

Developing Self-Directed Learners



Improving achievement for all students is one of the key directives of the No Child Left Behind Act (NCLB). As schools, districts, and state education agencies wrestle with NCLB requirements—as well as state accountability systems and tight fiscal resources—the strategy of helping K–12 students become self-directed learners may seem particularly attractive as a means for reaching achievement goals. According to the Northwest Regional Educational Laboratory’s most recent regional needs assessment (www.nwrel.org/planning/rna2000.html), “helping students become self-directed learners who take responsibility for their own academic performance” was ranked near the top of identified priorities by 75 percent of teachers, 83 percent of principals, and 83 percent of superintendents in the region. This was especially important for teachers at schools that have been identified as “low-performing” under the accountability requirements of NCLB.

This Topical Summary looks at current research on several aspects of developing self-directed learners:

- Defining who is a self-directed learner
- Teaching or helping students to become self-directed learners

- Creating school environments that nurture self-directed learning within standards-based accountability systems
- How implementing state-level policies can assist schools in their efforts to become centers of high achievement and incubators for self-directed learners

DEFINING THE SELF-DIRECTED LEARNER

According to Abdullah (2001), self-directed learners are “responsible owners and managers of their own learning process” (p. 1). Such individuals have the skills to access and process the information they need for a specific purpose. Self-directed learning integrates self-management (management of the context, including social setting, resources, and actions) with self-monitoring (the process whereby learners monitor, evaluate, and regulate their cognitive learning strategies). It is important to note that being a self-directed learner is a trait or disposition we want students to develop, rather than a laundry list of observable behaviors we wish students to exhibit.

Various disciplines within education have long promoted self-directed learning as desirable. Research within

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the fields of adult education (Garrison, 1997), gifted education (Schillereff, 2001), and Web-based and distance learning (Scheidet, 2003) has shown the effectiveness of this strategy. But, will the concept work for K–12 educators and administrators as a way to enhance their responsibility to teach students within the current context of strict accountability systems and state standards? In other words, is self-directed learning developmentally appropriate for all students, and does it lead to enhanced student achievement?

TAPPING STUDENTS' MOTIVATION TO LEARN

To understand and help students achieve the many traits characteristic of a self-directed learner, we must examine the disciplines of motivational psychology and educational psychology. Teachers, parents, administrators, and students must understand the concepts of student motivation, metacognition, self-efficacy, self-regulation, locus of control, and goal orientation. These concepts provide the foundation for a student seeking to become a self-directed learner. Although a student can become a self-directed learner without explicit instruction and development of these traits, it is more likely to occur when teachers and administrators understand and foster them at the classroom or school level (Lumsden, 1999; Renchler, 1992; Biemiller & Meichenbaum, 1992).

Student motivation is complex and multidimensional (Lumsden, 1994; 1999). Fundamentally, it comprises the various situational reasons why students choose whether or not to engage in academic tasks. Student motivation is a slippery concept, in that a student may be intrinsically motivated to perform a particular task (e.g., “I want to do well on this for my own satisfaction”) but extrinsically motivated to perform another (e.g., “I want to do well on this task to increase my grade point average”).

There are many cultural factors that come into play here: attitudes toward education, individualism versus collectivism, and the role of the teacher.

Goal orientation is a narrower concept than student motivation. Defined by Caraway, Tucker, Reinke, and Hall (2003) as the individual’s ability to make plans and set goals, it works in conjunction with self-efficacy to increase motivation. Goal-oriented individuals set challenging goals for themselves and maintain high levels of commitment to those goals despite encountering obstacles or challenges.

Self-efficacy is defined as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, in Linnenbrink & Pintrich, 2003, p. 120). Self-efficacy is different from self-esteem in that it is a personal judgment of competence, rather than an emotional reaction to actual accomplishments. Self-efficacy is more specific to a task (e.g., “I can reduce fractions correctly”) instead of a generalized notion of competence (e.g., “I am good at math”).

Linnenbrink and Pintrich (2003) describe three important components linked to self-efficacy: behavioral engagement, cognitive engagement, and motivational engagement. **Behavioral engagement** is the observable behavior a teacher can see in classrooms when students are working on a task. **Cognitive engagement** is thinking critically, taking advantage of different learning strategies, and using metacognition. **Motivational engagement** includes the student’s personal interest in a task and his perceptions of the utility value and general importance of the task. A higher level of motivational engagement has been shown to increase student achievement.

Locus of control is defined by Rotter (1966, in Miller, Fitch, & Marshall, 2003, p. 548) as “the tendency students have to ascribe achievements

and failures to either internal factors that they control (effort, ability, motivation) or external factors that are beyond control (chance, luck, others’ actions).” A self-directed learner would have a higher internal locus of control than an external one.

Metacognition is the ability of the student to analyze, reflect on, and understand her own cognitive and learning processes. Students who identify appropriate learning strategies in the right context are using metacognition. For example, a student may know that she has trouble picking out the main idea in a reading passage. If she has been taught a simple graphic organizer—such as webbing—to identify the main idea, and then chooses on her own to map out the passage in a web, then that student has used metacognition to complete the task. Students who are aware of their own cognitive strengths and weaknesses are more likely to be able to adjust and compensate for them.

Self-regulation is the ability of the learner to control interest, attitude, and effort toward a task or a goal. The key to self-regulation is the ability of the learner to understand the requirements of the task or goal, and then to monitor and adjust his effort without reminders, deadlines, or cues from others such as teachers, peers, or parents. A student who has a clear understanding of an academic task (e.g., “I must write a five-paragraph paper tonight”) can then implement self-regulation to meet the requirements of the task (e.g., “If I write an outline first and then utilize the writing strategies I have been taught, I can get a draft done in 90 minutes”).

IMPLICATIONS FOR INSTRUCTION

The research and literature on what teachers, administrators, and school communities can do to promote the development of self-directed learners strongly reinforce a central theme: A student cannot become a self-directed learner without becoming engaged in a curriculum that allows it to happen. Here are the features that help foster self-directed learners and learning:

Student Choice/Responsibility

- The curriculum has opportunities for student choice in the way mastery of content and subject matter is demonstrated and investigated. State standards and local district curriculum standards don't need to be adjusted, but students should be able to have some choice in acceptable ways to show they have met the standards.

- Teachers raise awareness of students' role in their own learning (Abdullah, 2001). Teachers shift some of the responsibility for learning from them-

selves to the learner. This is not to suggest that the teacher should not teach, make lesson plans, or facilitate activities. However, the teacher can instruct the class in those features over which students have control: amount of effort, note taking, perseverance, locus of control, self-efficacy, and self-regulation.

TABLE I: RESEARCH ON TRAITS OF SELF-DIRECTED LEARNERS

LEARNER TRAITS	RESEARCH	CLASSROOM IMPLICATIONS
Student Motivation	Anderman, 2004; Guthrie, Alao, & Rinehart, 1997; Howse, Lange, Farran, & Boyles, 2003; Lumsden, 1994, 1999	Challenging, but achievable, relevant assignments; conceptual theme instruction; choice in task/task accomplishment; mastery learning/outcome-based instruction; cooperative/collaborative learning; individual goal setting; accelerated learning; teacher modeling of positive behaviors; depth rather than breadth of topics.
Goal Orientation	Caraway, Tucker, Reinke, & Hall, 2003; Nichols, Jones, & Hancock, 2003; Stefanou & Parkes, 2003	Type of assessment influences motivation; learner emotions/teacher instructional strategies influence student goal orientation; a higher general level of confidence increases student engagement in curriculum.
Locus of Control	Harlen & Crick, 2003; Miller, Fitch, & Marshall, 2003	Learning goals rather than performance goals; at-risk students have a higher external locus of control.
Self-Efficacy	Bouffard & Couture, 2003; Linnenbrink & Pintrich, 2003; Thomas, 1993; Zimmerman, 2002	Student demonstrates behavioral, cognitive, motivational engagement; teachers assist students to maintain self-efficacy beliefs; foster belief that competence/ability is changeable; motivational variables do not change much across subject matter; performance feedback improves independent learning.
Self-Regulation	Palmer & Wehmeyer, 2003	Students can develop self-regulation through problem-solving/goal-setting instructional activities.
Metacognition	Blakey & Spence, 1990; Ngeow & Kong, 2001	Students should plan, monitor, and evaluate their thinking processes; students should engage in inquiry/problem-based learning that includes problem framing, data gathering, divergent thinking, idea generation, evaluating alternatives.

- Educators encourage study skills, inquiry, questioning, and an atmosphere where errors are acceptable during the process of arriving at correct answers. Teachers need to be able to comfortably inhabit “a world of ambiguity.” They should be able to avoid taking the shortest path to correct answers and should help students to determine correct answers through critical questioning; expressing differing and conflicting views; and putting assertions and hypotheses to the rigor of disciplined inquiry (scientific method).

- Teachers provide opportunities for students to self-monitor, revise work, and reflect on their own thinking and learning processes. Journals, study groups, and critical friends’ groups are just a few of the ways to achieve this in classrooms.

Project Learning/ Collaboration/Rewards

- The curriculum has a strong strand of problem-based and project-based learning. Students have opportunities to explore solutions to real-world problems and focus on innovation. Students also have opportunities to transfer conceptual knowledge to new situations. For example, if students complete a social studies project about the factors contributing to the American Civil War, they should have an opportunity to apply their knowledge to understanding the factors contributing to civil wars in other countries.

- Collaboration and cooperation are high. Interestingly, self-directed learners are not nurtured in isolation but where there are ample opportunities to collaborate and interact with their peers.

- Rewards are used sparingly and when they are used, they reward achievement,

perseverance, risk taking, and collaboration. Remember, rewards are part of an ethos that reinforces extrinsic motivation.

- Teachers model the behaviors they wish students to exhibit. Teachers should model critical questioning, risk taking, and subjecting assertions and hypotheses to public scrutiny and debate. Teachers need to model the discipline it takes to really investigate complex problems and formulate possible solutions.

POLICY AND ACCOUNTABILITY ISSUES

Several key issues and concerns leap to mind when looking at the literature on self-directed learners. A thoughtful reader may look at the information presented above and draw the reasonable conclusion that committing time and resources to develop school environments that enable students to become self-directed learners appears to be antithetical to the provisions of state accountability systems and NCLB adequate yearly progress determinations. First, it is important to point out that developing self-directed learners can be a viable and worthy component of school improvement efforts (Schwartz, 2001; Patterson, 2000). Second, there is empirical evidence that self-directed learning leads to increased student achievement. Table I (page 3) describes the traits of self-directed learners and the research demonstrating the effects on student achievement. NCLB requires that school improvement interventions meet rigorous scientific research criteria.

While NCLB requires strict accountability, it does not prescribe curriculum. In fact, even a quick glance at the academic standards for the states of the Northwest region shows that instruction can be designed to foster self-directed

learners and meet student achievement goals. The accountability system is the method of measurement, not the content of the curriculum or the pedagogy used. Table II (opposite) illustrates how sample academic standards can accommodate the types of curriculum features that support and encourage self-directed learning.

In the Northwest, state education leaders can assist schools and districts by developing standards and belief statements about learners. A search of the state Web sites shows much useful information about what students should learn, but little about the type of learner that schools should develop. Although each state has statements about citizenship and character in its academic or content standards, there needs to be more explicit information about the type of learner those standards require. By including such information in the standards, state policymakers can validate school and district efforts to develop self-directed learners and assist with the pursuit of funding and resources to accomplish those efforts.

Finally, the requirements of NCLB that have garnered the most attention are the accountability provisions and the determinations of school quality. The interest expressed in the Northwest region in developing self-directed learners is refreshing in that it puts the focus back on the learner, what we know about learner capabilities, and what we believe students can achieve. A natural consequence of focusing on test scores as a measure of student achievement is that the learner is passive, and education is an intervention to compensate for perceived deficiencies. To be sure, educators must ensure students are learning and that appropriate interventions are enacted. But, to boost achievement, there must be an expectation that students can engage in chal-

lenging curriculum and an assessment system that truly measures capabilities while encouraging students to invest in their own learning.

CONCLUSION

Should self-directed learners' achievement be measured separately from other students' achievement? The answer is no, not in a general sense. Although there has been some research on assessing self-directed learners (Birenbaum, 2002), the school, district, and state systems of gathering achievement data should not

change; only the methods of instruction may have to be altered. As Table II demonstrates, the development of self-directed learners can be accomplished within a framework of current academic standards and strict accountability. Many of the types of teaching and instruction that foster self-directed learning are well-known, widespread, and proven to be effective. However, the emphasis on fostering self-directed learners cannot take place in one or two classrooms, but must permeate the academic culture of a school (Lumsden, 1994).

Although there is some debate over

whether high-stakes testing inhibits student motivation (Amrein & Berliner, 2003; Harlen & Crick, 2003; Sheldon & Biddle, 1998), communicating to learners the reasons for assessments and the value gained from the information can feed into the development of self-directed learning. For example, if students have a developed sense of self-

TABLE II: CONNECTING TO EXISTING STANDARDS

STATE/WEB SITE	SUBJECT MATTER/ SAMPLE STANDARD	CURRICULUM FEATURE THAT SUPPORTS DEVELOPMENT OF SELF-DIRECTED LEARNERS
Alaska www.eed.state.ak.us/ contentstandards/ Geography.html	Geography: "A student should understand and be able to evaluate how humans and physical environments interact."	Problem-based learning: Students can attain these standards when given "real-world" examples and charged with developing solutions in cooperative groups.
Idaho www.sde.state.id.us/ dept/docs/standards/ PrintingbyGrade.pdf (p. 106)	History: "Understand the evolution of democracy. Analyze the struggles for the extension of civil rights."	Student choice: Students can choose topics to research and choose how to demonstrate knowledge gained through projects, experiments, research papers.
Montana www.opi.state.mt.us/ standards/index.html	Mathematics: "...makes reasonable predictions and decisions based on data, probability, and statistics..."	Students can analyze data from current events such as elections and determine if voter polls are accurate.
Oregon www.ode.state.or.us/ teachlearn/subjects/science/ standards/contentstandards.pdf	Science: "Investigate, through research and inquiry, important principles, theories, and relationships from a field of science."	Students can analyze, compare, and contrast the features of fiction and non-fiction texts.
Washington www.k12.wa.us/ curriculumInstruct/ reading/ealrs.aspx	Reading: "Think critically and analyze author's use of language, style, purpose, and perspective in informational and literary text."	Students can analyze pseudo-scientific knowledge and explain why it does not meet the criteria of scientific inquiry.

efficacy and locus of control, they can view a test as a challenge to be met rather than an ordeal. They can also understand that test results are a product of a student's efforts and work ethic rather than simply his or her innate ability.

State education leaders should ensure that in the rush to be accountable, we do not forget what learning is for, and who it is for. States should help disseminate information about self-directed learners and commit resources to exploring promising practices that exist in the Northwest region.

Finally, the challenge of meeting federal and state student achievement requirements may appear to be enough without adding on the development of self-directed learners. However, the states of the Northwest region should not view self-directed learning as an "add-on," but an integral part—and a desired outcome—of standards-based accountability systems.

RESOURCES

Character Education Partnership

Eleven principles of effective character education

www.character.org/principles/

This resource explains the rationale for developing self-directed learners; principles two and seven are particularly pertinent.

Maine Center for Meaningful Engaged Learning

www.mcmel.org/

This advocacy organization, affiliated with the University of Maine at Farmington, is dedicated to helping teachers find ways to motivate and engage every learner.

National Academies Press

Engaging schools: Fostering high school students' motivation to learn

[Executive summary]

http://books.nap.edu/execsumm_pdf/10421.pdf

This links to the free executive summary of a very informative book for high school leaders.

National Center for Learning and Citizenship

www.ecs.org/html/projectsPartners/clc/clc_main.htm

This Web site on service learning and citizenship education has several resources that complement developing self-directed learners.

National Service-Learning Clearinghouse

www.servicelearning.org/article/frontpage/1/

This is a source of information on improving school climate and supporting the type of problem-based learning that develops self-directed learners.

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Increasing student engagement and motivation: From time-on-task to homework

www.nwrel.org/request/oct00/index.html

Part of the By Request series, this booklet describes how teachers can influence student motivation both in school and at home.

Project-based instruction: Creating excitement for learning

www.nwrel.org/request/2002aug/index.html

Another publication in the By Request series, this is an excellent introduction to project-based learning and the research-based rationale for using this approach.

BIBLIOGRAPHY

Abdullah, M.H. (2001). *Self-directed learning* [ERIC digest No. 169]. Bloomington, IN: ERIC Clearinghouse on Reading, English, and Communication. (ERIC Document Reproduction Service No. ED459458)

Amrein, A.L., & Berliner, D.C. (2003). The effects of high-stakes testing on student motivation and learning. *Educational Leadership*, 60(5), 32–38.

Anderman, L.H. (2004). Student motivation across subject-area domains. *Journal of Educational Research*, 97(6), 283–285.

Biemiller, A., & Meichenbaum, D. (1992). The nature and nurture of the self-directed learner. *Educational Leadership*, 50(2), 75–80.

Birenbaum, M. (2002). Assessing self-directed active learning in primary schools. *Assessment in Education: Principles, Policy and Practice*, 90(1), 119–138.

Blakey, E., & Spence, S. (1990). *Developing metacognition* [ERIC digest]. Syracuse, NY: ERIC Clearinghouse on Information Resources. (ERIC Document Reproduction Service No. ED327218)

Bouffard, T., & Couture, N. (2003). Motivational profile and academic achievement among students enrolled in different school tracks. *Educational Studies*, 29(1), 19–38.

Caraway, K., Tucker, C.M., Reinke, W.M., & Hall, C. (2003). Self-efficacy, goal orientation, and fear of failure as predictors of school engagement in high school students. *Psychology in the Schools, 40*(4), 417–427.

Garrison, D.R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly, 48*(1), 18–33.

Guthrie, J.T., Alao, S., & Rinehart, J.M. (1997). Engagement in reading for young adolescents. *Journal of Adolescent and Adult Literacy, 40*(6), 438–446.

Harlen, W., & Crick, R.D. (2003). Testing and motivation for learning. *Assessment in Education, 10*(2), 169–207. Retrieved December 7, 2004, from www.educationarena.com/educationarena/sample/sample_pdfs6/CAIE10_2.pdf

Howse, R.B., Lange, G., Farran, D.C., & Boyles, C.D. (2003). Motivation and self-regulation as predictors of achievement in economically disadvantaged young children. *Journal of Experimental Education, 71*(2), 151–174.

Linnenbrink, E.A., & Pintrich, P.R. (2003). The role of self-efficacy in student engagement and learning in the classroom. *Reading and Writing Quarterly: Overcoming Learning Difficulties, 19*(2), 119–137.

Lumsden, L. (1994). *Student motivation to learn* [ERIC digest No. 92]. Eugene, OR: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED370200)

Lumsden, L. (1999). *Student motivation: Cultivating a love of learning*. Eugene, OR: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED443135)

Miller, C.A., Fitch, T., & Marshall, J.L. (2003). Locus of control and at-risk youth: A comparison of regular education high school students and students in alternative schools. *Education, 123*(3), 548–552.

Ngeow, K., & Kong, Y. (2001). *Learning to learn: Preparing teachers and students for problem-based learning* [ERIC digest]. Bloomington, IN: ERIC Clearinghouse on Reading, English, and Communication. (ERIC Document Reproduction Service No. ED457524)

Nichols, W.D., Jones, J.P., & Hancock, D.R. (2003). Teachers' influence on goal orientation: Exploring the relationship between eighth graders' goal orientation, their emotional development, their perceptions of learning, and their teachers' instructional strategies. *Reading Psychology, 24*(1), 57–85.

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.

Patterson, W. (2000). Grounding school culture to enable real change. *Education Digest, 65*(9), 4–8.

Renchler, R. (1992). *Student motivation, school culture, and academic achievement: What school leaders can do* [Trends and issues paper]. Eugene, OR: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED351741)

Scheidet, R.A. (2003). Improving student achievement by infusing a web-based curriculum into global history. *Journal of Research on Technology in Education, 36*(1), 77–94.

Schillereff, M. (2001). Using inquiry-based science to help gifted students become more self-directed. *Primary Voices K–6, 10*(1), 28–32.

Schwartz, W. (2001). *Closing the achievement gap: Principles for improving the educational success of all students* [ERIC digest]. New York, NY: ERIC Clearinghouse on Urban Education. (ERIC Document Reproduction Service No. ED460191)

Sheldon, K.M., & Biddle, B.J. (1998). Standards, accountability, and school reform: Perils and pitfalls. *Teachers College Record, 100*(1), 164–180.

Stefanou, C., & Parkes, J. (2003). Effects of classroom assessment on student motivation in fifth-grade science. *Journal of Educational Research, 96*(3), 152–162.

Thomas, J.W. (1993). Promoting independent learning in the middle grades: The role of instructional support practices. *Elementary School Journal, 93*(5), 575–591.

Zimmerman, B.J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64–70.

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Northwest Regional Educational Laboratory

101 S.W. Main Street, Suite 500

Portland, Oregon 97204

Telephone: 503-275-9500, Fax: 503-275-0458

E-mail: Info@nwrel.org

NWREL's Web site address is www.nwrel.org

Planning and Service Coordination

Director: Dr. Steven R. Nelson

Writer: Clayton Connor

Editor: Rhonda Barton

Design and Production: Paula Surmann

Technical Editor: Eugenia Cooper Potter

Comments or queries may be directed to
Dr. Steven R. Nelson at nelsons@nwrel.org.
To order products call 503-275-0755 or
800-547-6339 ext. 755.

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