

An Agentic Perspective Contrasting Autonomous Learning with Self-Directed Learning: A Theoretical Discussion

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Abstract

Recent research has focused on autonomous learning without offering a clear differentiation between this construct and self-directed learning. The purpose of this article is to provide a heuristic position—that is, a speculative, theoretical formulation—that suggests autonomous learning can be manifest in all three modes of agency (i.e., individual, proxy, or collective; Bandura, 2006) in the activation of learning activities; however, self-directed learning represents the degree to which personal agency is exercised individually by directing the creation of such activities. Thus, autonomous learning represents a necessary but not sufficient condition for self-directed learning.

Keywords: autonomous learning, self-directed learning, agency theory

1. Introduction

Approximately 2 decades ago, several theorists (Ponton, 1999; Ponton & Carr, 1999, 2000; Ponton, Derrick, & Carr, 2005; Ponton & Rhea, 2006) introduced the concept of agency to define autonomous learning. In this conceptualization, autonomous learning is viewed as an intentional manifestation of resourcefulness (Carr, 1999), initiative (Ponton, 1999), and persistence (Derrick, 2001) in learning activities based upon preexisting desire (Meyer, 2001). Consistent with social cognitive theory (SCT; Bandura, 1986), the exhibition of such agency in one's learning is dependent upon the reciprocal interplay between person, environment, and behavior (i.e., reciprocal determinism); thus, the emergent interactive view of agency (Bandura, 1989) is the relevant conceptualization as opposed to mechanical or autonomous agency.

The theoretical placement of autonomous learning within the larger framework of self-directed learning (SDL) has lacked formal treatment using agency theory. While Ponton and Rhea (2006) theorized that autonomous learning represents a subset of actions within the quasilinear behavioral model of SDL first presented by Ponton and Carr in 1999, they were not explicit in their contrast of autonomous learning versus SDL.

The purpose of this article is to provide a heuristic position—that is, a speculative, theoretical formulation—that suggests autonomous learning can be manifest in all three modes of agency (i.e., individual, proxy, or collective; Bandura, 2006) in the activation of learning activities; however, SDL represents the degree to which personal agency is exercised individually by directing the creation of such activities. Thus, autonomous learning represents a necessary but insufficient condition for SDL. Consistent with SCT, the important role of self-efficacy in personal agency will also be discussed as well as methods for its development using the individual agentic perspective to foster self-directedness.

2. Discussion

2.1 Autonomous Learning and Agency

In 1999, Ponton defined autonomous learning as follows: “an agenti[c] learning process in which the conative factors of desire, initiative, resourcefulness, and persistence are manifest” (p. xiii). The importance of these four factors was first proposed by Confessore (1991). In this early work, Ponton (1999) simply defined agency as referring to “acts done intentionally” (p. xiii). In addition, he asserted the following:

The difference between autonomous learning and self-directed learning is that autonomous learning represents a subset of activities [i.e., agentic actions] that can be associated with the process of self-directed learning. This subset of activities is the direct result of the learner’s autonomy. (Ponton, 1999, p. 14)

This differentiation was made due to the focus of the working definition of autonomous learning on desire, resourcefulness, initiative, and persistence with an assumption that SDL would encompass many more learning processes (i.e., add more restrictive delimitations) and, thus, reduce the types of learning activities categorized as SDL in comparison to autonomous learning. Since that time, the Learner Autonomy Profile (licensed to Human Resource Development Enterprises) has been used to assess learner autonomy by incorporating measures of desire (Meyer, 2001), resourcefulness (Carr, 1999), initiative (Ponton, 1999), and persistence (Derrick, 2001). More recently, a fifth instrument measuring self-efficacy in autonomous learning (Ponton, Derrick, Hall, et al., 2005) has been added to the profile. As Ponton (1999) argued, the agentic perspective of autonomous learning was an explicit focus on Long’s (1989) “psychological conceptualization” (p. 9) of SDL as opposed to process perspectives of SDL.

The importance of defining autonomous learning as an agentic process is rooted in the notion that it is “purposeful, intentional learning” (Ponton & Rhea, 2006, p. 45) directed toward accomplishing learning goals of personal value. When one feels that a learning activity is a viable means to accomplish a valued outcome; perceives requisite ability to engage

successfully in such an endeavor; and shows desire, initiative, resourcefulness, and persistence in such a learning activity one is engaging in an autonomous learning activity. However, such autonomy does not mean acting in isolation of environmental influences on thinking and action. Autonomous learning, like all other forms of human functioning, is dependent upon the bidirectional interaction between agent, environment, and behavior (see triadic reciprocal causation in Bandura, 1986). As learning generally involves the learner interacting with select learning resources, reciprocal determinism is explicitly relevant.

SCT (Bandura, 1986) recognizes three models of agency: mechanical, autonomous, and emergent interactive (Bandura, 1989). Mechanical agency describes the unidirectional influence of the environment on behavior (i.e., radical behaviorism) whereas autonomous agency posits that thinking is the sole determinant of behavior independent of environmental influence (i.e., radical cognitivism); however, neither model of agency is consistent with SCT or current concepts of autonomous learning (Ponton & Rhea, 2006). Rather it is the third conceptualization of agency, emergent interactive, that recognizes the bidirectional interaction of all three factors—environment, person, and behavior—in determining emergent human functioning that is adopted by Bandura (1986, 1989) and reflected in Ponton and Carr (1999, 2012). In this model of agency, the person encompasses cognitive, affective, conative, and biological processes while the environment represents everything external to the agent.

Because of the bidirectional interaction modeled by reciprocal determinism, the environment can take three forms: imposed, selected, and created (Bandura, 1997). There are aspects of our physical and social surroundings that are imposed upon us regardless of our desires; however, even this imposition is still influenced by our cognitive appraisals and conative reactions. In addition, the environment represents a potentiality from which we purposely select aspects with which to engage thereby creating an actual environment. Finally, humans have the capability to create environments that would not otherwise exist. As is evident in these three environmental forms, humans play an important agentic role in construing, determining, and creating actual environments that correspond to increases in personal agency (Bandura, 1997).

There are no inconsistencies between autonomous learning as presently defined and manifest learning activities that involve all three forms of the environment. The learner who is autonomous can intentionally and proactively (a) engage in a learning activity by making sense of an imposed environment; (b) select an aspect of the potential environment, such as taking a course, to facilitate desired learning; or (c) direct the creation of a new learning activity that would not otherwise exist. Desire, resourcefulness, initiative, and persistence can be present in all three learning situations.

Note that even directing the creation of a new learning activity can involve resources created by others; “there is no absolute agency” (Bandura, 2006, p. 164). However, environmental creation should involve the reshaping of a situation into something new. In the case of learning, the transformation involves the creation of a learning activity that corresponds to the traditional self-regulatory/self-directed processes of self-evaluation, goal setting, planning, monitoring progress, and making process adjustments (cf. Knowles, 1975; Oddi, 1987; Zimmerman et al., 1996; Zimmerman & Cleary, 2006). Ponton and Dondlinger (2022) and Ponton (2025)

discussed learning resource selection and self-evaluation, respectively, incorporating SCT as a theoretical framework; the arguments they present suggest a false dichotomy between process and personality perspectives of SDL due to the role that personality plays in influencing learning processes.

There is a difference between personal agency and the modes through which this agency is exercised. Personal agency is exercised whenever one engages in the following: intentionality, forethought, self-regulation, and self-reflection (Bandura, 2006). These aspects of personal agency are evident in Ponton and Carr's (2000) description of autonomy in SDL and their modeling of SDL vis-à-vis learner self-directedness via the quasilinear behavioral model (Ponton & Carr, 1999) based upon the work of Fishbein and Ajzen (1975). However, Bandura (2006) asserted that "everyday functioning requires an agentic blend" (p. 165) of the following three modes of personal agency: collective, proxy, and individual. Thus, personal agency is exercised through three distinct mechanisms.

Collective agency is exercised when one enlists a group of persons to synergistically contribute to the accomplishment of personally desired objectives. Proxy agency is realized when individuals influence "others who have the resources, knowledge, and means to act on their behalf to secure the outcomes they desire" (Bandura, 2006, p. 165). Finally, personal agency exercised individually describes the person who influences their thoughts, behaviors, and environment without relying on others. However, in all three modes of agency, personal agency is still manifest as long as the agent intentionally catalyzes action with the assistance of others, without such assistance, or using others as a proxy for personal functioning in an effort to accomplish anticipated outcomes while regulating personal thought and action with subsequent reflection upon the consequences of this manifest agency.

When a learning activity is construed as an environmental determinant that facilitates desired levels of learning, learner autonomy is present whether or not the varied forms of the environment (i.e., imposed, selected, or created) are activated by group, proxy, or individual, provided such activation occurs via personal agency. That is, a learner acts autonomously when intentionally deciding to choose the type of learning activity in which to engage. Such an activity can be (a) created solely by another (e.g., using proxy agency to enlist the help of another person to create a learning activity), (b) created in concert with others (e.g., selecting/creating a group activity that uses collective agency to shape the learning activity), (c) created individually where the agent regulates every aspect of the activity, or (d) imposed upon the individual who then chooses to engage in sense-making; however, in all situations it is the autonomous learner who intentionally catalyzes individual learning due to personal desire, resourcefulness, initiative, and persistence.

2.2 Autonomous Learning Versus SDL

As mentioned earlier, Ponton (1999) stated the following:

The difference between autonomous learning and self-directed learning is that autonomous learning represents a subset of activities that can be associated with the

process of self-directed learning. This subset of activities is the direct result of the learner's autonomy. (p. 14)

The “subset of activities” refers to the agentic actions associated with resourcefulness, initiative, and persistence based upon the degree to which one believes themselves capable of acting intentionally (cf. “desire” with Meyer, 2001). Precursors to intention formulation also include motivation and self-efficacy (Ponton, Derrick, Confessore, et al., 2005) and arguably personal responsibility (Ponton & Rhea, 2006). However, SDL involves more than these psychological conceptualizations of action. Extant process models of self-regulation/self-directedness referenced in the previous section bring to the forefront important distinctions in the modes of agency through which SDL is manifest when compared to autonomous learning.

Long (1989) asserted that SDL can be conceptualized along sociological (i.e., addressing learner isolation), pedagogical (i.e., addressing the learner's learning activities), or psychological (i.e., addressing the learner's mental activities) dimensions. Ponton (1999) asserted that the process description of SDL encompasses the sociological and pedagogical dimensions while the learner attribute description encompasses the construct of autonomy. Long stated the following:

The psychological conceptualization implies that fundamentally learning is a self-initiated, self-directed, and self-regulated cognitive process whereby the learner can *choose* [emphasis added] to ignore instruction, to merely absorb it by casual attention, to carefully memorize without critical reflection, or to seek to change or create an understanding of information. (p. 9)

Long (1989) further asserted that only “the *psychological conceptualization* is both necessary and sufficient to explain SDL” (p. 10) thereby highlighting his position that agency, as emphasized by the importance of the learner's choice in the learning process itself, is the defining characteristic of SDL. It has already been argued that agency is the defining characteristic of autonomous learning; however, more recent propositions in agency theory suggest that perhaps the definition of SDL can and should be nuanced further.

A sole focus on the psychological dimension of the learner neglects important structural aspects of a self-regulated/SDL activity. That is, a learning activity is a process that is purposely designed to accomplish a learning goal thereby resulting in a valued outcome (Ponton & Carr, 1999, 2000). Process descriptions congruent with the pedagogical dimension highlighted by Long (1989) are critical in understanding what is meant by SDL as differentiated from autonomous learning. Autonomous learning focuses on the psychological dimension of the learner as manifest in certain cognitive based actions; however, it is presently proposed that SDL involves these actions but much more: the creation of a learning environment through the individual mode of personal agency.

As argued earlier, personal agency in autonomous learning can be manifest in imposed, selected, or created learning environments and exercised via collective, proxy, or individual agency. In all combinations of these multiple dimensions a learner can show desire, initiative, resourcefulness, and persistence in their learning (e.g., when participating in a class); however,

self-direction implies more action. Self-direction implies enlisting the self-regulatory processes of identifying discrepancies between current and desired states, planning learning activities with relevant resources to bridge this gap, monitoring progress to assess achievement, and providing corrective feedback to the learning activity; that is, the *directing* aspects of the learning activity. This is not an imposed or selected environment as much as it is one created by the individual. Thus, it is presently proposed that SDL represents personal agency that is exercised individually in the creation of a learning activity whereby autonomous learning represents a necessary but insufficient condition in defining SDL.

This differentiation between autonomous learning and SDL does not preclude the notion that while participating in the former, the latter cannot exist. Exercising personal agency in any learning activity by incorporating SDL would support an “agentic blend” (Bandura, 2006, p. 165) and influence eventual attainments. As an example, it is often the case that courses offered to students fully prescribe the required activities and resources. When an individual is motivated to learn and shows the resourcefulness, initiative, and persistence to intentionally enroll and fully engage in such a course, this participation becomes an exhibition of autonomous learning. However, if during the course the student realizes extant deficiencies exist, creates a plan to remedy discrepancies in knowledge or skills, participates in this individually created learning activity with self-selected resources, and monitors the adequacy of personal progress and the activity itself, SDL is also occurring within this overall autonomous learning activity (i.e., the course itself). Achievement of personal goals often requires enlisting multiple modes of agency in an episodic manner.

A legitimate argument can be made that ambiguity exists when defining the creation of a learning activity particularly with respect to the planning and selection of resources. Following the example in the previous paragraph, should the “course” be viewed as a “self-selected resource” similar to a book in a library? If the conative factors associated with autonomous learning were exhibited in the intentional selection and study of a book where this could easily be defined as an SDL activity based upon previous definitions, why would not enlisting personal agency to enroll in a course (albeit a different self-selected resource but a self-selected resource nonetheless) also be labeled SDL? The difference lies in the term *directed*.

To direct learning not only involves an assessment of learning discrepancies and the creation of a learning activity by choosing appropriate resources and activities but also evaluating the adequacy of progress and the activity itself. In an SDL activity, it is the self-reflective agent who decides whether or not desired levels of learning are achieved, not a proxy; in SDL, it is the self-regulatory agent who uses achievement feedback to modify the learning activity if desired levels of learning are not being achieved, not a proxy. Defining an activity as SDL requires the exhibition of personal agency via individual effort in all facets of the self-regulatory cycle. As discussed earlier, the arguments presented by Ponton and Dondlinger (2022) and Ponton (2025) suggest a false dichotomy between process and personality perspectives of SDL due to the role that personality—such as self-efficacy—plays in influencing learning processes; that is, process and personality should be conceptualized via interacting determinants, which is consistent with SCT.

2.3 Self-Efficacy Development

Bussey and Bandura (1999) stated the following:

In the agentic sociocognitive view . . . people are self-organizing, proactive, self-reflective, and self-regulating, and not just reactive organisms shaped and shepherded by external events. The capacity to exercise control over one's thought processes, motivation, affect, and action operates through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than people's beliefs in their capabilities to produce given levels of attainments. Unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties. Perceived efficacy is, therefore, the foundation of human agency. (p. 691)

The motivation to embark upon and persevere within an SDL activity requires the agent to believe that requisite skills are present to design and participate in such an activity in the face of impediments. "Perceived self-efficacy is conceptualized as *perceived operative capability*. It is concerned not with what one *has* [in terms of a repertoire of rudimentary behaviors] but with belief in what one *can do* with whatever resources one can muster" (Bandura, 2007, p. 646). Many impediments to self-efficacy in autonomous learning activities have already been argued and empirically supported as relevant for differentiating adult learners (Ponton, Derrick, Hall, et al., 2005); these impediments should be equally relevant for SDL. However, due to the heuristic position presently proposed that SDL encompasses an expanded set of self-regulatory skills, self-efficacy development (and assessment) must go beyond mere agentic participation in a learning activity when it is not required by someone else (see Ponton, Derrick, Hall, et al., 2005, p. 61) but must include facets of self-directing one's learning.

Self-efficacy appraisals are based upon four sources of information: enactive mastery experiences, verbal persuasion, vicarious experiences, and physiological/emotive arousals (Bandura, 1997). Capability is often perceived to exist when previous experiences have been successful and such successes are attributed to personal ability (i.e., mastery experience). In addition, when respected referents provide persuasive arguments to an individual that the individual is capable of a successful performance, the individual may begin to believe this is indeed the case (i.e., verbal persuasion). Individuals also appraise their respective capabilities by observing models deemed similar to themselves (i.e., vicarious experience). Finally, interpretations of physiological and affective arousals from participating in an enactive mastery experience can be interpreted as an indicant of incapability thereby weakening efficacy or as an indicant of expanding capability with a concomitant strengthening of efficacy beliefs. In all cases, it is the agent and not some external evaluator who reflects upon the varied forms of efficacy information and arrives at a resultant efficacy belief; self-efficacy is perceived capability developed subjectively through one's cognitive filters, not some objectified assessment of capability.

Within formal education, self-efficacy in SDL can be strengthened by attending to these sources of efficacy information. Mastery experiences in which students must act autonomously while directing all self-regulatory facets of a learning activity can be part of curricular

requirements. Instructors can provide verbal persuasion to help convince students that resultant learning successes are attributable to personal capabilities rather than some outside facilitative influence (e.g., luck, assistance). Instructors can also highlight previously successful students as well as create group tasks that allow students to recognize the capabilities of similar others. Finally, instructors can help students to interpret arousals as indicants of expanding, rather than limited, capabilities. Armed with strong beliefs in personal efficacy, the self-directed learner is better able to reject disconfirming evidence of capability while selectively highlighting successful endeavors thereby feeling empowered to influence personal life trajectories via SDL activities.

Of course, this does not mean that humans whose self-efficacy in SDL was not intentionally attended to by outside agents are doomed to a life of dependency upon externally directed learning activities. The same sources of efficacy information are evaluated by all persons in or out of the classroom; thus, the development of self-efficacy is not confined to the walls of educational institutions. However, due to the resiliency of efficacy beliefs and the importance of preparing students for a lifetime of personal development, it should be a goal of formal education to attend to the development of self-directedness (cf. Ponton, 2021a) rather than leave it to happenstance after matriculation. Ponton (2021b) argued that a strong sense of self-inefficacy can be built upon extensive negative experiences—in contrast to weak self-efficacy built upon little information—thus creating psychological impediments to positive change; this supports the importance of strengthening self-efficacy as early as possible.

3. Conclusion

The remarks presented are merely my perspective on autonomous learning and SDL. Readers familiar with the SDL literature will find congruence between past ideas and those presented albeit with some variations in terminology. As constructs, the differentiation of autonomous learning with SDL resides within the realm of human discussion and debate. However, as it has been my intent to remain as faithful as possible to the precepts of SCT as well as remain consistent in my definitions of terms, I felt it necessary to propose a position that differentiates autonomous learning from SDL. In this manner, at least my writing can remain consistent with the theories upon which I stand.

In 1999, Ponton asserted that “self-directed learning exists without a unique definition” (p. 11) and cited Oddi (1987) and Merriam and Caffarella (1999) who observed that SDL research can be dichotomized into two categories of perspectives: process or personality characteristic. The two perspectives, if viewed in isolation, can contribute to ambiguity in defining what constitutes SDL (and ignore important interacting determinants); however, the position of this article is that defining a learning activity as SDL involves attention to both perspectives with the added caveat that SDL learning activities are those in which the learner directs the creation of all associated self-regulatory processes thereby exercising personal agency individually. It is by adding this latter restriction that SDL can be differentiated from autonomous learning where the latter is a necessary but insufficient condition for defining SDL. Using agency theory, a unique definition for SDL is offered that I hope will spawn spirited debate.

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References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175–1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman and Company.
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1(2), 164–180. <https://doi.org/10.1111/j.1745-6916.2006.00011.x>
- Bandura, A. (2007). Much ado over a faulty conception of perceived self-efficacy grounded in faulty experimentation. *Journal of Social and Clinical Psychology*, 26(6), 641–658. <https://doi.org/10.1521/jscp.2007.26.6.641>
- Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, 106(4), 676–713. <https://doi.org/10.1037/0033-295x.106.4.676>
- Carr, P. B. (1999). *The measurement of resourcefulness intentions in the adult autonomous learner* (Publication No. 9949341) [Doctoral dissertation, The George Washington University]. ProQuest Dissertations and Theses Global.

- Confessore, G. J. (1991). Human behavior as a construct for assessing Guglielmino's Self-Directed Learning Readiness Scale: Pragmatism revisited. In H. B. Long & Associates (Eds.), *Self-directed learning: Consensus & conflict* (pp. 123–146). Oklahoma Research Center for Continuing Professional and Higher Education of the University of Oklahoma.
- Derrick, M. G. (2001). *The measurement of an adult's intention to exhibit persistence in autonomous learning* (Publication No. 3006915) [Doctoral dissertation, The George Washington University]. ProQuest Dissertations and Theses Global.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Follett.
- Long, H. B. (1989). Self-directed learning: Emerging theory and practice. In H. B. Long & Associates (Eds.), *Self-directed learning: Emerging theory & practice* (pp. 1–11). Oklahoma Research Center for Continuing Professional and Higher Education of the University of Oklahoma.
- Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide* (2nd ed.). Jossey-Bass.
- Meyer, D. T. (2001). *The measurement of intentional behavior as a prerequisite to autonomous learning* (Publication No. 9999882) [Doctoral dissertation, The George Washington University]. ProQuest Dissertations and Theses Global.
- Oddi, L. F. (1987). Perspectives on self-directed learning. *Adult Education Quarterly*, 38(1), 21–31. <https://doi.org/10.1177/0001848187038001003>
- Ponton, M. K. (1999). *The measurement of an adult's intention to exhibit personal initiative in autonomous learning* (Publication No. 9949350) [Doctoral dissertation, The George Washington University]. ProQuest Dissertations and Theses Global.
- Ponton, M. K. (2021a). A teaching strategy based upon a model of agentic learning. *Journal of Studies in Education*, 11(1), 1–11. <https://doi.org/10.5296/jse.v11i1.18125>
- Ponton, M. K. (2021b). Weak self-efficacy versus strong self-inefficacy: A comment on the conceptual difference. *International Journal of Social Science Research*, 9(2), 1–7. <https://doi.org/10.5296/ijssr.v9i2.18244>
- Ponton, M. K. (2025). Self-evaluation: A theoretical discussion of a critical self-directed learning subfunction. *International Journal of Social Science Research*, 13(2), 1–12. <https://doi.org/10.5296/ijssr.v13i2.22912>
- Ponton, M. K., & Carr, P. B. (1999). *A quasi-linear behavioral model and an application to self-directed learning* (NASA Technical Memorandum 209094). NASA Langley Research Center. <https://ntrs.nasa.gov/api/citations/19990018653/downloads/19990018653.pdf>
- Ponton, M. K., & Carr, P. B. (2000). Understanding and promoting autonomy in self-directed learning. *Current Research in Social Psychology*, 5(19). <http://www.uiowa.edu/crisp>

Ponton, M. K., & Carr, P. B. (2012). Autonomous learning and triadic reciprocal causation: A theoretical discussion. *International Journal of Self-Directed Learning*, 9(1), 1–10. <https://www.sdlglobal.com/journals>

Ponton, M. K., Derrick, M. G., & Carr, P. B. (2005). The relationship between resourcefulness and persistence in adult autonomous learning. *Adult Education Quarterly*, 55(2), 116–128. <https://doi.org/10.1177/0741713604271848>

Ponton, M. K., Derrick, M. G., Confessore, G. J., & Rhea, N. E. (2005). The role of self-efficacy in autonomous learning. *International Journal of Self-Directed Learning*, 2(2), 81–90. <https://www.sdlglobal.com/journals>

Ponton, M. K., Derrick, M. G., Hall, J. M., Rhea, N. E., & Carr, P. B. (2005). The relationship between self-efficacy and autonomous learning: The development of new instrumentation. *International Journal of Self-Directed Learning*, 2(1), 50–61. <https://www.sdlglobal.com/journals>

Ponton, M. K., & Dondlinger, M. J. (2022). A sociocognitive discussion of learning resource selection in self-directed learning. *International Journal of Learning and Development*, 12(2), 46–56. <https://doi.org/10.5296/ijld.v12i2.19924>

Ponton, M. K., & Rhea, N. E. (2006). Autonomous learning from a social cognitive perspective. *New Horizons in Adult Education and Human Resource Development*, 20(2), 38–49. <https://doi.org/10.1002/nha3.10250>

Zimmerman, B. J., & Cleary, T. J. (2006). Adolescents' development of personal agency: The role of self-efficacy beliefs and self-regulatory skill. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 45–69). Information Age.

Zimmerman, B. J., Bonner, S., & Kovach, R. (1996). *Developing self-regulated learners: Beyond achievement to self-efficacy*. American Psychological Association.

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