* 1-21.

Perkins, D. N., Tishman, S., Ritchhart, R., Donis, K., & Andrade, A. (2000). Intelligence in the Wild: A Dispositional View of Intellectual Traits. *Educational Psychology Review, 12,* 269-293. https://doi.org/10.1023/A:1009031605464

Pineda-Herrero, P., Quesada-Pallarès, C., & Ciraso-Calí, A. (2014). Evaluation of Training Transfer Factors: The FET Model. In K. Schneider (Ed.), *Transfer of Learning in Organizations* (pp. 121-144). London: Springer. https://doi.org/10.1007/978-3-319-02093-8_8

Porter, L., & Lawler, E. (1968). *Managerial Attitude and Performance*. Florence, KY: Dorsey Press.

Robertson, T., & Atkins, P. (2013). Essential vs. Accidental Properties. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2013 Edition). http://plato.stanford.edu/archives/win2013/entries/essential-accidental

Rodriquez, C., & Gregory, S. (2005). Qualitative Study of Transfer of Training of Student Employees in a Service Industry. *Journal of Hospitality & Tourism Research, 29,* 42-66. https://doi.org/10.1177/1096348004270753

Roussel, J.-F. (2014). Learning Transfer in Organizations: An Adaptive Perspective Centered on the Learner and the Development of Self-Regulation. In K. Schneider (Ed.), *Transfer of Learning in Organizations* (pp. 45-64). London: Springer. https://doi.org/10.1007/978-3-319-02093-8_4

Schneider, K. (2004). *Die Teilnahme und die Nicht-Teilnahme Erwachsener an Weiterbildung: Theorienartige Aussage zur Erklärung der Handlungsinitiierung.* Bad

Heilbrunn/Obb.: Julius Klinkhardt.

Schneider, K. (2010). The Subject-Object Transformations and "Bildung". *Educational Philosophy and Theory, 44,* 302-311. https://doi.org/10.1111/j.1469-5812.2010.00696.x

Schneider, K. (2011). Assessment Methods for Self-Development Goals of Executives. In V. C. X. Wang (Ed.), *Encyclopedia of E-Leadership, Counseling and Training* (pp. 310-319). Hershey, PA: IGI Global. https://doi.org/10.4018/978-1-61350-068-2.ch023

Schneider, K. (2013). Transfer Securing of Vocational Education. *Science Journal of Education, 3,* 36-42. https://doi.org/10.11648/j.sjedu.20130103.12

Schneider, K., Pältz, M., & Stauche, H. (2014). Transfer of Learning in German Companies. In K. Schneider (Ed.), *Transfer of Learning in Organizations* (pp. 5-22). London: Springer. https://doi.org/10.1007/978-3-319-02093-8_2

Seyda, S., & Werner, D. (2012). *Umfang, Kosten und Trends der betrieblichen Weiterbildung-Ergebnisse der IW-Weiterbildungserhebung 2008*. Köln: Institut der deutschen Wirtschaft Köln (IW).

Shore, E., & Sechrest, L. (1961). Concept Attainment as a Function of Number of Positive Instances Presented. *Journal of Educational Psychology, 52,* 303-307. https://doi.org/10.1037/h0041592

Splitter, L. J. (2010). Dispositions in Education: Nonentities Worth Talking about. *Educational Theory, 60,* 203-230. https://doi.org/10.1111/j.1741-5446.2010.00354.x

Steiner, E. (1988). *Methodology of Theory Building*. Sydney: Educology Research Associates.

Tannenbaum, S., Mathieu, J., Salas, E., & Cannon-Bowers, J. (1991). Meeting Trainees' Expectations: The Influence of Training Fulfillment on the Development of Commitment, Self-Efficacy, and Motivation. *Journal of Applied Psychology, 76,* 759-769. https://doi.org/10.1037/0021-9010.76.6.759

Wadsworth, M., & Ford, D. H. (1983). Assessment of Personal Goal Hierarchies. *Journal of Counseling Psychology, 30,* 514-526. https://doi.org/10.1037/0022-0167.30.4.514

Wexley, K., & Baldwin, T. (1986). Post Training Strategies for Facilitating Positive Transfer: An Empirical Exploration. *Academy of Management Journal, 29,* 503-520. https://doi.org/10.2307/256221

While, A., Ullman, R., & Forbes, A. (2007). Development and Validation of a Learning Needs Assessment Scale: A Continuing Professional Education Tool for Multiple Sclerosis Specialist Nurses. *Journal of Clinical Nursing, 16,* 1099-1108. https://doi.org/10.1111/j.1365-2702.2007.01693.x

Witsch, M. (2008). *Kultur und Bildung. Ein Beitrag für eine kulturwissenschaftliche Grundlegung von Bildung im Anschluss an Georg Simmel, Ernst Cassirer und Richard Hönigswald*. Würzburg: Königshausen & Neumann.

Yamnill, S., & McLean, G. (2001). Theories Supporting Transfer of Training. *Human Resource Development Quarterly, 12,* 195-208. https://doi.org/10.1002/hrdq.7

Yamnill, S., & McLean, G. (2005). Factors Affecting Transfer of Training in Thailand. *Human Resource Development Quarterly, 16,* 323-344. https://doi.org/10.1002/hrdq.1142