Inviting Autonomy: Common Roots and Beliefs of Self-determination Theory and Invitational Education Theory

Dr. Jennifer D. Moss
Purdue University

Abstract

Often, educational and psychological theories stand independently of one another, focusing on particular, discreet components of learning or motivation. However, there are many similarities between invitational educational theory, which examines motivation and education, and self-determination theory, a theory of motivation and personality. Both theories, when applied to educational settings, value respectful relationships between teachers and students. They encourage practitioners to incorporate choice into their plans and recognize the importance of a person's perception to that person's related behavior. Invitational education theory and self-determination theory were developed separately by different researchers. However, the two theories emerged during the early 1970s, at a time when educators and psychologists were rejecting behaviorism and, instead, beginning to value a human-centered approach. This paper aims to introduce invitational education and self-determination theory, describe their origins from a similar place and time via humanistic psychology, and highlight key similarities in their beliefs with the ultimate goal of enhancing knowledge in order to continue to improve classrooms world-wide.

Keywords: Invitational Education theory, Self-determination theory, Humanism

Introduction

When a teacher issues an invitation to a lesson, she has made a choice to ask a selected group of students to join her. The teacher understands that some students may accept her invitation, others may decline, and the students' choices are to be respected. This basic idea from invitational education theory (IE; Purkey & Novak, 2016), that teachers can manage their classrooms and educate their students with dignity and empathy rather than threats and punishment, aligns with self-determination theory (SDT; Ryan & Deci, 2000b), which says humans have basic psychological needs for autonomy, relatedness, and competence. In fact, in addition to this initial sense of alignment, these two theories have a great deal more in common.

This paper explores the common roots of SDT and IE grounded in humanistic psychology and education, as well as the similar beliefs that both theories hold. After describing both theories, my first goal is to demonstrate how the two theories grew from a common place and time. Both IE and SDT were formulated during a time when psychology had moved from behaviorism to humanism and viewing the theories through this lens allows for a complete understanding of their initial contexts. My second goal is to highlight three key beliefs common to both IE and SDT: the need for autonomy, the importance of positive relationships and the value of perceptions.

The scope of invitational education is broad. When considering whether a school as a whole is an inviting place, the style of the administrators, the set-up of the classroom, and the teaching styles of the instructors are all examined (Purkey & Novak, 2016). Other educational theories are considerably narrower than IE, focusing on select parts of the educational process. Achievement goal theory (Pintrich, 2000) focuses on students' reasons for undertaking classroom tasks, such as to learn or to show what they already know. Expectancy-value theory (Wigfield & Eccles, 2000) describes how students act based on what they think they will gain or achieve from the task.

However, when seeking theories that are as broad as IE, SDT is a likely partner for comparison. It addresses behaviors and beliefs at the teacher/student level (Reeve, Jang, Carrell, Jeon, & Barch, 2004) all the way to school district concerns of the negative impacts of high-stakes testing (Ryan & Brown, 2005). SDT is theory of motivation and personality and has been studied extensively in schools, as well as in many other domains such as business, physical education and sports, health and wellness, and parenting (Ryan & Deci, 2017).

In order to provide the basis for further discussion about IE and SDT, some background information is necessary. These overviews should not be taken as comprehensive texts explicating all aspects of the theories, but as introductions to establish the common points that will be discussed later. Both IE and SDT have robust literatures that provide detailed explanations of their theories and applications (SDT: e.g., Deci & Ryan, 1985; Ryan & Deci, 2002; Vansteenkiste, Lens, & Deci, 2006) (IE: e.g., Purkey & Aspy, 2003; Zeeman, 2006).

Self-Determination Theory

Self-determination theory (Ryan & Deci, 2000b) is a comprehensive theory of motivation and personality, focused on nurturing inner motivational resources to enhance optimal functioning. A key component of SDT is the recognition of the three basic psychological needs: autonomy, relatedness, and competence. Autonomy refers to the perception that one's actions are volitional in nature, chosen by the self rather than directed by another. Relatedness encompasses the sense that one is liked, appreciated, and valued in a particular setting. Competence is perceived when one feels that they are successful in their tasks and their interactions (Ryan & Deci, 2017). According to SDT, educators are more successful when they support these basic psychological needs for their students (Reeve, 2002).

SDT also describes a person-environment dialectic, where what a person does affects her environment and in turn, the environment affects the person in a continuous cycle (Deci & Ryan, 2002). This two-part relationship shows that people have agency over their situations; they can act upon their surroundings and make changes. The environment is then changed, but it continues to act upon people in ways that create change in them as well. SDT believes that human beings are active agents, striving for continued growth and integration (Ryan & Deci, 2017).

A third component of SDT is the motivational spectrum. Often, when discussing motivation, other researchers and educators will view it as an all-or-nothing construct: James has motivation, but Stacey has none. However, SDT proposes that there is a spectrum of motivation from amotivation (literally, without motivation) through externally motivated behaviors, to intrinsic motivation (Deci & Ryan, 2002). This presents a more fine-grained analysis, showing that while a very few people are without motivation, most people are motivated in positive or negative ways. There are four ways of being extrinsically motivated. When people are motivated by rewards, money, or the specific outcome of the task, SDT describes this as external regulation.

This happens when we work just for the money, or train kids to complete tasks just for the stickers. With a slightly more internal focus, the next type of motivation is introjected regulation, where behavior is regulated by fears of guilt, shame, or a sense that one "has to do" the task to avoid an unpleasant outcome. Whenever we use the word "should" with ourselves or others, we are likely introducing introjected regulation.

Still considered extrinsic motivation but demonstrating more positive outcomes are identified regulation and integrated regulation (Ryan & Deci, 2000a). Identified regulation happens when a person takes on a task because he knows it is valuable and he can identify the importance. Integrated regulation describes times when a person engages in an activity because it represents who he thinks he is as a person. For example, if two students were assigned to read a chapter in a science textbook, an "identified" student might read because he understands the importance of learning the material in the chapter for his future work in class. A student displaying integrated regulation might read the same chapter because he feels that learning and doing his homework are parts of who he is, as a person. Mainly, it is important to understand that these two types of regulation represent the positive end of the spectrum of extrinsic motivation.

Beyond the different types of extrinsic motivation, at the most positive end of the motivation spectrum, lies intrinsic motivation. Intrinsically motivated behavior originates when a person volitionally undertakes a task because she finds it inherently satisfying and enjoyable (Ryan & Deci, 2000a). For example, a student may become engrossed in project identifying cloud formations because she chose the topic and finds it to be fun and enjoyable.

While there are times when intrinsic motivation is visible in educational settings, teachers often need to encourage students to complete tasks that they have not chosen and may not find enjoyable or satisfying. In these cases, SDT proponents would suggest that teachers return to the key component first discussed in the SDT section: autonomy. Teachers can support students' autonomy in the classroom, even for less preferred tasks, by enacting several strategies including providing a satisfying rationale for the activity, incorporating elements of choice, and promoting the value of the activity (Reeve, 2002).

These autonomy-supportive strategies stand in contrast to controlling teaching strategies (Reeve, 2002). When teachers control children, or when anyone seeks to control others, they try to control their thoughts and behaviors. Controlling teachers manage their classrooms with threats of punishment and sarcasm. Other controlling behaviors include shaming children, issuing commands, talking more than listening, and not allowing students to hold educational materials (Reeve, 2000).

Invitational Education Theory

Invitational education theory (IE) provides educators and researchers with a framework to guide teacher and administrator behaviors in school settings (Purkey & Novak, 2016). IE rests on three foundations: the democratic ethos, the perceptual tradition, and self-concept theory. The democratic ethos reminds educators that all students matter and that people grow by making their own decisions. The perceptual tradition suggests that everyone acts in accordance to the perceptions that they hold. Self-concept theory states that people have a sense of who they are, a self-concept which encompasses what they believe about themselves and their place in the world.

These three foundations are supported by five assumptions (Purkey & Novak, 2016). First, IE posits that people are capable, worthy, and responsible, and should be treated as such. Second, they point out that education is a cooperative undertaking. The third assumption focuses attention

on the fact that the process used along the way becomes the product in the end. Assumption four indicates that all people, students and adults alike, have limitless potential, and assumption five follows this up by indicating that people can reach this potential in environments that are intentionally inviting. The core values of these five assumptions from IE suggest that people are important and competent, that they possess the potential for growth, and that growth is fostered in collaborative environments that are designed intentionally for growth. Teachers in these classrooms express might have furniture sized for the students, create activities that allow for mistakes but promote learning, and demonstrate warm regard for their students by learning about their families.

Along with the foundations and supporting assumptions, IE posits five basic elements that describe how to enact an inviting style: intentionality, care, optimism, respect, and trust (Purkey & Novak, 2016). These five elements characterize IE as a teaching style that is enacted purposefully and predictably which builds trust and reliability. It is also a style that encourages growth of all parties involved, autonomous functioning, and the value in expending effort to achieve a worthwhile goal.

Points of Similarity between IE and SDT: Common Roots in Humanism

There are several ways that IE and SDT are similar, including calls for treating people with respect and honoring their potential for growth. The similarities are not surprising when one considers how both theories emerged at a time when psychology and education researchers were endorsing humanistic views of behavior and rejecting the behaviorism which had previously dominated both fields.

Both IE and SDT emerged during the early 1970s (Deci, 1971; Purkey, 1970). To better understand this context, it is vital to reflect on key points in education and psychology in the United States leading up to this time. As the previous century began, during the 1900s, behaviorism was a rising philosophy in education and psychology. Behaviorism is a theory that asserts people can be controlled by the rewards and punishments that are provided by their environment (Schwartz & Lacey, 1982). Pavlov published his research on classical conditioning in 1906 (Abrahmson, 2004). This was followed by Watson and colleagues founding the school of behaviorism in 1920 ("Timeline: The development of psychology,") and Skinner's publication of his first paper on conditioning in 1930 (Abrahmson, 2004). By the 1950s, behaviorism had found its way into education, with Skinner's proposal of teaching machines, apparatuses that deliver lessons and provide positive or negative feedback to students (Skinner, 1958). Skinner described these machines as a way to optimize educating one's self.

While behaviorism was taking center stage in education and psychology during much of this time, a more humanistic, person- or student-centered line of inquiry and research was materializing. Dewey began a movement of progressive education with works published as early as 1904. He sought to democratize education for all students (Dewey, 1975). Mathematics educators in the 1920s began to wonder about the value of teaching topics that weren't inherently valuable to basic, everyday life (Klein, 2003). In 1936, Piaget published *Origins of Intelligence in the Child*, which put forth his theories of how children are not mere vessels to be filled with knowledge but that children construct knowledge for themselves as they learn. The 1940s saw a rise of humanism in psychology with seminal publications by Rogers and Maslow (Maslow, 1943; Rogers & Carmichael, 1942).

Humanistic psychologists began to organize in the late 1950s (Moustakas, 1986), with the development of a journal, edited books, and a conference. During the 1960s psychologists and educators shifted away from behaviorism (Buhler, 1971). Rogers's 1961 work, *On Becoming a Person*, explained that effective psychotherapy should be grounded in a relationship between the patient and the therapist, instead of a behaviorist-focused, one-way delivery model where the therapist fixes the patient. Bruner's 1966 work, *Toward a Theory of Instruction*, helped continue this move away from behaviorism and toward cognitive approaches in education.

It is against this backdrop that SDT and IE emerged in the late 1960s and early 1970s. Purkey published on self-concept and academic achievement in 1967 and 1970. His early work focused on the relationship between self-esteem and students' school achievement, along with the way that humans develop in an environment that provides social interactions (Purkey, 1970). By addressing self-esteem and achievement, he incorporated the humanistic idea of cognition rather than relying on the behaviorist notion that people merely react to their environment, as Skinner's theories on condition proposed (Abrahamson, 2004). Considering the value that humanists place on relationships, Purkey (1967) cited humanists, including Rogers, as he discussed how the self was a social product, based on one's own perceptions, and growing from one's interactions with the environment. Beginning in 1968, Purkey and Siegel were also training teachers in methods to humanize education, sharing with them much of what would become IE (Purkey, 2016).

As noted in Table 1 (p. 23), SDT was not named as a theory until Deci and Ryan's 1985 book, *Intrinsic Motivation and Self-Determination in Human Behavior*, but Deci began publishing the ideas that would ultimately be part of the foundation as early as 1971. Soon after, Deci introduced cognitive evaluation theory, now included as a mini-theory of SDT, which suggests that social contexts impact one's intrinsic motivation. It posits that people evaluate messages they receive, rather merely act upon them and that the relationship is an important part of whether a person would be intrinsically motivated to act. Further addressing intrinsic motivation, Deci placed his work in direct contrast to the behaviorists as he explained that money and rewards decrease intrinsic motivation. At the time, behaviorists believed that if a task provided a positive reward then a person would keep doing the task, regardless of the person's context (Deci, 1972). Deci pointed out that the effectiveness of this motivational tactic depended on entirely external motivators and ignored internal motivators. Deci discussed how the behaviorists were only satisfying Maslow's lower order needs for money and tangible rewards, while neglecting higher order needs such as self-esteem and self-actualization.

Table 1
IE and SDT roots in humanism

	Timing	Rejection of behaviorism	Person-centered beliefs
Humanism	Humanist theories began being put forth as early as 1904 (Dewey) and continued through the first half of the 20th Century (Piaget, 1936; Maslow, 1943). Humanistic psychologists organized in 1950s	Support of cognitive approaches to education instead of motivating by rewards and punishments (Bruner, 1966) Topics in education should be inherently meaningful to students (Klein, 2003)	Importance of relationship between people (Rogers, 1967) Children construct information, are not empty vessels (Piaget, 1936)
Invitational Education Theory	Purkey published The Self and Academic Achievement, 1967	People are always motivated, operating from their beliefs at the time, not only from rewards and punishments (Purkey & Aspy, 2003)	The self is a social product, in relationship with others (Purkey, 1967)
Self-determination Theory	Deci published in 1971 on how rewards undermine intrinsic motivation	Rewarding people for doing tasks undermines their intrinsic motivation (Deci, Sheinman, Wheeler, & Hart, 1980)	Learning is enhanced when teachers respect students and provide supportive classrooms (Deci, Sheinman, Wheeler, & Hart, 1980)

Authors and researchers over time have maintained the ties between humanism and the two theories, IE and SDT. In 2003, Purkey and Aspy wrote about how IE typified humanistic psychology in practice, as it is a theory that encourages fulfillment of human potential. In this particular instance, Purkey and Aspy described how low-performing schools were transformed from failing schools managed with "law-enforcement techniques" (p. 2) such as metal detectors and security cameras, to a welcoming and inviting environment where students scored high on standardized achievement measures. Novak (1981) explained that the name for IE came about as an alternative to "humanistic education," a term that he felt had become overused. Researchers in SDT have published articles in the *Journal of Humanistic Psychology*, including Sheldon and Kasser's 2001 paper about well-being, goal concordance, and support for humanistic theories.

Points of Similarity between IE and SDT: Common Beliefs

From their common roots, there are three key beliefs that SDT and IE share. Both theories value teacher autonomy support and promote relatedness between students and teachers. In addition, they both recognize how a person's perception is the basis for his behavior.

Autonomy

According to SDT, autonomy is feeling volitional and choiceful in your actions (Ryan & Deci, 2002). For example, did the student complete the task because she wanted to? Or did she complete the task because she was trying to achieve a reward or avoid an unpleasant consequence? Was her behavior motivated from within, or was she compelled by outside forces? Autonomy (along with relatedness and competence) is seen as a basic psychological need in SDT, as previously mentioned. It is necessary for the basic functioning of human beings, just as air and water are vital physiological needs (Ryan & Deci, 2000b).

Autonomy is not necessarily synonymous with independence, nor is it the opposite of dependence, according to SDT (Ryan & Deci, 2002). Following directions can be done autonomously if one endorses the behavior requested. For example, when a teacher introduces an assignment to her students, she may need to give them very strict guidelines as the assignment is part of a larger project that will build off of this assignment. If the teacher helps her students understand the need for the strict guidelines it is more likely that the students will follow them autonomously. It is also entirely possible to work independently and feel pressured into doing so. A teacher might create a project where students can work in pairs, but she might pressure a few high-achieving students to work alone so they can challenge themselves. These students will likely agree to work independently, but not with autonomy.

When teachers attend to their students need for autonomy, SDT refers to this as autonomy support (Reeve, 2002). Teachers who support their students' need for autonomy do the following: listen to their students, allow students to complete tasks in their own ways, help students draw upon their own internal motivation, provide information about and reasons for tasks, demonstrate the value of the tasks, and understand and accept when students express negative emotions (Reeve, 2014). For example, teachers supporting their students' autonomy might allow them to choose their own topics for a presentation as well as their own way of presenting the material, rather than ask every student to report on the same book in the same way. They might also listen to their students' complaints about a third day of indoor recess due to frigid temperatures, rather than punish them for loud whining.

While using different language, IE also values autonomy and autonomy support, describing a "dynamic and ethical" way of "doing-with" other people rather than "doing-to" others (Purkey & Novak, 2016, p. 8). When teachers are doing things to other people, they are controlling them – the opposite of autonomy support. We can see when teachers describe what they do, including making students take tests, getting them to line up, and giving them homework. Teachers that are doing with their students might say instead that they are working on algebra problems together, finding out what their students know, and helping them get ready for lunch.

The democratic ethos that IE proposes is another form of autonomy support, reminding educators that it is important to allow people to express their needs on issues that impact their lives (Purkey & Novak, 2016). Brinson and Miller (1995) echo this in saying that students should be invited to be part of the educational processes that will affect them. For example, high school history students might be invited to decide if they want to organize a field trip to a local historical

site or invite a guest speaker to their class. Fourth grade students might be asked to vote on whether they have their weekly spelling tests before or after lunch.

In autonomy supportive teaching, the idea is to encourage the students to find their inner motivation resources to complete the task because research indicates that students who are controlled do poorly compared to students who act autonomously (Reeve, 2002). IE also believes that motivation is a force that is internal to each person, rather than something that can be bought with stickers, rewards, and other reinforcements (Purkey & Novak, 2016). In IE, how we do something matters – trying to achieve good outcomes through bad means is considered ineffective.

Relatedness between Teachers and Students

Both theories value building strong, positive relationships between teachers and students. In SDT, this is referred to as relatedness, one of the three basic psychological needs that were previously discussed (Deci & Ryan, 2002). We have a need for relatedness and relationships that we have either fulfill this need or thwart it. Ideally, relationships between teachers and students should fulfill the students' needs for relatedness, as well as the teachers' needs. In IE, this need for positive relationships is best explained by care, one of the five basic elements. Purkey and Novak (2016) describe caring teachers as having empathy, warmth, and positive regard for their students and themselves. Linking the theories, as teachers develop positive relationships with their students, the caring that they exhibit satisfies the students' relatedness needs. Beyond the classroom, as caring collegial relationships develop at school, teachers satisfy their own needs for relatedness and those of their fellow teachers as well.

In order to build positive relationships, IE suggests that teachers should be personally inviting with others, which is one of the steps in the Four Corner Press of being personally and professionally inviting with one's self and others (Purkey & Novak, 2016) In order for students to feel that they belong in the classroom community, teachers can learn about students' families and outside interests, they can share information about themselves and their activities away from school, and celebrate classroom success with their students. This focus on being personally inviting maps onto SDT, which identifies that relatedness-building actions on the part of the teacher also created a more autonomy-supportive classroom environment (Reeve, 2002). These actions include listening, answering student-generated questions, taking students' perspectives.

Students in classrooms with higher levels of relatedness also are more likely to internalize the teacher's values and find more identified regulation for learning (Niemiec & Ryan, 2009). Student satisfaction with the class also increases when positive relationships are valued (Amos, in Purkey and Stanley, 1991). Lacking a positive relationship with teachers may even detract from students' school experiences, leading to decreased engagement and enjoyment and higher levels of school-related anxiety (Klassen, Perry, & Frenzel, 2012).

Perception

Both SDT and IE believe that people's actions are based on their perceptions of their contexts. When a student believes that a teacher is insincere in his invitation to learn a new multiplication skill, he may respond with negativity. When a student perceives that a book report assignment is too difficult, she may withdraw from the assignment because her need for competence has been thwarted. In either case, the invitation might have been sincere and the assignment might have been well within the student's abilities, but the perceptions are what drive the behaviors.

There are many ways that SDT addresses perception. Cognitive evaluation theory, a mini-theory of SDT, suggests that a person's perceived sense of control and competence will determine how intrinsically motivated she is for a task (Ryan & Deci, 2002; Vallerand & Ratelle, 2002). Positive effects of a higher perceived sense of control include better performance, increased well-being, less aversion of unpleasant situations, and reduced sense of helplessness. In addition, when a person receives payment for a task that was already interesting, the level of intrinsic motivation decreases suggesting that the perception of the task has changed from interesting to something that is only done for money (Vallerand & Ratelle, 2002)

The perception of how much control one has over one's behavior has positive effects including enhanced performance and well-being, decreased aversion for unpleasant circumstances, and decreased helplessness, via many research studies. In describing what determines a person's motivation for an event or task, Vallerand and Ratelle (2002) talk about how it is determined by the how well the context advances a person's perception of autonomy, relatedness, and competence. If a student believes that he has no control over his performance on a group project because other students have taken charge, his positive motivation will decrease. Her teacher may disagree and say that he does have control over his performance, but the student himself perceives that he has none, and it is that perception which will determine his motivation and, ultimately, his performance. It is impossible to functionally measure a person's sense of autonomy, competence, and relatedness. Instead, we rely on the person's perception of how well those needs are filled. As it is said so often, perception is reality.

Invitational education echoes these sentiments with their foundational statements about the perceptual tradition and self-concept (Purkey & Novak, 2016). The behavior that we see from other people is a function of how they perceive the world around them, and at bottom, how they perceive themselves. People strive to preserve and augment their perceived self. In addition, IE also sees perceptions in the interpretation of any invitation that has been issued. A teacher may issue an invitation to a student to join a lunchtime book group, but the student may not perceive the invitation as sincere if he feels that the teacher only wants him to go because his language arts grades are slipping. However, Purkey and Novak (2016) point out that to students who have not had experience with being invited, even a small invitation will be perceived positively.

Novak (1981) points out that perception should also be considered when issuing invitations. A teacher might consider his approach to be inviting, but the students may not perceive it that way. He points out that a message is inviting if it "affirms a person's value, ability, or responsibility," (p. 5) but that the recipient then has the job of decoding the message, and will ascribe perceived intent. A student may not perceive an invitation the same way that a teacher or observer intended, and since in schools most of the time the student is on the receiving end of invitations, it is the student who decides whether the message was inviting or not.

Linking both of the theories, SDT and IE allow that, for each person, his perception is his reality. Students who are intrinsically motivated to read may lose interest when they are provided with an opportunity to earn incentives for each book completed. Framing this incentive program as an invitation, the teacher may have meant only to reward the high performing students. However, students create their own perception of the situation which in this case will likely be one of perceived teacher control.

Conclusion

Self-determination theory and invitational education theory share common roots and beliefs. Both theories grew from the movement of psychology and education toward humanism and away from behaviorism. They rejected the idea that all behavior was motivated only by the

rewards and punishments that the environment presented. Instead, these teachers and researchers began to see humans as acting in accordance with their own individual beliefs. IE focuses on schools and classrooms. Self-determination theory has been successfully applied to education, work, sport, and health. However, they share common key beliefs: autonomy is a necessary condition for quality learning; positive relationships support experiences in the classroom; and, the students' perceptions motivate their behaviors. By recognizing and understanding the bonds between SDT and IE, practitioners and theorists will be able to integrate the knowledge from both theories in order to continue to improve classrooms world-wide.

References

Abrahmson, C. I. (2004). History of psychology timeline. Retrieved from http://psychology.okstate.edu/museum/history/.

Brinson, K. H., & Miller, J. (1995). *Invitational theory and total quality management: Implications for professional practice and educational reform*. Paper presented at the Northeastern Educational Research Association conference, Ellenville, New York.

Bruner, J. (1966). *Toward a theory of instruction*. Cambridge, MA: Belknap Press.

Buhler, C. (1971). Basic theoretical concepts of humanistic psychology. *American Psychologist, 26*(4), 378.

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18*(1), 105.

Deci, E. L. (1972). Intrinsic motivation, extrinsic reinforcement, and inequity. *Journal of Personality and Social Psychology, 22*(1), 113.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Springer US.

Deci, E. L., & Ryan, R. M. (2002). Overview of self-determination theory: An organismic dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.

Deci, E. L., Sheinman, L., Wheeler, L., & Hart, R. (1980) Rewards, motivation, and self-esteem.

The Educational Forum, *44*, 429-433, doi:10.1080/00131728009336186

Dewey, J. (1975). *Democracy and education: An introduction to the philosophy of education*: Free Press: New York.

Klassen, R. M., Perry, N. E., & Frenzel, A. C. (2012). Teachers' relatedness with students: An underemphasized component of teachers' basic psychological needs. *Journal of Educational Psychology, 104*(1), 150.

Klein, D. (2003). A brief history of American K-12 mathematics education in the 20th century. In J. Royer (Ed), *Mathematical cognition*, 175-259. Charlotte, NC: Information Age Publishing.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370.

Moustakas, C. (1986). Origins of humanistic psychology. *The Humanistic Psychologist, 14*(2), 122-123. doi:10.1080/08873267.1986.9976764

Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *School Field, 7*(2), 133-144.

Novak, J. M. (1981). *Clarity begins at home: An analysis of key ideas of invitational education.* Paper presented at the American Educational Research Association conference, Los Angeles, California.

Piaget, J. (1936). *The origins of intelligence in children*. New York: Norton.

Pintrich, P. R. (2000). An achievement goal theory perspective on issues in motivation terminology, theory, and research. *Contemporary Educational Psychology, 25*(1), 92-104.

Purkey, W. W. (1967). *The self and academic achievement*. Gainsville, FL: Florida Educational Research and Development Council.

Purkey, W. W., & Stanley, P. H. (1991). *Invitational teaching, learning, and living*. Washington, DC: National Education Association.

Purkey, W. W. (1970). *Self concept and school achievement*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Purkey, W. W. (2016). History of International Alliance for Invitational Education. Retrieved from https://www.invitationaleducation.net/iaie/history/

Purkey, W. W., & Aspy, D. (2003). Overcoming tough challenges: An invitational theory of practice for humanistic psychology. *Journal of Humanistic Psychology, 43*(3), 146-155.

Purkey, W. W., & Novak, J. N. (2016). *Fundamentals of invitational education* (A. T. Schoenlein Ed. 2nd ed.). New York: The International Alliance for Invitational Education.

Reeve, J. (2002). Self-determination theory applied to educational settings. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.

Reeve, J. (2014). *Understanding motivation and emotion* (6th ed.). Hoboken, NJ: Wiley.

Reeve, J., Jang, H., Carrell, D., Jeon, S., & Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motivation and Emotion, 28*(2), 147-169.

Rogers, C. (1967). *On becoming a person*. London: Constable.

Rogers, C., & Carmichael, L. (1942). *Counseling and psychotherapy; newer concepts in practice*. Boston: Houghton Mifflin.

Ryan, R. M., & Brown, K. W. (2005). Legislating competence. In A.J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation*. New York: Guilford Press.

Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology, 25*(1), 54-67.

Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist, 55*(1), 68.

Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory: An Organismic-dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination theory*. Rochester, NY: The University of Rochester Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: The Guilford Press.

Schwartz, B., & Lacey, H. (1982). *Behaviorism, science and human nature*. New York: Norton.

Sheldon, K. M., & Kasser, T. (2001). Goals, congruence, and positive well-being: New empirical support for humanistic theories. *Journal of Humanistic Psychology, 41*(1), 30-50. doi:doi:10.1177/0022167801411004

Skinner, B. F. (1958). Teaching machines. *Science, 128*(3330), 969-977. doi:10.1126/science.128.3330.969

Timeline: The development of psychology. (2009) Retrieved from https://www.theguardian.com/lifeandstyle/2009/mar/07/timeline-psychology-history

Vallerand, R. J., & Ratelle, C. F. (2002). Intrinsic and extrinsic motivation: A hierarchical model. *Handbook of self-determination research, 128*, 37-63.

Vansteenkiste, M., Lens, W., & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational Psychologist, 41*(1), 19-31.

Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology, 25*(1), 68-81.

Zeeman, R. D. (2006). Glasser's choice theory and Purkey's invitational education: Allied approaches to counseling and schooling. *Journal of Invitational Theory and Practice, 12*, 46-51.

To contact the author:
Jennifer D. Moss,
Center for Instructional Excellence, Wilmeth Active Learning Center,
340 Centennial Mall Drive, Suite 3007,
Purdue University,
West Lafayette, Indiana, 47907
Email: moss16@purdue.edu