Utilizing Self-Determination Theory in Teaching the Research and Evaluation Course

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Abstract

Research is an important component in counselor preparation. However, students often are not motivated in taking the research course. The author explores and applies the Self-Determination Theory (SDT; Ryan & Deci, 2000) to teaching the research and evaluation course. Self-Determination Theory posits that student will be autonomously motivated to learn when basic needs of autonomy, relatedness, and competence are present in the classroom. Strategies to increase all three basic needs are discussed in this paper.

Keywords

A fundamental aspect of counselor training and preparation is research (Steele & Rawls, 2015). The Council for the Accreditation of Counseling and Related Educational Programs (CACREP) underscores the importance of research by establishing research and program evaluation as one of the eight common core areas (CACREP, 2015). Accordingly, all counselor education programs accredited by CACREP is required to document ways in which research is covered in their program (CACREP, 2015). Similarly, Kaplan and Gladding (2011) consider research to be a central strategy in unifying and strengthening the counseling profession. Furthermore, research is important for client care as there is a growing trend towards evidence-based practice documenting client progress and outcome (e.g., American School Counselor Association [ASCA], 2012; Patel et al., 2013). Thus, research is an integral aspect of best practice.

Despite the importance of research within the counseling profession, there is evidence to suggest problematic areas with the teaching and learning of the research course. For example, Steele and Rawls (2015) examined master's-level students' attitude towards quantitative research training and found that participants in their study had negative to neutral attitudes towards quantitative research. Furthermore, participants reported that they possess low efficacy on quantitative research, despite rating quantitative research as valuable (Steele & Rawls, 2015). These results were consistent across counseling specialties (e.g. school counselors, clinical mental health, marriage, couple, and family) and counseling programs (CACREP vs. non-CACREP; Steele & Rawls, 2015). The finding of low self-efficacy extends to doctoral students too, as Jones (2012) found that doctoral students in counselor education reported a lack of confidence in their quantitative research skills.

A few reasons have been postulated for low self-efficacy. In observing his own teaching experience, Gerig (2012) noted that master's-level students are disinterested in research because learning about research skills does not fit with the idea of becoming skilled clinicians. Due to the perceived gap between research and practice (Murray, 2009), students may have low motivation to learn research and statistical concepts, leading to low self-efficacy. Additionally, there could be anticipatory anxiety from course expectations, such as learning about statistical concepts and completing a research proposal (Gerig, 2012).

Based on the author's teaching experience, there could be another reason for students' disinterest in learning about research: prior negative experience. The first author noted that many students have had a course in research during their undergraduate degree. However, most students described their experiences as negative. The combination of negative prior experience and the lack of connection between research and practice could contribute to students being disinterested and unmotivated to take the research and evaluation course.

Considering these obstacles, educators may wonder "How can I motivate students to engage with the course and course materials?" The answer to this question has two major implications. Firstly, research has shown that motivated students are more likely to engage with the materials, which results in greater self-efficacy and perceived knowledge transfer (Hsu et al., 2019). Possessing a higher sense of self-efficacy could propel students to be competent counselors by altering their attitude towards evidence-based practice (EBP), which ultimately results in greater client care. Secondly, motivated students reported higher satisfaction in their major (Schenkenfelder et al., 2020). Students' satisfaction plays an important role in faculty evaluation, especially for tenure and promotion. As such, finding motivational strategies benefit both the students and the instructor. In this paper, we propose integrating Self-Determination

Theory (SDT) in teaching the Master's level research and evaluation course. Due to the scant research in this area, we included research findings from both Master's and doctoral level students. We will first provide a brief overview of SDT and its related components before moving to specific strategies to increase students' motivation. Finally, we end the paper with some additional considerations.

Self-Determination Theory

Self-determination theory (SDT) is a "…broad theory of human development and wellness, with strong implications for education" (Ryan & Deci, 2020, pg.1). According to SDT, there is a continuum of human motivation ranging from amotivation (not motivated) to extrinsic motivation (somewhat motivated) to intrinsic motivation (most motivated). Intrinsic motivation refers to activities that are done due to individuals' inherent interest and enjoyment (Deci & Ryan, 2000). Although such activities are usually fun and fulfilling, individuals also strive to engage and master these activities. According to Ryan and Deci (2017), intrinsic motivation is likely the catalyst for human learning across the life span, as opposed to external instruction and mandated learning. An example of intrinsic motivation is when students learn for the sake of learning and find learning enjoyable.

Extrinsic motivation refers to behaviors conducted for reasons other than their innate satisfaction (Ryan & Deci, 2020). SDT differentiates four types of extrinsic motivation: *external, introjected, identified,* and *integrated regulation*. Behaviors that are conducted due to rewards and punishments are known as *external regulation*. Individuals with externally regulated motivation perceive that their behaviors as non-autonomous and controlled (Ryan & Deci, 2020). An example of externally regulated behavior is when students study the research course for the sake of getting good grades. *Introjected regulation* refers to partially internalized extrinsic motivation. Thus, students study to receive good grades because it contributes to their self- esteem via internalized

messages about academic achievement (e.g. I'm a good student, I'm smart). In *identified regulation*, individuals consciously endorse the value of an activity, resulting in a relatively higher level of volition to act on a behavior (Ryan & Deci, 2020). Students who have this type of motivation will be motivated to learn the research course to better serve their client as a competent practitioner-scholar. Lastly, *integrated regulation* refers to individuals that endorse the value of the activity and find the activity congruent with other values and interests (Ryan & Deci, 2020). Students who are integrated will want to study the research course not just because they want to be a competent practitioner-scholar, but because they want to be a better consumer of research in general. Although identified and integrated regulation are similar to intrinsic motivation in the sense that they are highly volitional, they differ on one key aspect: intrinsic motivation is centered upon enjoyment and fun whereas identified and integrated regulations are centered upon the value of the behavior (worthwhile even though not pleasurable) (Ryan & Deci, 2020).

The last type of motivation is amotivation, which is defined as a lack of intentionality to act (Deci & Ryan, 2008; Ryan & Deci, 2020). Amotivation can be caused by a number of factors: perceived lack of competence, lack of interest, or lack of value of a particular behavior (Ryan & Deci, 2020). Counseling students may be amotivated when taking the research and evaluation course because the idea of learning research may not fit with their perception of a skilled counselor (lack of value; Gerig, 2012; Murray, 2009) and the anxiety that comes from learning statistical terms and completing a research proposal (lack of competence; Gerig, 2012). Figure 1 provides the continuum of motivation as conceptualized by SDT.

Figure 1

Continuum of motivation as proposed by SDT

Types of motivation	Amotivation	Extrinsic (External) regulation)	Extrinsic (Introjection)	Extrinsic (Identification)	Extrinsic (Integration)	Intrinsic
Attributes	No interest	Reward and punishment	Achievement makes oneself feel good	Agrees with the value of activity	Identification of value across different aspects of life	Inherent enjoyment
Autonomous/ Controlled		Controlled	Controlled	Autonomous	Autonomous	Autonomous

Although SDT differentiates types of motivation, these motivations are not mutually exclusive. Ryan and Deci (2020) acknowledged that students can have multiple motivations simultaneously. For example, students can have intrinsic motivation (learning because it is enjoyable) and external regulation motivation (get good grades to maintain scholarship) at the same time. Furthermore, the focus of SDT is not on extrinsic versus intrinsic motivation, but rather, autonomous versus controlled motivation (Deci & Ryan, 2008). Out of the four types of extrinsic motivation, external and introjected are controlled forms of motivation. In contrast, identified and integrated, along with intrinsic motivation are autonomous forms of motivation (Deci & Ryan, 2008).

Basic Needs in SDT

Research has consistently found that higher levels of autonomous motivation (identification, integration, and intrinsic motivation) result in greater student learning, engagement, and wellness (Ryan & Deci, 2020). When students are autonomously motivated, they are more likely to impart greater effort into learning (León et al., 2015). Furthermore, the increase in autonomous motivation deepened students' identity as learners (Skinner et al., 2017). In a study on college students' academic performance, Manganelli and colleagues (2019) found that students' autonomous motivation is a significant predictor of academic performance. Conversely, when

students are exposed to a controlling classroom condition (externally motivated), they were found to have higher cortisol levels than those in the neutral and autonomy-supportive conditions (Reeve & Tseng, 2011).

To increase students' autonomous motivation, it is important to understand the concept of basic needs. According to SDT, individuals have an inherent tendency toward psychological growth and integration (Ryan & Deci, 2020). This tendency for growth would unfold when basic psychological needs are being fulfilled (Ryan et al., 2019). SDT posits that three needs are especially crucial: the need for autonomy, competence, and relatedness (Ryan & Deci, 2020). These needs are considered to be universal, inborn, and vital for personal and social development, well-being, and growth (Ryan & Deci, 2000), irrespective of cultural context, gender, and social class (Vansteenkiste et al., 2010). When these three basic needs are present in the classroom, students are more likely to be autonomously motivated to learn.

Autonomy refers to individuals' sense of volition and psychological freedom in one's behavior and is determined by the level of external pressure when performing the behavior (deCharms, 1968; Deci & Ryan, 1985). The less pressure one experiences, the more one perceives that this behavior is born from inside them, resulting in higher feelings of autonomy. Typically, when individuals are autonomous, they behave in accordance with their own values and beliefs (Ryan & Deci, 2020). This ability to choose could partly explain why students are usually more engaged in elective courses; because they get to choose those courses which they are interested in. In an educational context, students can experience autonomy when the instructor provides choices within the classroom structure (Hsu et al., 2019).

Relatedness is defined as the longing to be connected to others in meaningful ways – to care and love others and to be cared for and loved by others (Baumeister & Leary, 1995). Humans have been found to possess an inherent need to establish connections with others (McClelland et al., 1953) and to create a sense of belongingness with others (Baumeister & Leary,

1995). In a classroom setting, students can be connected to the professor, other students, and to a certain degree, the course materials (Hsu et al., 2019).

Competence refers to the need to perceive self as efficacious and to have opportunities for learning and mastery (Skewes et al., 2018). Individuals' ability to successfully interact with their environment in producing desired outcomes contributes to their perception of competence (Connell & Wellborn, 1991). This perception of self-competence plays a vital component in one's goal formation, sense of achievement, and motivational processes towards success (Elliot & Church, 1997; Pintrinch, 2000). Thus, students are more likely to be motivated to succeed when they can see the improvement in mastering skills or learning outcomes (Hsu et al., 2019).

Need Supportive Learning Environment

SDT posits that the satisfaction of basic needs (autonomy, relatedness, and competence) would catalyze students' autonomous motivation (Ryan & Deci, 2020). Results from multiple researchers support this general premise (e.g. Howard et al., 2017; Katz et al., 2014). To understand the relationship between basic needs, autonomous motivation, and learning outcomes, researchers have conducted structural equation modeling (Hsu et al., 2019; Levesque- Bristol et al., 2010). Levesque-Bristol and colleagues (2010) found that the learning environment contributed to all three basic needs of autonomy, competence, and relatedness. In contrast, Hsu and colleagues (2019) found that the learning environment contributed to students' autonomy and relatedness, but not competence. However, one similarity between the two models was that students' autonomous motivation was only predicted by competence (Hsu et al., 2019; Levesque- Bristol et al., 2010). Additionally, the learning environment and student's satisfaction of their need for autonomy predicted other learning outcomes (e.g. grades, problem solving, perceived knowledge transfer) (Hsu et al., 2019; Levesque-Bristol et al., 2010).

These results provide support for the importance of a positive learning environment as a catalyst in satisfying students' basic needs, which in turn predicts their learning outcomes. Two

elements have been identified as supporting students' basic needs: a) educators' conveyance of autonomy support (which promotes autonomy and relatedness) and b) structure (which promotes competence; Ryan & Deci, 2020).

Autonomy Support

Autonomy support is defined as educators' interpersonal behavior during instruction to recognize, cultivate, and develop students' internal motivational resources (Deci & Ryan, 1985; Reeve et al., 2004). Therefore, an autonomy supportive classroom is where students are encouraged to be themselves rather than pressured to behave in a certain manner (Ryan & Deci, 2004). Deci and colleagues (1994) posited three interpersonal conditions as necessary to convey autonomy support: providing a meaningful rationale to the utility of a behavior, acknowledging negative feelings, and utilizing autonomy enhancing language (e.g. can, could, possible) rather than controlling language (e.g. must, have to, should).

In instances where students do not have a choice (such as counseling students completing the research and evaluation course), providing a meaningful rationale may be helpful in assisting students to accept the value of the behavior, increasing students' autonomous motivation (Ryan & Deci, 2020). Additionally, instructors could incorporate students in seeing the value of the behavior. For example, instructors could ask students some reasons why it is important to take the research and evaluation course.

Acknowledging negative feelings appears to help in satisfying the need for relatedness (Deci et al., 1994). Some behaviors could include providing opportunities for students to speak, listening to students, encouraging students' efforts, recognizing progress and mastery, recognizing students' perspectives, responding to students' questions and comments, and providing hints that enable students to progress when they appear stuck (Reeve & Jang, 2006).

Conversely, behaviors such as giving directives, dominating learning resources, and employing phrases such as "have to" and "should" were found to be controlling (Reeve & Jang,

2006). Educators' controlling behaviors were associated with an increase in need frustration, which was correlated with lower autonomous motivation, resulting in a higher sense of fear of failure, evasion of challenges, and conditional self-worth (Liu et al., 2017).

A few additional interpersonal conditions were found to help increase students' autonomous motivation. One important interpersonal condition is the provision of choice (Ryan & Deci, 2020), When students perceive the ability to choose, they take more ownership of the activities, which results in higher levels of autonomous motivation (Bao & Lam, 2008). Choice has been found to spark curiosity, particularly for behaviors initially low in autonomy (Schutte & Malouff, 2019) as well as increase students' performance (Murayama et al., 2015). Other essential aspects of autonomy support include conveying unconditional positive regard (Assor et al., 2004) and exhibiting patience for learning to occur (Reeve, 2009).

Structure

Structure, according to SDT, refers to setting clear parameters and objectives, having consistency in rules and procedures, and offering informational supports for effective engagement and feedback (Ryan & Deci, 2020). Having clear and consistent procedures provide students with an understanding of ways to effectively achieve the desired learning outcomes (Skinner & Belmont, 1993), thus satisfying the need for competence. Examples of good classroom structure include presenting students with appropriate challenges and providing positive feedback to students. Structure, when delivered in an autonomy supportive manner, has been found to facilitate students' autonomous motivation (Jang et al., 2010; Sierens et al., 2009).

Applying SDT to the Research and Evaluation Course

As an instructor teaching the Research and Evaluation course, the first author has repeatedly experienced students' aversion to taking the course. Students typically start the course with heightened controlled motivation (e.g. I need to complete this for graduation). Applying the concepts of SDT, below is a sampling of strategies that instructors can incorporate into their course

to increase students' autonomous motivation.

Autonomy Support

Instructors can start the course by acknowledging students' aversion and anxiety in taking the research course. Normalizing students' anxiety by discussing concepts such as statistics anxiety (Cruise et al., 1985) and the research-practice gap (Murray, 2009) could help in building relatedness amongst students. This acknowledgment also facilitates the relationship between instructor and students as the instructor's understanding and responding to students' perspectives has been found to increase students' autonomous motivation (Ryan & Deci, 2020). Instructors can also facilitate discussions around students' previous experience with research and their hopes for the research class. These prompts are intended to continue building the sense of relatedness in the classroom and to assist students in taking charge of their learning by setting their own goals.

When students do not have a choice in completing a task, such as taking the Research and Evaluation course, explaining the value of such an undertaking can help with students' motivation (Ryan & Deci, 2020). Even more helpful than explaining the value of taking the course is perhaps facilitating a discussion around the importance of learning research. Including students in the discussion could increase their investment and internalization of the significance of this course. To elevate students' autonomy in class, instructors can consider providing students with choices in their assignments. For example, if students are required to complete a research proposal, students can decide to work with a partner and to choose a topic that they are passionate about.

To bridge the gap between research and practice (Murray, 2009), counselor educators can share with students their research agenda and the link between their research and counseling practice. Furthermore, instructors can invite other counselor educators (via recorded video or guest lecture) to share about their research projects and the implications of those research to the field of counseling. Having other counselor educators in the program share their research will hopefully increase students understanding of the scholar-practitioner paradigm and increase relatedness

within the program as students get to know professors and their areas of research.

As recommended by Reeve (2009), being patient with students is part of conveying autonomy support. In the research and evaluation course, this may mean explaining concepts more than once, providing students with time to digest the materials, checking in on students' understanding, and using humor.

Structure

A good course structure is vital in supporting students' sense of competence (Ryan & Deci, 2020). One consideration is to teach qualitative research prior to quantitative research. Counseling students may be more receptive to learn about qualitative research because it is consistent with their role as a counselor (e.g. understanding clients' experience, finding for themes etc.). Indeed, researchers have found that both doctoral students (Reisetter et al., 2004) and counselor educators (Atieno Okech et al., 2006) perceive qualitative research as being aligned with counseling skills and theory, professional identity, and their research worldview.

Another structure that instructors can put in place is using relatable examples of research to pique students' interest. Studies like the effect of mindfulness activity on counseling students' stress level (Felton et al., 2015), whether single or couples live a healthier lifestyle (Schoeppe et al., 2018), and the attractiveness of male body odor (Zuniga et al., 2017) may make the learning process more relatable, enjoyable, and lighthearted. Students can critique the articles based on the research design and draw their own conclusion on whether the results found are applicable to them personally.

Instructors can consider implementing low-stake assignments that build students for success. For example, having fun in-class practice answering multiple-choice questions, such as using Kahoot! (a game-based learning platform), may help students to feel more at ease when completing their quizzes, midterm, or final examination. In building students for success in completing the proposal paper, instructors can build in class time to meet with each group of

students to assist in clarifying their research ideas. By having multiple meetings with students throughout the semester, students can be assured that they have some guidance, and the instructor can keep track of students' progress. Educators can also have mini assignments, such as article critique assignments, to facilitate students' ability to critically critique research articles. Students' ability to critique articles, in turn, could facilitate their ability to complete their research proposal paper. In all these assignments, providing students with positive feedback is crucial in satisfying students' need for competence.

Additional Considerations

Admittedly, there has been a lack of research on the application of SDT in an online learning environment (Hsu et al., 2019) and available research produced conflicting results. In one of the earliest examinations of SDT in an online learning context, Chen and Jang (2010) found that there is no significant relationship between students' autonomous motivation and any of their learning outcomes. In contrast, Hsu and colleagues (2019) found that students' autonomous motivation predicted learning outcomes. However, one similarity in findings between these two studies is that the learning environment predicted students' learning outcomes (Chen & Jang, 2010; Hsu et al., 2019). Although more research needs to be conducted on the role of students' autonomous motivation in relation to learning outcomes, it appears that a positive classroom environment is related to greater learning outcomes, even in an online learning context.

Importantly, instructors' conveyance of autonomy support and structure does not necessarily satisfy students' basic needs; students need to perceive instructors' autonomy support (Hagger et al., 2007). Thus, instructors may want to utilize a few instruments to assess students' perception of instructors' autonomy support. The Learning Climate Questionnaire (LCQ; Williams & Deci, 1996) can be used to measure students' perception of the learning climate. The Basic Psychological Needs at Work Scale (BPNS; Kasser et al., 1992) has been adapted to an academic setting and has been used to measure students' perception of autonomy, relatedness, and

competence. Lastly, instructors can utilize the Situational Motivation Scale (SIMS; Guay et al., 2000) to measure students' motivation. The SIMS was designed to measure each of the six forms of motivation proposed by SDT. For example, if results from the SIMS indicate that students are motivated primarily by external regulation (reward and punishment), then instructors can increase students' basic needs of autonomy, competence, and relatedness to increase students' autonomous motivation.

Another consideration to take into account in students' level of motivation is their physical basic needs satisfaction. According to Maslow (1954), physical needs like food, shelter, and safety are necessary prior to satisfying psychological needs such as belongingness and competence. Despite instructors' best efforts in facilitating autonomy, competence, and relatedness in the classroom, it is difficult to fathom students being motivated to learn if they are hungry or feel unsafe. Unfortunately, cases of students going hungry are not all that uncommon (Laterman, 2019). Students reported skipping meals and taking 'poverty naps' as they could not afford food (Laterman, 2019). Furthermore, students' concern for their physical safety and the safety of loved ones was thrust into center stage with the emergence of the COVID-19 pandemic. For minority students, the continuous racial tension and acts of racial aggression (Lang, 2021; Philimon, 2020) could further lower their motivation to learn. This consideration is not a criticism of SDT per se. However, educators need to consider the social and political climate when thinking about students' motivation. Situating lessons in tandem with the surrounding climate may assist students in seeing the relevance of their learnings (e.g. conducting research on racial aggression). Educators can also direct students to the right resources on and off-campus and advocate for changes on the local, regional, and federal level.

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