Rolf Arnold's systemic-constructivist perspective on self-directed learning

Beitrag 22

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DOI: 10.3278/6004599w022

Erscheinungsjahr: 2019

Schlagworte: Didaktik, Ermöglichungsdidaktik, Erwachsenenbildung, Lebenslanges Lernen, Lernkultur, Pädagogik

Der Artikel erschien in der Festschrift "Pädagogische Transformationsprozesse" für Rolf Arnold. Hier schreiben Wegbeleiterinnen und Wegbegleiter Analysen, Erinnerungen und Essays über Schulpädagogik, berufliche Aus- und Weiterbildung, Erwachsenenbildung, Organisationsentwicklung, Selbstbildung sowie Ermöglichungsdidaktik. Im Mittelpunkt steht die Frage, die Arnolds Forscherleben geprägt hat: Wie können Transformations- und Veränderungsprozesse pädagogisch inszeniert und begleitet werden?

An analysis of Rolf Arnold's systemic-constructivist perspective on self-directed learning

Thomas Howard Morris

Abstract

Rolf Arnold ist ein renommierter deutscher Professor für Erwachsenen- und Berufsbildung. In diesem Kapitel wird eine Analyse von Arnolds systemisch-konstruktivistischer Perspektive auf selbstgesteuertes Lernen im Vergleich zur internationalen Perspektive auf selbstgesteuertes Lernen aufgezeigt. Arnolds These unterstreicht, dass Kompetenzentwicklung aus einer ganzheitlichen Perspektive betrachtet werden muss. Lernerfahrungen, die von Geburt an gemacht werden, prägen stark unsere Neigungen, Vorlieben und Kompetenzen im Erwachsenenalter. Um die selbstgesteuerte Lernkompetenz zu fördern und die Lernenden auf ihre Arbeit und ihr Leben in einer modernen Welt vorzubereiten, wird vorgeschlagen, dass das Bildungssystem im gesamten Lebensverlauf ganzheitlich ausgerichtet sein muss. Praktische Implikationen und weitere Forschungsperspektiven werden gegeben.

Rolf Arnold is a renowned German professor of adult and vocational education. This chapter presents an analysis of Arnold's systemic-constructivist perspective on self-directed learning in comparison to international perspectives on self-directed learning and its facilitation in formal educational settings. Arnold's thesis highlights that competence development must be considered from a holistic perspective. That is, educational experiences from birth may strongly shape one's inclinations, preferences, and competencies in adult life. In order to facilitate the fostering of self-directed learning competence and in order to prepare learners for working and living in a modern world, it is discussed that an educational system needs to function holistically toward the goal of competence development across learners' life course. Practical implications and further research directions are given.

Keywords: Self-directed learning, systemic-constructivism, adult learning, workplace competence, formal education

Brief Introduction

Rolf Arnold is a renowned German professor of adult and vocational education with about 1.000 published works.[1] The purpose of this chapter is to present an interpretation of Arnold's systemic-constructivist perspective on self-directed learning theory, in an attempt to analyze how Arnold's ideas complement other international perspectives on facilitating self-directed learning in formal educational settings. In many contexts, self-directed learning represents a critical competence required for an adult's workplace and life.

Self-directed learning as a critical workplace competence

If the purpose of formal education is to prepare a person for life (cf. Lindemann, 1926), then a key purpose of formal education is to foster learners' workplace competence. Workplace competence concerns an employee's ability to act in order to successfully manage their occupational requirements (Arnold, Nolda, & Nuissl von Rein, 2019).

Boyer, Edmondson, Artis, and Fleming (2014) identified that self-directed learning competence is very important for preparing adults for their working life. Other scholars (e.g., Morris, 2018a) have positioned self-directed learning as a *critical* workplace competence. Thus, fostering learners' self-directed learning competence should be a principle endeavour of formal education in many contexts in our modern world (Arnold, 2015, 2017, 2019a, 2019b).

Self-directed learning has been defined as a "major, highly deliberate effort to gain certain knowledge and skill (or to change in some other way)" (Tough, 1971, p. 1). Or,

> a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (Knowles, 1975, p. 18)

Self-directed learning competence may be defined as the ability to pursue self-directed learning with success and efficiency: to proficiently direct one's own learning means and objectives in order to meet definable personal goals.

Self-directed learning competence may afford an adult and their society a multitude of benefits, including:

- enabling adults to adapt to social and contextual changes and grow through a proactive process of continual learning of new skills and knowledge (e.g., Arnold, 2017; Morris, 2018a);

1 Cf. Rolf Arnold's publication list, accessed on 30.11.2018 at https://www.sowi.uni-kl.de/fileadmin/paed/Dokumente/hobelsberger/2018/Ver%C3%B6ffentlichungsliste_Arnold_Stand_April_2018.pdf

- providing a certain protection against long-term unemployment through empowering an individual with the competence to upskill in the case of changes in economic conditions (Barnes, Brown, & Warhurst, 2016);
- facilitating the possibility of individuals escaping from oppressive life situations through learning new skills and knowledge (e.g., Bagnall & Hodge, 2018); and,
- assisting progression toward self-actualization—empowering a person with the potential to become who they could be through the process of continual personal development (cf. Arnold, 2017).

A contrasting perspective is that education that does not provide persons with the necessary competencies for their personal and working life could be termed a competence catastrophe: by keeping traditional forms of education in place, rather than designing education that focuses on learners' competence development (Arnold, 2019a).

Indeed, readers of the present paper should consider that self-directed learning competence represents just one critical workplace competence. Self-directed learning competence may however be especially valuable for persons who work in jobs in which conditions are continually changing. This is exampled in, but not limited to, medicine, computer science, engineering, nursing, psychology, and business management (e.g., Ma, Yang, Wang, & Zang, 2018).

Nonetheless, when considering Arnold's systemic-constructivist perspective on adult learning, appreciation should be given that this perspective is potentially applicable to all forms of competence development: a systemic-constructivist perspective is not only applicable to understanding how to foster self-directed learning competence in formal educational settings.

In the present chapter, first an overview of the systemic-constructivist perspective on self-directed learning is given, including the consideration that learning is a natural and important part of the meaning of being human. Afterward, practical considerations for realizing the possibilities for implementing a systemic-constructivist position in formal educational settings are given and future research directions are outlined.

A systemic-constructivist perspective on self-directed learning

Arnold (2017) highlights that a self-directed learning process is needed for individuals to partake in a "journey of continual improvement toward becoming who they could be" (p. x). His thesis emphasizes the holistic nature of an adult learner's experience of learning, which takes into consideration their life journey, or individual experiences from birth through to adulthood, until death.

The systemic-constructivist perspective builds on a more general view of constructivist epistemology in which learning is viewed as an individual, interpretive,

and active process of meaning-making (Merriam, Caffarella, & Baumgartner, 2007). According to constructivist theory, two implicit cognitive processes, assimilation and accommodation, work reciprocally in the process of meaning-making (cf. Piaget, 1964). Assimilation concerns the way in which new perceptual information is "fitted" to one's established knowledge structures. Accommodation refers to the process whereby existing knowledge structures are modified by experience.

An adult learner's personal understanding of the world and how they interpret new experiences, and make meaning of the world in which they live, is determined by their unique set of experiences and interpretations of themselves and their world since birth. Meaning-making is always an individual and personal, unique, process. However, in addition, a key consideration is that experience and learning never occurs in a social or contextual vacuum.

Arnold's (2017) work highlights that an adult's learning process, understanding of the world, and behavior in the present moment, are systemically grounded in one's experiences from birth. That is, one's personal and individual experiences, since nativity, may powerfully influence one's understanding, behavior, nature of habitual learning processes, and displayed competencies during adulthood.

Arnold's systemic-constructivist perspective on adult learning is complemented by Robert Kegan's constructive-developmental theory (Kegan, 2009). Kegan makes the key distinction that to grasp an understanding of the process of adult learning, rather than being concerned with what information we know, appreciating our way of knowing is essential. Kegan's constructive-developmental theory highlights that over time the ways we understand and construct experience can become more complex.

In this regard, in order to understand an adult learner's tendency and propensity toward self-directed learning, a person's childhood and adolescent experiences of learning should be considered. That is, according to this perspective, self-directed learning competence is not developed overnight or in a single course of education, but is a product of a lifetime of experiences of learning: a holistic and systemic process, or spiral, of competence development (cf. Arnold, 2015, 2017, 2019a, 2019b; Morris, 2019).

Thus, a person's early experiences in childhood of self-directed learning may have a strong influence not only on their propensity and tendency toward self-directed learning but also on their self-directed learning competence later in adulthood. In this regard, in order to examine the potential influence of a person's childhood and adolescent experiences of learning on their self-directed learning competence in adulthood, it would seem necessary to conduct longitudinal studies that follow and measure learners' self-directed learning experiences and competence from the early years of childhood through until the later years of adulthood. Retrospective studies may provide insight and complement such studies.

Kranzow and Hyland (2016) also discussed the need for a holistic educational system/approach toward competence development. This would require, perhaps, learner exposure to experiences of practicing self-directed learning and facilitated de-

velopment of the skills necessary for the self-directed inquiry process, in a cohesive and perhaps stepwise fashion possibly from the earliest days of parenthood and upbringing, through childhood and adolescent schooling, to workplace and adult lifelong learning.

The idea of a systemic approach toward an educational process of competence development goes against empirical studies on self-directed learning that report on relatively novel, short-lived, attempts for individual institutions or individual (perhaps innovative and forward-thinking) teachers to introduce a course of formal education that stipulates or suggests that students undertake self-directed learning: where learners control, or have ultimate choice over, their learning means and objectives (cf. Morris, 2001a).

For example, Kicken, Brand-Gruwel, van Merriënboer and Slot (2009) evaluated vocational educational processes in the Netherlands that stipulates young adult learners to undertake self-directed learning. The authors reported a key problem that students were not use to self-directed learning and often lacked the skills needed for a successful self-directed learning process (i.e., a lack of self-directed learning competence). These learners had been use to a teacher-directed learning process, perhaps through their entire schooling years.

Rather, in accordance with a systemic-constructivist perspective, there is a need for a holistic educational *system*—a system that operates collectively and progressively toward learners' competence development—rather than a process of trial and error of novel educational programs, in a single semester or education course, for example. In this regard, it should be considered that there may be inter-institutional differences regarding whether learners are exposed to competence development focussed learning processes or not, even within a single educational system.

In a recent novel systemic study, that examined whether teaching-learning transactions promoted self-directed learning in Further Education colleges in England, Morris (2018c) reported a wide-within college difference concerning the extent to which colleges supported either a self-directed learning process or a teacher-directed learning process. Indeed, through a thematic qualitative analysis of inspectors' comments within inspection reports, the author reported that the majority of teaching within colleges rated as "needs improving" by the inspectorate body represented a teacher-directed learning process—where teachers control the learners' learning means and objectives.

In comparison, in this study the majority of teacher-learner transactions in colleges rated as "outstanding" by the inspectorate body represented a balance of control between (1) the teacher allowing students a share of control over directing their learning means and objectives and (2) the teacher offering expert advice in order to assist learners in directing their learning means and objectives. As well as pointing out the possibility of inter-institutional differences within a single educational system regarding competence development processes, this study also highlighted that facilitating self-directed learning in formal educational settings inevitably involves a collaborative balance of control between teacher and learner.

This conclusion concurred with the hypothesis of Garrison (1997) who proposed that the process of facilitating self-directed learning, or "self-management of learning tasks" (p. 23), in formal educational settings may paradoxically represent a cooperative process: where "the control over management of learning tasks is realized in a collaborative relationship between teacher and learner" (p. 23). Garrison explained, "Issues of control must balance educational norms and standards (e.g., what counts as worthwhile knowledge) with student choice and the responsibility for constructing personal meaning" (p. 23).

The idea, and importance, of a collaborative learning process and enabling the possibility for the co-construction of knowledge is reflected in Arnold's LENA learning model framework, created by Arnold in a joint project with the Austrian WIFI Trainer Network (cf. Arnold, 2015; Morris, 2018b for review). Based on the concept of enabling didactics, and aiming to encourage lifelong and sustainable learning, the model has five components: self-paced, productive, activating, situated, and social.

Arnold's learning model emphasizes the contextual and pragmatic dimensions of a learning process. In this regard, recent scholarship on self-directed learning, such as that of Tan (2017), provide complementary perspectives to that of Arnold in that an effective learning process should consider both the learner's individual needs and the needs of the society in which the individual is situated.

Moreover, a recent model of self-directed learning from Sawatsky, Ratelle, Bonnes, Egginton, and Beckman (2017) was derived from employing Hiemstra and Brockett's Person Process Context model (2012) as a theoretical lens in an empirical study in a medical educational context. Aiming to explain the process, personal, and contextual factors affecting self-directed learning during residency training, the authors concluded that the self-directed learning process in this context began with a trigger that uncovered a knowledge gap. Learners progressed to formulating learning objectives, using resources, applying knowledge, and evaluating learning—reflecting projects of learning as per the classic study of Tough (1971). Sawatsky and colleagues indeed defined a "trigger" for self-directed learning as "External events [which] started the process" (p. 4).

The model of self-directed learning presented by Sawatsky et al. (2017) concurs with Arnold's (2015) perspective on self-directed learning in that construction of knowledge always occurs from the inside out, even though the process may be triggered by an external event. In other words, it could be summarized that a process of self-directed learning is always situated in the learner's context. Thus, the self-directed learner would seemingly benefit from paying particular attention to the conditions of the situation in order to derive an effective solution to their project of learning (cf. Morris, 2018a).

Moreover, it could be interpreted that Arnold's (2015) model extends upon Garrison's (1997) hypothesis. Concurring in the sense that the educator may assist students by providing useful directions regarding their learning means and objectives, such as providing useful resources and exampling a variety of learning methods for students to trial, but extending Garrison's hypothesis in highlighting that other

learners could represent a primary resource/source of collaboration in the process of self-directed learning. Thus, enabling a collaborative learning process and possibility for co-constructed meaning-making.

This perspective concurs with historical conceptualizations of self-directed learning. For instance, Knowles (1975) described the process as one that may, or often, occur *with* the help of others. Tough (1971) reported that learners often sought help from others in order to progress in their projects of learning.

Furthermore, in a novel historical empirical study on self-directed learning, Gibbons et al. (1980) analyzed the biographies of twenty acknowledged experts who had gained their expertise through self-directed learning and without formal education. The authors concluded that the self-directed learning process of these experts was highly collaborative. This included the process of seeking information, but also concerning the process of evaluation, where it was commonplace for experts to seek feedback from other experts in their field of expertise in order to gain recognition and progress further in their self-directed learning projects: reflecting, perhaps, a natural learning process of the human species.

The human species is capable of learning

A fundamental position of Arnold (2019a) and a key and important dimension of the systemic-constructivist perspective on adult learning is that the human species is capable of learning. Indeed, the capability of the human being to learn has enabled the human species to continue at the top rung of the food chain (Arnold, 2015). In this regard, we could consider how the scientific revolution and information age has contributed to the modern nature of adult learning, which has given rise to issues such as "fake news" (cf. Arnold, 2019b).

However, although the nature of adult learning has changed considerably over time (Arnold, 2019b), perhaps what has not changed is the relative competence of the human species to learn. This notion underlines Arnold's position on teaching, learning, and education (Arnold, 2015, 2017, 2019a, 2019b), which concurs with the humanistic positioning underlying the theory of self-directed learning (cf. Groen & Kawalilak, 2014).

In accordance with humanistic philosophy, learning is regarded as an apparatus for personal growth—placing the learners' needs as the central concern in the learning process (Elias & Merriam, 1995; Maslow, 1943). Humanistic philosophical assumptions include that learners are autonomous and capable of smart decision-making; have a sense of responsibility to themselves and others; are inherently good natured; possess an urge toward self-actualization; and have unique but unlimited potential for growth, determined by the learner's self-concept and individual understanding of the world (Elias & Merriam, 1995). It could be summarized that empowering learners' growth potential is a salient feature of the self-directed learning construct.

Additionally, Arnold's thesis builds on the work of key scholars such as John Dewey and Carl Ransom Rogers regarding the need for alternative forms of educa-

tion. These authors' theses concur in the sense that they argue that "traditional" forms of education that involve the process of knowledge and skill inculcation are not suitable for preparing persons for work and life.

In this regard, Arnold argues that learning to the human being is like breathing: learning occurs "in regular spurts, never stopping, sometimes flat, sometimes deep down, occasionally halting, but not for long" (cf. Arnold, 2019a, p. 1)—a position that learning is naturally self-directed and formal education should promote, facilitate, utilize, and enhance, humans' self-directed learning competence.

Moreover, Arnold (2015) also outlined some of the negative consequences associated with traditional forms of education that consist of knowledge and skill inculcation, exampled by Freire's (1970) banking concept of education. Arnold discussed that,

> ... slogans like "Lifelong Learning" or "Learning for Life" ... do not exactly elicit enthusiasm, agreement, and anticipation... Many people have become estranged from their own learning. The experience of learning is thought of as something expected of them from the outside, and in giving into this, they also feel a lack of authenticity and responsibility. The experience of learning is often remembered as stressful, as a pressure to perform, as a fear of failure, and as an alienation. (2015, p. 1)

This statement represents a potentially damming possibility of reality in some formal educational contexts for some learners, especially given the importance of lifelong learning in modern societies. Arnold's writing in this regard concurs with the thoughts of John Dewey. For instance, Dewey (1938/1963) wrote about formal education:

> The most important attitude that can be formed is that of desire to go on learning. If impetus in this direction is weakened instead of being intensified, something much more than mere lack of preparation takes place. The pupil is actually robbed of native capacities which otherwise would enable him to cope with the circumstances that he meets in the course of his life. We often see persons who have had little schooling and in whose case the absence of a set of schooling proves to be a positive asset. They have at least retained their native common sense and power of judgement, and its exercise in the actual conditions of living has given the precious gift of ability to learn from the experiences they have. (p. 48)

Moreover, Morris's (2018a) model of self-directed learning concurs with Arnold's systemic-constructivist perspective. Expanding on Houle's (1980) learning mode typology, Morris proposed and contrasted two learning models that could be employed in formal educational settings. The Reinforcing Model of Modes of Learning represents education in which learners consistently move between the modes of instruction and reinforcement. Instruction, in this instance, represents "the process of disseminating established skills, knowledge, or sensitiveness" (Houle, 1980, p. 32); performance (later renamed reinforcement; Houle, 1984), in this context, represents "the process of internalizing an idea or using a practice habitually, so that it becomes a funda-

mental part of the way in which a learner thinks about and undertakes his or her work" (Houle, 1980, p. 32).

Morris (2018a) highlighted that traditional forms of education, discussed as a problem by Arnold (2019a), may be perceived as a process of moving back and forth between these two modes, perhaps working progressively toward more difficult learning objectives in a stepwise fashion, as per a traditional educational curriculum (cf. Dewey, 1938/1963). Importantly, such education is underlined by behaviorist epistemology (cf. Skinner, 1971/1987; Thorndike, 1898; Watson, 1994), where learning outcomes are intended to be uniform and feedback is given to support the effectiveness of the process of knowledge and skill inculcation.

Morris (2018a) also proposed a second learning model that could be used to guide the facilitation of self-directed learning in formal educational settings: the Adapting Model of Modes of Learning. In brief, educational processes that enable learner *inquiry*, potentially alongside the modes of instruction and performance. In this context, inquiry could be defined as "the process of creating some new synthesis, idea, technique, policy, or strategy of action" (Houle, 1980, p. 31). This learning model inevitably stipulates real-world based educational activities in order to enable a constructivist learning environment and allow the possibility for facilitating self-directed learning in formal educational settings. Additionally, this model of learning may encourage learners to be *adaptive* in their performance, perhaps a critical requirement for living in a modern world in which social contextual conditions are rapidly changing.

Moreover, Morris highlighted the importance of operating the Adapting Model of Modes of Learning in educational settings, especially in terms of modulating the initiation and maintenance of learners' motivation for self-directed learning. Furthermore, an important difference concerning the potential learning outcomes associated with this model is that *creative* learning outcomes are possible in the learning process, which represents an important area for further research on facilitating self-directed learning in formal educational settings.

In this regard, returning to Arnold's (2015) LENA learning model, a key dimension of the learning process highlighted by Arnold is that learning should always be situated in the learner's context. On this point, if we consider that the learner themselves represent an important and central part of their context, then in concurring with Morris's Adapting Model of Modes of Learning, and as per a natural process of self-directed learning, a learner's learning projects will inevitably be differentiated in accordance with the learner's perception of their "self" and their environmental demands. In terms of adult learning, a good portion of learning will unescapably involve projects that are specific to a learner's workplace and life (cf. Tough, 1971).

Nonetheless, Arnold (2015) points out that the reality in some formal educational settings is that learning is not situated. This argument is supported through empirical evidence in some formal educational contexts (e.g., Morris, 2018c). Arnold highlights that consequently many learners may enter adulthood perceiving learning as a "negative" activity and some adults may become accustomed to associating

learning with educational experiences that are obligatory and have external regulations (Arnold, 2015, 2019a), which reflect behaviorist assumptions of learning and the Reinforcing Model of Modes of Learning (Morris, 2018a). Such educational experience may promote repetitive behavior (learners moving in *circles*), rather than promoting a *spiral* in learner growth through their life course (cf. Morris, 2019).

Practical considerations and future research directions

In accordance with a systemic-constructivist perspective on self-directed learning (Arnold, 2015, 2017, 2019a, 2019b), learners' educational experiences in childhood through to adolescence and adulthood must be considered holistically. This goes against many empirical works on self-directed learning that document cycles of trial and error of employing self-directed learning in a single program or semester of formal education (e.g., Kicken et al., 2009). A key issue being that such programs run the risk of trialling the facilitation of self-directed learning, but when learners do not reap the desired quality of learning outcomes educational programs may fall back toward more traditional teacher-directed models.

In this regard, rather than trying to foster self-directed learning through one single educational course (cf. Kasworm, 1983; Knowles, 1975 for further examples), a whole system of education must work collaboratively and progressively toward the goal of learner competence development. In order to achieve this, it seems important that there is coherence between government educational policy and institutional practice within a particular educational system (cf. Morris, 2018c).

Nevertheless, it is possible that some educational systems in some contexts do actually work systemically in accordance with Arnold's systemic-constructivist perspective on competence development. In this regard, case studies that example competence development through a systemic-constructivist lens, may be particularly insightful for a multitude of stakeholders of formal education. Moreover, longitudinal studies that follow learners' learning experience through the various steps of education, which could monitor progression in competence development, may supplement our understanding of which educational activities are conductive to competence development.

Finally, it should be considered that adults potentially require a discrete set of competencies depending upon their workplace requirements and life situation. Therefore, case studies in particular work domains, including cross comparisons of cases, may be especially helpful for understanding how certain competencies may be fostered to meet differential life or vocational demands.

Conclusion

One thing that is certain in our modern world is a high probability of change and uncertainty in social contextual conditions. In this regard, stakeholders of an educational system should work together collectively, if education is to succeed in preparing learners for their working and personal life. Rolf Arnold's systemic-constructivist perspective on self-directed learning may assist our understanding of how to plan and develop educational systems that focus on learner competence development. In conclusion, preparing learners with the competencies to live and work with success in our modern unpredictable world is not an insurmountable task.

Acknowledgements
I would sincerely like to thank, my master, Rolf Arnold for living by his theory and facilitating my process of self-directed learning ever since we met in September 2016.

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