

# Research Guide

## College and Career Competency: *Goal Setting*

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### Definition:

In the context of education, goal setting often refers to identifying specific academic objectives. A wider definition encompasses specific long-term or short-term life or career objectives. Research conducted by Locke and Latham found that people perform better when they have goals and that goals “direct attention, effort, and action toward goal-relevant actions” and away from actions that don’t relate to the goal (Locke & Latham, 1990, 2002, as cited in Shogren, 2013, p. 60).

### Essential Components for Students:

Set a goal that is:

1. Meaningful to you.
2. Focused on your own personal improvement; don’t compare yourself to others.
3. Based on data, including prior experiences; interests and skills; and feedback of family members, teachers, peers, or another trusted person.

### Research:

- Why goals are pursued will impact educational outcomes. For example, students who pursue educational goals for autonomous reasons, rather than being told to, will be more likely to endorse the values being taught, persist in the behaviors required to achieve the goals, and proactively cope with failures (Deci & Ryan, 2000).
  - Autonomous reasons can be intrinsic (interest or enjoyment) or because the goal is inherently important (Milyavskaya, Nadolny, & Koestner, 2014).
  - Goals that individuals feel they are being forced to adopt because of shame, guilt, or extrinsic motivation will result in less successful outcomes (Milyavskaya et al., 2014).
- Goals typically have two orientations: mastery or performance. With a mastery orientation, the student engages in a task to develop ability. Success in mastery goals is judged by progress over time or progress against an absolute standard (Friedel, Cortina, Turner, & Midgley, 2010). The other orientation, performance, emphasizes the demonstration of ability, and success is usually judged in relation to others’ performance (Friedel et al., 2010). An example of a mastery goal is “I want to get better at algebra, so I will spend time each night this week working on practice problems.” An example of a performance goal is “I will get a better grade than Isabelle on the science test.”
  - Research shows that mastery goals are consistently associated with higher levels of academic **self-efficacy**, but the relationships between performance goals and **self-efficacy** (the belief in your ability to succeed at specific outcomes [Bandura, 1977]) are much less consistent (Friedel et al., 2010).
  - A research study (Friedel et al., 2010) that examined how changes in teacher goal emphasis impacted students’ **self-efficacy** in math as they transitioned to middle school found that an increase in **self-efficacy** could be predicted when the students perceived the teacher was emphasizing mastery rather than performance goals. As late as 7th

grade, teachers can positively impact mathematics **self-efficacy** beliefs (and counter low **self-efficacy** beliefs from previous classroom experiences in math) by emphasizing learning and improving understanding (mastery goals). Simply put, teachers can undo previous negative effects.

- Students as young as five to six can be taught to set goals through the application of the Self-Determined Learning Model of Instruction. While the model was originally developed for adolescents (with and without disabilities), it can be successfully adapted for early elementary grades (Palmer & Wehmeyer, 2003) [See the Instructional Strategies section below for the instructional process for implementing the model].
- The path from setting goals to accomplishing goals is complex and requires both 1) sufficient commitment to goals during goal setting and 2) effective planning and goal-oriented behaviors during goal-striving (i.e., working toward the goal) (Boekaerts & Corno, 2005; Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011). Research (Duckworth et al., 2011) conducted with 66 second-year high school students at an urban school showed that **self-regulatory** strategies for successful goal pursuit can be taught directly.
  - The **self-regulatory** strategies consist of mental contrasting and implementation intentions, which are defined below.
  - Mental contrasting involves imagining a desired future (e.g., graduating high school, doing well on a test) and then reflecting on the present reality and any obstacles that might stand in the way (Oettingen & Gollwitzer, 2010).
  - Implementation intentions specify when, where, and how the goal will be pursued (Oettingen & Gollwitzer, 2010). They can take the form of “if-then” plans that highlight what step the student will take in different situations to stay on track during goal-striving. For example, in the study by Duckworth et al. (2011), students identified two positive outcomes of completing practice tests in a PSAT preparation workbook and two potential obstacles to completing the tests (mental contrasting). They then wrote potential solutions in the form of if/then statements to overcome the obstacles (implementation intentions). These students completed 60% more practice questions than students who did not use the mental contrasting/implementation intentions.
- Self-determination theory (Deci & Ryan, 1985, as cited in Dietrich & Salmela-Aro, 2013) suggests that supportive and structured parenting will foster autonomous (versus controlled) goal motivation and goal pursuit. In a study of 807 Finnish adolescents, students with parents who supported their career goals were more likely to reach those goals (Dietrich & Salmela-Aro, 2013). This research reinforces the importance of including others in the goal setting process.
- Goals that are specific and challenging (but attainable) lead to better task performance than easy or vague goals (Locke & Latham, 2006).
- Goal setting positively affects performance and enhances achievement (Boekaerts, 2002; Edwins, 1995; Griffiee & Templi, 1997; Moriarity, Pavelonis, Pellouchoud, & Wilson, 2001; Schunk, 2003, as cited in Moeller, Theiler, & Wu, 2012).
- “Studies have shown that appropriate goal setting, along with timely and specific feedback, can lead to higher achievement, better performance, a high level of **self-efficacy**, and **self-regulation**” (Moeller et al., 2012, p. 154).
- High school students learning Spanish who set goals, developed action plans to achieve their goals, and reflected on their attainment achieved higher language proficiency than students who were not proficient in goal setting (Moeller et al., 2012).

## Assessments:

- Goal Attainment Scaling (GAS) is a process where a target goal is identified and then more than expected and less than expected outcomes are defined (Kiresuk & Sherman, 1968).
  - A GAS is prepared for the individual student using an established goal and potential outcomes identified by the teacher and the student. The result is a five-point scale going from most unfavorable to most favorable. The midpoint of the scale is “expected outcome.” Both teachers and students rate their perception of goal completion (Palmer & Wehmeyer, 2003).
  - An overview of GAS procedures can be found on the Massachusetts School Psychologists Association website: [https://mspa.wildapricot.org/resources/Documents/DDM-Goal\\_Attainment\\_Scaling.pdf](https://mspa.wildapricot.org/resources/Documents/DDM-Goal_Attainment_Scaling.pdf) (2014).
- Several assessments can provide an indication of a student’s ability to set and achieve goals. For example, the Arc’s self-determination scale has a section on goal setting. The Grit Scale also asks about goal setting. Though neither of these assessments deals solely with goal setting, they incorporate it as an important dimension.
  - For the Arc’s self-determination scale (Wehmeyer & Kelchner, 1995), see <http://beach.drupal.ku.edu/sites/beach.drupal.ku.edu/files/images/general/SelfDetermination/The%20Arc%27s%20Self-Determination%20Scale%20-%20Adolescent%20version%20REV2013.pdf> and see <http://beachcenter.org/sites/beach.drupal.ku.edu/files/images/general/SelfDetermination/Procedural%20Guidelines%20to%20Adolescent%20Version%20of%20The%20Arc%27s%20Self-Determina....pdf> for the associated procedural guidelines.
  - For the Grit Scale (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth, 2013), see <http://www.sas.upenn.edu/~duckwort/images/12-item%20Grit%20Scale.05312011.pdf>.

## Instructional Practices:

- Apply the Self-Determined Learning Model of Instruction (SDLMI), which consists of three instructional phases. The SDLMI can be integrated into any teaching model and incorporates many student-directed learning strategies that directly involve students in setting and pursuing goals linked to desired outcomes (Shogren, 2013, p. 68). Goal setting is found in phase 1 (Palmer & Wehmeyer, 2003; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000).
  - See the Teacher’s Guide [http://www.selfdetermination.dept.ku.edu/wp-content/uploads/2017/04/SDLMI-Teachers-Guide\\_4-2017.pdf](http://www.selfdetermination.dept.ku.edu/wp-content/uploads/2017/04/SDLMI-Teachers-Guide_4-2017.pdf) (Shogren, Wehmeyer, Burke, & Palmer, 2017).
  - See the National Secondary Transition Technical Assistance Center’s (2012) resource on Using the self-determined learning model of instruction to teach goal attainment (accessed via <http://transitionta.org/node/133>; login required)
- Teach students to write SMART goals: goals that are Specific, Measurable, Attainable, Relevant, and Time-bound.
  - Using this technique, a basic goal like “I will study for my test,” becomes “Tonight I will spend two hours studying my class notes and the textbook to prepare for tomorrow’s math test.”
- When assigning important long-term projects, ask students to use mental contrasting to “mentally elaborate the benefits of completing the project as well as the obstacles that may

hinder completion” (Duckworth et al., 2011, p. 24) and follow this with classroom time for students to articulate implementation intentions by preparing if/then plans.

- Help young children develop autonomy by enabling and supporting choice-making. This is especially important for children with disabilities (Palmer et al., 2012).
- Apply the Possible Selves Mapping Intervention (PSMI), which helps students set personal goals and develop self-management skills by having them imagine possible futures (Shepard & Quressette, 2010).
  - Ask students to think about what they would like to become in the future (even if unlikely); also ask them to imagine aspects about themselves in the future that they would want to avoid.
  - Then, ask students to reflect on the steps they have taken recently to either bring about their hoped-for self or to avoid an undesirable outcome.
  - See [http://www.counseling.org/resources/library/vistas/2010-v-online/Article\\_51.pdf](http://www.counseling.org/resources/library/vistas/2010-v-online/Article_51.pdf) for more information about the intervention.

### References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. doi: 10.1037/0033-295X.84.2.191
- Boekaerts, M. (2002). Motivation to learn. Educational Practice Series. Geneva: International Bureau of Education. Retrieved from <https://smec.curtin.edu.au/local/documents/prac10e.pdf>
- Boekaerts, M., & Corno, L. (2005). Self-regulation in the classroom: A perspective on assessment and intervention. *Applied Psychology: An International Review*, 54(2), 199-231. doi: 10.1111/j.1464-0597.2005.00205.x
- Deci, E.L., & Ryan, R.M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268. doi: 10.1207/S15327965PLI1104\_01
- Dietrich, J., & Salmela-Aro, K. (2013). Parental involvement and adolescents’ career goal pursuit during the post-school transition. *Journal of Adolescence*, 36(1), 121-128. doi: 10.1016/j.adolescence.2012.10.009
- Duckworth, A.L., Grant, H., Loew, B., Oettingen, G., & Gollwitzer, P.M. (2011). Self-regulation strategies improve self-discipline in adolescents: Benefits of mental contrasting and implementation intentions. *Educational Psychology*, 31(1), 17-26. doi: 10.1080/01443410.2010.506003
- Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087-1101.
- Duckworth, A.L. (2013). 12-Item grit scale. University of Pennsylvania: School of the Arts & Sciences. Retrieved from <https://sites.sas.upenn.edu/duckworth/pages/research>
- Edwins, S.D. (1995). Increasing reflective writing and goal-setting skills on high ability sixth grade mathematics students. Retrieved from <http://eric.ed.gov/?id=ED392065>
- Friedel, J.M., Cortina, K.S., Turner, J.C., & Midgley, C. (2010). Changes in efficacy beliefs in mathematics across the transition to middle school: Examining the effects of perceived teacher and parent goal emphases. *Journal of Educational Psychology*, 102(1), 102-114. doi: 10.1037/a0017590
- Griffiee, D.T., & Templi, S.A. (1997). Goal setting affects task performance. In B. Visgatis (Eds.), *Proceedings of the JALT 1997 International Conference on Language Teaching and Learning*, (pp. 21-26).
- Kiresuk, T.J., & Sherman, R.E. (1968). Goal attainment scaling: A general method for evaluating comprehensive community mental health programs. *Community Mental Health Journal*, 4(6), 443-453.

- Locke, E.A., & Latham, G.P. (1990). A theory of goal setting and task performance. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705-717. doi: 10.1037//0003-066X.57.9.705
- Locke, E.A., & Latham, G.P. (2006). New directions in goal-setting theory. *Current Directions in Psychological Science*, 15(5), 265-268. Retrieved from <http://www.jstor.org/stable/20183128>
- Massachusetts School Psychologists Association. (2014). Goal attainment scaling. Retrieved from <http://www.mspa-online.com/district-determined-measures/>
- Milyavskaya, M., Nadolny, D., & Koestner, R. (2014). Where do self-concordant goals come from? The role of domain-specific psychological need satisfaction. *Personality and Social Psychology Bulletin*, 40(6), 700-711. doi: 10.1177/0146167214524445
- Moeller, A.J., Theiler, J.M., & Wu, C. (2012). Goal setting and student achievement: A longitudinal study. *The Modern Language Journal*, 96(2), 153-169.
- Moriarty, J., Pavelonis, K., Pellouchoud, D., & Wilson, J. (2001). Increasing student motivation through the use of instructional strategies. Retrieved from <http://eric.ed.gov/?id=ED455962>
- National Secondary Transition Technical Assistance Center. (2012). Using the self-determined learning model of instruction to teach goal attainment. Retrieved from <http://transitionta.org/node/133>
- Oettingen, G., & Gollwitzer, P.M. (2010). Strategies of setting and implementing goals: Mental contrasting and implementation intentions. In J.E. Maddux & J.P. Tangney (Eds.), *Social psychological foundations of clinical psychology*. New York: The Guilford Press.
- Palmer, S.B., Summers, J.A., Brotherson, M.J., Erwin, E.J., Maude, S.P., Stroup-Rentier, V., ... Haines, S.J. (2012). Foundations for self-determination in early childhood: An inclusive model for children with disabilities. *Topics in Early Childhood Special Education*, 33(1), 38-47. doi: 10.1177/0271121412445288
- Palmer, S.B., & Wehmeyer, M.L. (2003). Promoting self-determination in early elementary school: Teaching self-regulated problem-solving and goal-setting skills. *Remedial and Special Education*, 24(2), 115-126. doi: 10.1177/07419325030240020601
- Schunk, D.H. (2003). Self-efficacy for reading and writing: Influence of modeling, goal setting, and self-evaluation. *Reading & Writing Quarterly*, 19(2), 159-172.
- Shepard, B., & Quressette, S. (2010). Possible selves mapping intervention: Rural women and beyond. Retrieved from [http://www.counseling.org/resources/library/vistas/2010-v-online/Article\\_51.pdf](http://www.counseling.org/resources/library/vistas/2010-v-online/Article_51.pdf)
- Shogren, K. (2013). *Self-determination and transition planning*. Baltimore, MD: Paul H. Brookes Publishing Co.
- Shogren, K.A., Wehmeyer, M.L., Burke, K.M., & Palmer, S.B. (2017). The Self-Determination Learning Model of Instruction: Teacher's Guide. Lawrence, KS: Kansas University Center on Developmental Disabilities. Retrieved from <http://www.selfdetermination.dept.ku.edu/>
- Wehmeyer, M.L., & Kelchner, K. (1995). *The Arc's self-determination scale*. Arlington, TX: The Arc National Headquarters. Retrieved from <http://beachcenter.org/self-determination>
- Wehmeyer, M.L., Palmer, S.B., Agran, M., Mithaug, D.E., & Martin, J.E. (2000). Promoting causal agency: The self-determined learning model of instruction. *Exceptional Children*, 66(4), 439-453.