The Learning for Life Champions™
Foundational Research Base

December 8, 2014
Executive Summary

Students with disabilities comprise a heterogeneous group of individuals with varied backgrounds, experiences, and support needs. As a result, these students require a curriculum that is responsive to their diversity.

This foundational report summarizes the research behind components of Learning for Life’s Champions™ program, which provides instruction in daily living skills and career transition to students with disabilities. The report highlights research underlying the need for and effectiveness of instruction in daily living skills, career transition support, and certain instructional strategies for students with disabilities.

Learning for Life’s Champions™ provides instruction in daily living skills

Students with disabilities have a range of needs related to life skills such as dressing and meal preparation, human growth and development, nutrition and wellness, and personal safety. When student needs are met, and students have greater independence and daily living skills, they can have more positive academic, career, and independent living experiences after high school (e.g., Test et al., 2009).

Within the topic of human growth and development, instruction in social skills can be beneficial. For example, students with disabilities who possess more social skills have better behavior and more positive social interactions compared to their peers with less social skills (e.g., Gansle, 2005; Kam, Greenberg, & Kusché, 2004).

Similarly, within personal safety, abuse prevention programs can help. Studies find that when students with disabilities participate in abuse prevention programs, they have greater prevention knowledge compared to peers who do not participate (e.g., Kim, 2010).

Learning for Life’s Champions™ provides instruction in career transition skills

College is not an option for some students with disabilities, signifying the importance of career transition education (e.g., Carter, Brock, & Trainor, 2014). When high schools meet students’ career experience needs, studies suggest students with disabilities have more positive career and academic outcomes (Test et al., 2009). As an added benefit of career-related instruction in one topic, self-determination, students with disabilities might be more equipped at setting goals and solving problems (e.g., Agran, Blanchard, Wehmeyer, & Hughes, 2002).

Learning for Life’s Champions™ uses several research-based instructional strategies

Certain research-based instructional strategies—hands-on learning, student recognition, transition assessments, and flexible and adaptable programs—can enhance the learning experiences of students with disabilities. Specifically, hands-on learning can foster student understanding and achievement (e.g., Cass, Cates, Smith, & Jackson, 2003; Scruggs, Mastropieri, Bakken, & Brigham, 2003), and student recognition opportunities can support positive behaviors and greater motivation (e.g., Witzel & Mercer, 2003). Additionally, transition assessments can provide information on student mastery levels and areas for improvement related to students’ daily living, career, and academic skills (e.g., Test, Smith, & Carter, 2014). Finally, flexible and adaptable programming
can provide responsive educational content to students with varied needs (e.g., Snow, Wallace, & Munro, 2001).

**Summary**

Students with disabilities possess a wide array of needs, necessitating the importance of a responsive curriculum. Learning for Life’s Champions™ aims to empower children and adolescents with disabilities through a diverse curriculum that guides students toward success, independence, and self-sufficiency.
Acknowledgements

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Introduction

“Rather than looking at generalized academic standards, which are in part based on the knowledge that is required for post-secondary education, curriculum designed for students with disabilities should more closely reflect the ecology of the individual environments in which these students live and will live. This would mean comprehensive local level plans to identify those skills that would provide a student with the greatest opportunities to access the least restrictive services (e.g., competitive or supported employment, independent or group living, community leisure activities).” (Ayres, Lowrey, Douglas, & Sievers, 2011, p. 17)

Education should be instructionally responsive to the unique needs, strengths, and interests of students with disabilities during and after high school (Ayres et al., 2011; Individuals with Disabilities Education Act, 2004; U.S. Department of Education, 2007). Student Individual Education Programs (IEPs) mandate instructional responsiveness. When students with disabilities turn 16, their IEP must include information on postsecondary transition needs in the areas of training, education, employment, and independent living (Individuals with Disabilities Education Act, 2004; U.S. Department of Education, 2007, 2014).

Identifying postsecondary transition needs is important because students will follow different pathways. Research suggests transition and postsecondary outcomes vary considerably within and between disability categories (Grigal, Hart, & Miglore, 2011; Test, Smith, & Carter, 2014). For example, students with intellectual disabilities are less likely to attend college or participate in competitive careers, less likely to have a paying job, and less likely to earn more than $5.15 hourly compared to students with other disabilities (Grigal, Hart, & Miglore, 2011). Additionally, some students might require support in the area of independent living. For example, 49% of students with mental retardation, 46% of students with autism, and 41% of students with disabilities plan to live on their own in the future, without supervision (Wagner, Newman, Cameto, Levine, & Marder, 2007). As a result, schools should take individual student needs into consideration, supporting students in leading independent, adult lives after high school, if possible. A strictly standards-based, academic curriculum does not provide this level of support for independence (Ayres et al., 2011; Clark, Field, Patton, Brolin, & Sitlington, 1994; Spann, Kohler, & Soenksen, 2003).

Parents, teachers, and community members agree that students with disabilities need more than an academic curriculum, emphasizing the importance of life skills training in fostering independence and positive outcomes. Members of these groups identify social skills, communication skills, human growth and development topics, and other life skills as areas of curriculum need for students with intellectual disabilities, developmental disabilities, and autism spectrum disorders (Dowrick, 2004; Spann, Kohler, & Soenksen, 2003). Additionally, teachers of students with severe learning disabilities note that life skills training would equip their students with self-help skills, resulting in a greater likelihood of future employment, greater social skills, and higher quality of life (Rahamin, 1997).

Learning for Life Champions™ provides life skills and career transition instruction for students with disabilities. The Champions™ Daily Living Skills program includes 62 lessons for students with cognitive and developmental disabilities in the following 12 topic areas:
• Safety
• Calendar use
• Parts of the body
• Grooming
• Self-concept
• Clothing care
• Dressing
• Human growth and development
• Nutrition
• Wellness
• Table manners
• Meal preparation

Lessons include various adaptations and accommodations for different student needs, time for guided practice, active learning activities, and assessment opportunities for every lesson.

The Champions™ Transition to Work program aims to prepare high school-age students with disabilities for the workforce, through 24 lessons in the following six topic areas:
• Managing finances
• Decision-making skills
• Vocational opportunities
• Planning and preparation
• Mental skills needed for good work habits
• Seeking a job

Similar to the Champions™ Daily Living Skills program, the Champions™ Transition to Work program includes active learning, reflection, and assessment opportunities in each lesson. Both programs incorporate recognition strategies (e.g., honor wall chart, stickers for completion of lessons) and involve parents.

This foundational research paper includes existing research on components included within Learning for Life’s Champions™ Daily Living and Transition to Work programs. The paper details research behind instruction in daily and independent living skills; research supporting instruction in transition and career skills; and research underlying Learning for Life instructional strategies. Throughout the document endnotes provide additional background, including information on study design, analyses, and effect sizes.
Learning for Life’s Champions™ provides instruction in daily living skills

Learning for Life’s Champions™ Daily Living program provides instruction in various life skills for daily, independent living. The following section details data from research on daily living skills needs and on instructional programs designed to meet such needs.

Life Skills

Studies suggest that students with disabilities have a need for daily living or life skills instruction. For example, in a study of elementary and middle school students with disabilities, only 24% performed at a high level on functional skills (e.g., reading signs, telling time), 64% performed at an average level, and 12% performed at a low level (Blackorby et al., 2005). In another study, 66% of adolescents with disabilities performed poorly on self-care skills (e.g., eating, getting dressed), 71% scored poorly on social interactions (e.g., use of language), and 76% scored poorly on overall independence (Wagner, Newman, Cameto, & Levine, 2006). When students with disabilities have higher independence and daily living skills, research suggests they have more positive academic, career, and independent living experiences after high school, emphasizing the importance of life skills instruction to meet student needs (Test et al., 2009).

Specific Subtopics

Life skills instruction can encompass a wide variety of topic areas, such as dressing and meal preparation, human growth and development, nutrition and wellness, and personal safety.

Dressing and Meal Preparation

Some students with disabilities lack skills related to dressing and meal preparation. For example, Blackorby et al. (2005) reported that 76% of elementary and middle school students with disabilities are proficient at self-care and can feed themselves and get dressed independently, but 22% score in an average range, and 2% score poorly. Furthermore, only 3% of elementary and middle school students with disabilities are proficient at various household responsibilities (e.g., making a meal, cleaning, doing laundry), whereas 37% perform at an average level, and 60% perform poorly (Blackorby et al., 2005).

However, recent research suggests that schools can meet student needs related to dressing and meal preparation through additional instruction. For example, Graves, Collins, Schuster, and Kleinert (2005) found that students with moderate disabilities could be taught to cook simple meals for themselves with 100% mastery.
Human Growth and Development

Within the topic of human growth and development, two areas—social skills, and sex and drug education—might be beneficial for students with disabilities.

Social Skills

At a young age, some students with disabilities might be at a social disadvantage. For example, in a study by the U.S. Department of Education (2012), 40-44% of parents reported their preschool-aged children with disabilities experienced difficulty playing with other children and 47-53% of parents reported their preschool-aged children interacted aggressively with peers. Presumably because of these difficulties, Kolb and Hanley-Maxwell (2003) found that parents of students with disabilities emphasized the importance of social skills for their children, including self-awareness, self-control, empathy, and social cooperation.

Studies also suggest that social skill performance can vary by disability. For example, 60% of students with autism spectrum disorders score poorly on social skills compared to 27% of students with learning disabilities and 19% of students with speech impairments (Blackorby et al., 2005). To meet social skill needs, research suggests potential benefits of providing social skills instruction, as students with greater social skills in high school have higher grades (Milsom & Glanville, 2010) and greater academic and career-related success after high school (Test et al., 2009).

When schools teach social skills, there can be positive effects. Multiple studies suggest that social skills programs for students with disabilities are associated with the following benefits:

- less behavior problems and aggression (Gansle, 2005; Kam, Greenberg, & Kusché, 2004);
- greater awareness of negative feelings (Kam et al., 2004);
- more positive social skills (Gansle, 2005; Richardson, Tolson, Huang, & Lee, 2009);
- greater use of problem solving strategies (Kam et al., 2004; Richardson et al., 2009); and
- better communication skills and greater empathy (Richardson et al., 2009).

Sex and Drug Education

Some studies suggest that students with disabilities are at risk for alcohol and drug abuse. For example, Emerson and Turnbull (2005) and Hogan, McLellan, and Bauman (2000) report that students with disabilities might be at increased risk of smoking cigarettes and drinking alcohol. The increasing number of students living independently after high school makes it more likely
that students would encounter drug and substance abuse issues (Snow, Wallace, & Munro, 2001). This greater risk is especially concerning to educators because cigarette, alcohol, marijuana, or cocaine use in students with disabilities predicts poorer high school outcomes, including lower GPA, a younger age at first sexual intercourse, and a greater likelihood of school dropout (Hollar & Moore, 2004). To prevent these problems, research suggests drug and sex education might be helpful for students with disabilities (Gougeon, 2009; Hollar & Moore, 2004).

**Nutrition and Wellness**

As adults, some individuals with disabilities have poorer nutritional and wellness habits. The Centers for Disease Control (CDC, 2014) reports that 36% of adults with disabilities are classified as obese compared to 25% of adults without disabilities. Furthermore, according to the CDC (2014), 22% of children and adolescents with disabilities are classified as obese compared to 16% of children and adolescents without disabilities. Studies also suggest students with disabilities are at greater risk for sedentary behavior and poor nutritional choices compared to students in general education (Hogan, McLellan, & Bauman, 2000).

Research suggests that nutrition and wellness programs offer a possible solution to addressing obesity. Specifically, the CDC (2013), suggest that all students with disabilities can benefit from opportunities to participate in wellness programs, including having nutrition goals in IEPs and involving parents in health and wellness initiatives. As evidence, one study by Arnold-Reid, Schloss, and Alper (1997) showed that students with mental retardation could master the importance of nutritional guidelines and meal planning.

**Personal Safety**

Abuse and bullying prevention are key topics in the area of personal safety.

**Prevention of Abuse**

Unfortunately, students with disabilities are at greater risk for abuse. Specifically, children and adolescents with disabilities have a greater risk for physical violence, maltreatment, sexual abuse, emotional abuse, and neglect compared to students without disabilities (Baladerian, 1991; Jones et al., 2012). The prevalence of abuse in the general population is 11% compared to 31% in the population of students receiving special education (Sullivan & Knutson, 2000).

One way to confront abuse-related issues is through prevention. Baladerian (1991) suggests that special education staff and parents can benefit from training in abuse recognition and reporting. Students can also benefit. For example, Kim (2010) reported that personal safety programs that teach children and adults with intellectual disabilities protection skills (e.g., saying “no”) effectively increase abuse prevention knowledge. Similarly, studies suggest sexual abuse prevention programs for children and adolescents without disabilities increase student knowledge surrounding abuse prevention (Davis & Gidycz, 2000; Rispens, Aleman, & Goudena, 1997).
**Prevention and awareness of bullying**

Bullying can also be a problem that leads to negative outcomes for some students with disabilities. For example, middle and high school students in full-time special education classes have higher levels of bullying, fighting, and victimization compared to peers in general education (Rose, Espelage, & Monda-Amaya, 2009). Furthermore, 77% of parents of children with autism spectrum disorder reported their child was bullied within a 30-day period; and students who were frequent victims (compared to less frequent victims), had higher anxiety, more hyperactivity, a greater likelihood of self-injury, and greater sensitivity (Cappadocia, Weiss, & Pepler, 2012).

One way to address bullying involves information sharing. Parents support the importance of victims telling an adult about being bullied (Sawyer, Mishna, Pepler, & Wiener, 2011) and bullies report that threatening to tell an adult would reduce bullying behaviors (Paul, Smith, & Blumberg, 2012).

**Summary**

Students with disabilities can benefit from life skills instruction in multiple areas, such as dressing and meal preparation, human growth and development, nutrition and wellness, and personal safety.

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**LEARNING FOR LIFE’S CHAMPIONS™ TEACHES LIFE SKILLS**

Learning for Life’s Champions™ addresses life skills topics in 12 different areas, with lessons specific to dressing and meal preparation, human growth and development, nutrition and wellness, and personal safety.

Across 16 clothing care, dressing, and meal preparation lessons, students have opportunities to practice basic dressing skills, such as zipping clothes and identifying clothing for different types of weather; students receive support in basic clothing care, such as determining when clothes are dirty; and students practice basic steps for meal preparation, such as learning kitchen appliances and determining which foods need refrigeration.

In six human growth and development lessons, students learn various social skills and basic sex and drug education. Examples of social skills lessons include how to handle anger and build emotional awareness. Topics related to sex and drug education include understanding basic physical development and affection, discussion of different types of drugs and why they are harmful, and strategies for saying “no” to drugs.

Within six lessons on nutrition and wellness, students learn about food groups, portion sizes, food labels, and the importance of breakfast. Students also practice daily exercise activities and learn about the importance of getting enough sleep.

Finally, within 12 lessons on personal safety, students address multiple topics, including how to prevent abuse and how to identify and report being bullied. One personal safety activity is a short video, Play it Safe, that uses a puppet game show format to educate students on four rules of personal safety (e.g., saying “no” when a child feels uncomfortable). The program also includes an abuse prevention guidebook for parents which provides information on prevalence, signs of abuse, and support resources.
Learning for Life’s Champions™ provides instruction in career transition skills

Learning for Life’s Champions™ program provides instruction in career transition skills for students with disabilities. The following section details data on the need for career transition skills and offers research behind instruction in career transition skills, including goal-setting and self-determination, for students with disabilities.

Career transition needs

Many students with disabilities follow a career versus college pathway and require career transition support. Consider the following statistics:

- Most teachers of students with intellectual and developmental disabilities (69-74%) believed that neither college nor vocational schools were options for their students after high school (Carter, Brock, & Trainor, 2014).
- Approximately 48% of students with mental retardation, 46% of students with autism, and 54% of students with multiple disabilities reported they would definitely or probably not complete a 4-year degree after high school (Wagner et al., 2007).
- Approximately 37% of students with mental retardation, 34% of students with autism, and 29% of students with multiple disabilities planned to be financially self-supporting after high school (Wagner et al., 2007).
- Eight years after high school, 59% of students with disabilities reported living independently (Newman et al., 2011).
- After high school, 91% of students with disabilities reported having a job at some point and having an average of four jobs since high school (Newman et al., 2011).
- After high school, 59% of students with disabilities have a savings account, 59% have a checking account, and 41% have a credit card (Newman et al., 2011).

In addition to teacher and student perceptions of need, student strength and need profiles suggest that 80% of students with intellectual and developmental disabilities have complex and diverse needs related to post-school transition planning (Carter, Brock, & Trainor, 2014).
When students with disabilities leave school with their career transition needs met, studies suggest that they achieve more positive outcomes. For example, Carter, Austin, and Trainor (2012) reported that when students with disabilities received instruction in job searches and self-promotion, they were more likely to become employed. Additionally, when students with disabilities left high school with greater career awareness, took career-related courses in high school, or participated in transition programs, they had greater post-high school career and academic outcomes (Test et al., 2009). Finally, when students with disabilities participated in transition planning interventions that taught self-determination, work skills, and other related skills, students had greater success in acquiring and keeping jobs (Cobb & Alwell, 2009).

Teaching goal-setting and self-determination

Self-determination and goal setting skills can be aspects of career transition support. Self-determination is defined as goal choice, expression, planning, evaluation, and modification; and involves self-advocacy and decision-making (Algozzine, Browder, Karvonen, Test, & Wood, 2001). Most special education teachers (60%) believe that self-determination skills prepare students for school and post-school success (Wehmeyer, Agran, & Hughes, 2000), and research suggests that self-determination skills can support students with disabilities in a multitude of ways. For example, Wehmeyer and Palmer (2003) reported that after high school, students with cognitive disabilities who were higher in self-determination (compared to lower) were more likely to report maintaining a bank account, holding a job, and working part- or full-time one year later; and living independently, having job training, and having a job three years later. Additionally, in examining post-high school outcomes for students with disabilities, Test et al. (2009) found that students who had greater self-determination skills (compared to lower self-determination skills) had more positive academic and employment outcomes.

Fortunately, students with disabilities can benefit from instruction in self-determination (e.g., Algozzine et al., 2001). For example, Agran et al. (2002) found that middle school students with disabilities can successfully set goals and solve problems when supported with self-reflection and goal-setting activities.

Summary

Students with disabilities have a need for various transition services, with many students benefiting from career-related support. Educating students in self-determination might offer one method for building positive career and post-secondary skills and outcomes.

**LEARNING FOR LIFE’S CHAMPIONS™ TEACHES CAREER TRANSITION SKILLS**

Learning for Life’s Champions™ program provides instruction in various topics related to career transitions, including information on seeking a job (i.e., looking for a job, applying for a job, interviewing for a job, understanding job regulations and ethics), and aims to build various self-determination and decision-making skills (i.e., asking for help, making good versus bad decisions, considering alternative solutions, and developing personal goals). Students learn how to manage finances and receive instruction in various finance topics, such as budgeting and credit card management. Students also learn about different work opportunities, have opportunities to plan and prepare for potential jobs, and practice job seeking strategies, such as applying and interviewing for jobs.
Learning for Life’s Champions™ uses several research-based instructional strategies

Learning for Life incorporates multiple research-based instructional strategies in Champions™. The following section explores supporting research behind four such strategies for students with disabilities: manipulatives and hands-on learning, student recognition, assessment opportunities, and program flexibility and adaptability.

Use of manipulatives and hands-on learning

Studies suggest that manipulatives and hands-on learning in general education can support direct learning experiences, independence, and student confidence (Berkowitz & Grych, 2000; Burenheide, 2012; Janas & Nabors, 2000). These strategies may also be effective for students with disabilities (e.g., McCarthy, 2005; Scruggs, Mastropieri, Bakken, & Brigham, 1993). For example, using manipulatives during math lessons can support students with disabilities in understanding math concepts (e.g., Cass, Cates, Smith, & Jackson, 2003; Styers & Baird-Wilkerson, 2011). Additionally, using hands-on instruction compared to text-based learning (e.g., textbooks) can result in higher achievement and understanding for middle school students with emotional and learning disabilities (McCarthy, 2005; Scruggs et al., 1993).

Student recognition

There is currently debate on whether the use of rewards leads to greater motivation and interest among students in the general education population (e.g., Cameron & Pierce, 1994; Deci, Koestner, & Ryan, 1999; Eisenberger, Pierce, & Cameron, 1999; Hattie, 2009). However, there is some agreement that verbal praise can be beneficial, particularly when it is specific to accomplishing a task (Cameron & Pierce, 1994; Deci, Koestner, & Ryan, 1999; Hattie, 2009; Hattie & Timperley, 2007; Kluger & DeNisi, 1996). In meeting the needs of students with disabilities, some researchers believe that rewards in the form of recognition and praise can be beneficial. Specifically, research suggests that rewards can foster motivation and encourage appropriate social and academic behaviors (Dean, Hubbell, Pittler, & Stone, 2012; Witzel & Mercer, 2003). By recognizing students for their efforts toward meeting various goals, objectives, or benchmarks, student confidence and achievement can increase (Dean et al., 2012).

“Recognizing students’ efforts along the way to achieving a goal helps them strengthen their resolve to complete the task or internalize the learning. As students see the results of working hard, they change their attitudes and beliefs about themselves and their ability to learn. They often become more tenacious and resilient; they will persevere when a task is difficult and success doesn’t come immediately. Students’ increased sense of competence and control contributes to a positive learning environment and their motivation to learn.” (Dean et al., 2012, Kindle Locations 528-532)
When using rewards, researchers offer several suggestions. First, similar to students in general education, when giving rewards to students with disabilities, teachers should focus more on recognizing student actions than on the reward itself. As students become more intrinsically motivated, teachers can use fewer concrete rewards (e.g., medals), focusing more on praising students for achievements (Witzel & Mercer, 2003). Second, teachers should ensure that students with disabilities understand the reasoning behind the reward. Finally, teachers should ensure equity so that students believe their reward is comparable to rewards received by their peers (Dean et al., 2012; Witzel & Mercer, 2003).

**Assessment opportunities**

When students turn 16, their IEPs must include information on assessments of post-school transition needs related to training, education, employment, and daily living skills (U.S. Department of Education, 2014). One way to address this IEP component is through transition assessments, which can provide insight into students’ academic performance, career aptitude, self-determination, and daily living skills (Test et al., 2014). Transition assessments are essential because student needs differ, underscoring the importance of monitoring and assessing individual needs (Carter, Brock, & Trainor, 2014; Patton, Cronin, & Jairrels, 1997).

**Program flexibility and adaptability**

Students with disabilities are an extensively heterogeneous group of people with varied skills, experiences, and support needs. To address this diversity, Snow, Wallace, and Munro (2001) emphasize the importance of flexible and adaptable programs, with appropriate materials for a wide range of student needs.

**Summary**

Students with disabilities can benefit from instruction that incorporates hands-on learning, recognition, assessment opportunities, and program flexibility and adaptability.

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**LEARNING FOR LIFE’S CHAMPIONS™ USES RESEARCH-BASED INSTRUCTIONAL STRATEGIES**

*Learning for Life’s Champions™ incorporates multiple hands-on activities (e.g., in a lesson on anger, students practice whole body coping strategies); recognizes students for effort and mastery through recognition stickers (Life Skills version) and certificates and medals (Transition to Work version); provides brief assessment opportunities at the end of each lesson (i.e., evaluation benchmarks set to 80 percent mastery); and offers adaptability solutions for every lesson (i.e., adaptation sections offer alternative ways of teaching content).*
Summary

Responsive education is essential for post-high school success. Students with disabilities comprise a heterogeneous group of individuals with different academic, career, and daily living support needs, emphasizing the importance of a comprehensive curriculum that meets the unique goals set for and by each student.

This foundational research paper summarized research that supports components of Learning for Life’s Champions™ Daily Living and Transition to Work programs. Different sections of the report described research supporting daily living skills, career transition education, and instructional strategies for students with disabilities.

Research suggests that students with disabilities possess a wide variety of life skill needs related to dressing and meal preparation, human growth and development, nutrition and wellness, and personal safety (e.g., Baladerian, 1991; Blackorby et al., 2005; CDC, 2014; Emerson & Turnbull, 2005; Rose et al., 2009; U.S. Department of Education, 2012). Meeting these needs is important, because when students with disabilities have greater independent and daily living skills, they have more positive post-high school academic, career, and independent living experiences (e.g., Test et al., 2009). As additional examples of curriculum benefits, within the topic of human growth and development, studies suggest that social skills training can help, as students with greater social skills have fewer behavior problems and better social interactions compared to students with lower social skills (Gansle, 2005; Kam et al., 2004; Richardson et al., 2009). Furthermore, personal safety programs might be beneficial, as students who participate in abuse prevention programs have greater prevention knowledge compared to students who do not participate (e.g., Kim, 2010).

In addition to the need for daily living skills, students with disabilities might also require career transition support. Researchers emphasize the importance of career skills for students with intellectual and developmental disabilities (e.g., Carter et al., 2014) and find that when career needs are met, students have positive outcomes. For example, when students leave high school with greater career awareness or career transition knowledge, they have more positive career and academic outcomes after high school (Test et al., 2009). Programs that emphasize self-determination skills, one component of career-related education, can also help students to set goals and solve problems (Agran et al., 2002).

In providing responsive programming, schools should also consider the importance of research-based instructional strategies for students with disabilities, such as hands-on learning, student recognition, transition assessments, and flexible and adaptable programming. First, hands-on learning experiences can support student understanding and achievement (e.g., Cass et al., 2003; Scruggs et al., 1993). Second, opportunities for student recognition can foster appropriate student behaviors and build student motivation (Witzel & Mercer, 2003). Third, transition assessments can provide insight into students’ academic performance, career aptitude, self-determination, daily living skills, and mastered skills (Test et al., 2014). Finally, because students with disabilities comprise a heterogeneous group, researchers emphasize the importance of providing a flexible and adaptable curriculum (e.g., Snow et al., 2001).
Because of the varied experiences and backgrounds of students with disabilities, schools should seek solutions to build skills in a variety of areas, including daily living and career transition. Learning for Life’s Champions™ program aims to empower children and adolescents with disabilities with instruction in these skills, providing them with support in living fulfilling and independent adult lives.
References


Appendix. Range of effect sizes by research topic area

Effect sizes represent standard deviation differences between two conditions or two time points. For example, an effect size equal to 1.0 translates to a one standard deviation difference between groups (e.g., pretest/posttest, treatment/control). Readers can interpret the strength of an educational intervention using effect sizes and some basic guidelines from Hattie (2009), who examined the distribution of 146,142 educational effect sizes. Hattie (2009) found that many educational studies report positive results and the average reported effect size is higher than zero (average effect size = 0.40). As a result, Hattie (2009) suggested using 0.40 as a benchmark for determining the relative strength of an educational intervention. Table A1 briefly describes the proposed categories and effect size ranges described in Hattie (2009).

Table A1. Hattie (2009) interpretation of effect sizes

<table>
<thead>
<tr>
<th>Hattie (2009) Category</th>
<th>Effect Size Range</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse effects</td>
<td>Below 0.0</td>
<td>Negative effect sizes; Decreases in student outcomes (e.g., achievement/performance)</td>
</tr>
<tr>
<td>Developmental effects</td>
<td>0.0 to 0.15</td>
<td>Effect sizes usually found due to typical student improvement over the course of a year (i.e., maturation/development)</td>
</tr>
<tr>
<td>Teacher effects</td>
<td>0.15 to 0.40</td>
<td>Effect sizes usually found for teacher average impacts on student performance over the course of a year (i.e., teacher influence accounts for a 0.15 to 0.40 standard deviation increase in student growth)</td>
</tr>
<tr>
<td>Zone of desired effects</td>
<td>Above 0.40</td>
<td>Effect sizes representing the greatest potential impacts on students</td>
</tr>
</tbody>
</table>

The studies cited in this report found positive effect sizes for programs that addressed three topics in the Learning for Life Champions™ Program (see Table A2). All effect sizes fell between the Hattie (2009) categories of developmental effects and zone of desired effects.
<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Effect Sizes (Range)²</th>
<th>Hattie (2009) Effect Size Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RE</td>
</tr>
<tr>
<td>Daily living skills</td>
<td>0.14–5.26</td>
<td>×</td>
</tr>
<tr>
<td>Career transitions</td>
<td>0.09–0.72</td>
<td></td>
</tr>
<tr>
<td>Instructional strategies</td>
<td>0.09–1.00</td>
<td>×</td>
</tr>
</tbody>
</table>

² Magnolia Consulting calculated effect sizes using information provided by articles cited in the foundational report. Positive effect sizes represent more positive student outcomes (e.g., achievement, performance).

b. RE = Reverse effects, DE = Developmental effects, TE = Teacher effects, ZDE = Zone of desired effects
Notes

1 Grigal, Hart, and Migliore (2011) used data from the National Longitudinal Survey 2 (NTLS2) to compare transition planning in a population of students with intellectual disabilities to transition needs of students with other disabilities (e.g., autism, deafness, blindness, emotional disorders, hearing or physical impairments). Students with intellectual disabilities were less likely to attend college or participate in competitive employment, less likely to have a paying job, and less likely to earn more than $5.15 hourly in their current job compared to students with other disabilities ($p < .05$).

2 Spann, Kohler, and Soenksen (2003) reported that 83% of parents of high school-age children with autism spectrum disorders or developmental disabilities believed schools were not doing enough to help their children meet life skill needs.

3 This foundational research paper is not an efficacy study of Learning for Life’s Champions™. Researchers did not investigate the impact of Learning for Life’s Champions™ Daily Living or Transition to Work programs in any studies cited in this report.

4 Effect sizes represent standard deviation differences between two conditions or two points in time. For example, an effect size equal to 1.0 translates to a one standard deviation difference between groups (e.g., pretest/posttest, treatment/control).

5 Blackorby et al. (2005) conducted a six-year longitudinal study (Special Education Elementary Longitudinal Study; SEELS) to examine student achievement of elementary and middle school students with disabilities. The study sample included more than 11,000 students in Grades 1–6 at the study onset.

6 Wagner et al. (2006) examined data from the National Longitudinal Transition Study (NLTS2), a longitudinal study including over 11,000 13- to 16-year-old students followed over multiple years, starting in the 2000/2001 school year. In this study, researchers examined the functional skills of students with disabilities.

7 Test et al. (2009) explored different predictors of post-high school outcomes for students with disabilities using data from 22 studies and 26,480 students. Researchers found that students who had more independent living skills had greater academic (effect size = 0.27) and career-related outcomes (effect sizes = 0.42 to 0.53).

8 Blackorby et al. (2005) conducted a six-year longitudinal study of elementary and middle school students with disabilities. The study sample included more than 11,000 Grade 1–6 students at the beginning of the study.

9 Graves et al. (2005) used a video modeling technique to teach three students with moderate intellectual disabilities how to cook (e.g., macaroni and cheese, ramen). All students achieved 100% mastery and became more adept at cooking other foods once they mastered the concept on the first occasion.

10 These statistics are reported in the U.S. Department of Education’s 31st Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (U.S. Department of Education, 2012). The report provides statistics related to providing appropriate, equitable, and effective education for students with special needs.

11 These findings are from a six-year longitudinal study designed to examine student achievement outcomes of elementary and middle school students with disabilities. The study sample included more than 11,000 students in the first year (Blackorby et al., 2005).

12 Milsom and Glanville (2010) used data from Wave 1 of the National Longitudinal Transition Study-2 (NLTS-2) to examine associations between social skills and academic grades for students with special needs. This study included 734 students with learning disabilities or emotional disturbances. Overall, greater cooperation with others predicted higher student grades (standardized beta = 0.11, effect size = 0.22). Additionally, the relationship between...
cooperation with others and student grades was mediated by trouble with teachers, whereby less trouble with teachers predicted higher grades (standardized beta = 0.07, effect size = 0.14).

13 Test et al. (2009) explored different predictors of post-high school outcomes for students with disabilities. Overall, students with more social skills had greater academic (effect sizes = 0.47 to 0.53) and employment-related outcomes after high school.

14 Gansle (2005) conducted a meta-analysis of twenty interventions designed to reduce student anger problems. Overall, there was a positive effect of anger interventions and programming on outcomes of students who participated compared to those who did not participate (effect size = 0.31). Immediately after the interventions, students who received the intervention had fewer behavioral problems and outward aggression (effect size = 0.54) and more positive social skills (effect size = 0.34) compared to students who did not receive the intervention. Similarly, at follow-up, students who received the intervention had fewer behavioral problems and outward aggression (effect size = 0.53) and more positive social skills (effect size = 0.99) compared to students who did not receive the intervention.

15 Kam, Greenberg, and Kusché (2004) investigated the impact of the social skills training program, Promoting Alternative THinking Strategies (PATHS), on the social and psychological outcomes of students in special education classes. The PATHS program taught students different strategies for self-control, emotional awareness, and basic social-emotional problem solving. The three-year, longitudinal study included 133 students with special needs (i.e., learning disabilities, mild mental retardation, emotional and behavioral problems, physical disabilities) in grades 1–3. Using HLM analyses, researchers found that students who received the PATH intervention (compared to those students who did not receive the intervention), had greater decreases in externalizing behaviors (e.g., aggression, effect size = .18), smaller increases in internalizing behaviors (e.g., sadness, withdrawal; effect size = .22), greater decreases in depression (effect size = .49), greater awareness of negative feelings (effect size = .54), and greater usage of non-confrontational problem solving approaches ($F = 3.4$, $p < 0.0$).

16 Richardson, Tolson, Huang, and Lee (2009) examined how participation in an elementary school character education program, Connecting with Others: Lessons for Teaching Social and Emotional Competence, related to outcomes. Twenty-five students in Grades 3 and 4 with special needs (i.e., learning disabilities, behavior disorders), who also had antisocial behavior before the intervention, participated in the treatment-only study. Teachers rated students who participated as having greater social skills (effect size = 5.26), higher problem solving skills (effect size = 3.38), better communication skills (effect size = 3.86), and greater empathy (effect size = 2.88).

17 Emerson and Turnbull (2005) used interview data collected in the Mental Health of Children and Adolescents in Great Britain survey to understand the prevalence of drug abuse in adolescents (ages 11–15) with and without intellectual disabilities. Overall, students with intellectual disabilities had a higher likelihood of being a current smoker compared to students without intellectual disabilities (odds ratio = 1.85, effect size = 0.34); however, child poverty (odds ratio = 5.4, effect size = 0.93) was also a significant predictor of current smoking status for students with disabilities. There were no significant differences between students with and without disabilities in the reports of alcohol consumption at some point in their lives.

18 Hogan, McLellan, and Bauman (2000) sought to understand the prevalence of different maladaptive behaviors in populations of students with disabilities compared to general student populations in Australia. The study sample included 3,918 children and adolescents (ages 11–16) who completed surveys about their life experiences. Overall, students with disabilities had a greater likelihood of smoking cigarettes (odds ratio = 1.57, effect size = 0.25), drinking alcohol on a regular basis (odds ratio = 1.60, effect size = 0.26), and having been drunk more than four times (odds ratio = 2.0, effect size = 0.38).

19 Hollar and Moore (2004) examined outcomes associated with substance abuse for a sample of 1,021 youth with various disabilities (i.e., learning, sensory, physical, emotional, health) who were followed longitudinally using data from the National Education Longitudinal Study 1988-2000 (NELS 88). Overall, cigarette, alcohol, marijuana, or cocaine use in the past month (compared to non-use) predicted fewer high school credits (effect sizes = -1.58 to -0.74), lower high school GPAs (effect sizes = -0.79 to -0.51), a younger age at first sexual interactions (effect sizes = -0.60 to -0.30), and a greater likelihood of school dropout (effect sizes = 0.13 to 0.27).

20 Hogan, McLellan, and Bauman (2000) examined the prevalence of different maladaptive behaviors in Australian
populations of 11- to 16-year-old students with disabilities compared to general student populations. Overall, students with disabilities had a greater likelihood of playing video games more than four hours a week (odds ratio = 1.42, effect size = 0.19), and playing computer games more than four hours per week (odds ratio = 1.57, effect size = 0.25) compared to their peers without disabilities. Students with disabilities also ate more fast food than their peers without disabilities (f[3,3815] = 36.7, p < .001, effect size = 0.20).

21 Arnold-Reid et al. (1997) explored the benefits of teaching meal planning and basic nutrition to three high school-aged students with mental retardation. Researchers taught the students about the importance of good nutrition, went over components within the food pyramid, and helped students to plan and shop for healthy meals. At baseline, students were meeting nutritional guidelines for fruits, vegetables, vitamins, etc. approximately 38% to 90% of the time. At posttest (and also two months later), all three participants were meeting nutritional guidelines 100% of the time and appeared engaged in planning and eating healthy meals.

22 Jones et al. (2012) conducted a meta-analysis of 11 studies to understand the risk of violence in children with disabilities (compared to children without disabilities). Overall, children (younger than 18) with disabilities had a higher likelihood (compared to children without disabilities) of physical violence (odds ratio = 3.56, effect size = 0.70), maltreatment (odds ratio = 3.68, effect size = 0.72), sexual abuse (odds ratio = 2.88, effect size = 0.58), emotional abuse (odds ratio = 4.36, effect size = 0.81), and neglect (odds ratio = 4.56, effect size = 0.84).

23 Sullivan and Knutson (2000) examined abuse data from the school records of 50,278 students (ages 0 to 21) in Omaha, Nebraska schools. Overall, researchers found that the prevalence of abuse was 11% in the general population, compared to 31% of students who received some form of special education.

24 Davis and Gidycz (2000) conducted a meta-analysis of 27 different studies of child sexual abuse prevention programs for children ages 3–13. Researchers found a large, positive average effect size for child abuse prevention programs (effect size = 1.07). The weighted mean effect size was 2.14 for pre-K, followed by 1.24 for ages 5–8, and 0.77 for ages 8 and older.

25 Rispens et al. (1997) conducted a meta-analysis of 16 child sexual abuse prevention studies. Overall, sexual abuse prevention programs had a positive effect on student knowledge immediately following the intervention (effect size = 0.71) and at follow-up occasions (effect size = 0.62). Programs had stronger effects on student knowledge at younger ages (< 5.5 years, effect size = 0.97) compared to older ages (> 5.5 years, effect size = 0.67).

26 Rose, Espelage, and Monda-Amaya (2009) explored how bullying, victimization, and aggression compared between students who were in special education versus general education. The study included 14,315 high school students (Grades 9–12) and 7,331 middle school (Grades 7–8) students who completed questionnaires about their experiences. Overall, middle school students who were in full-time special education classes had higher levels of bullying (effect size = 0.60), fighting (effect size = 0.49), and being a victim of bullying (effect size = 0.41). Similarly, high school students who were in full-time special education classes had higher levels of bullying (effect size = 0.40), fighting (effect size = 0.59), and being a victim of bullying (effect size = 0.37).

27 Cappadocia, Weiss, and Pepler (2012) sought to understand the prevalence and risk factors of bullying in a sample of children with autism spectrum disorder (ASD). The study sample included 192 parents of children ages 5–21 who were diagnosed with ASD and in K–12 at the time of the study. Researchers examined risk factors by placing students into three groups: (a) no victimization in past four weeks (none), (b) victimized 1–3 times in past four weeks (low), and (c) victimized more than three times in past four weeks (high). Students who were victimized at high levels, compared to none and low levels, had greater anxiety issues (effect sizes = 0.79 [low], and 0.90 [none]). They were also more hyperactive (effect sizes = 0.65 [low], 0.81 [none]), were more likely to injure themselves (effect sizes = 0.43 [low], 0.63 [none]), and were more sensitive (effect sizes = 0.63 [low], 0.81 [none]).

28 Carter, Brock, and Trainor (2012) explored teachers’ and parents’ perceptions of the unique needs and strengths of 134 high school students with intellectual and developmental disabilities.

29 Using data from the NLTS-2, Wagner et al. (2007) explored students with disabilities’ perceptions of their individual and academic experiences.
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30 Newman et al. (2011) conducted a longitudinal study (National Longitudinal Transition Study-2; NTLS2) of 13- to 16-year-old students with disabilities and followed them for eight years.

31 Using data from the National Longitudinal Transition Study-2 (NLTS-2), Carter, Austin, and Trainor (2012) explored what factors predicted post-high school employment for high school-age students with disabilities (n = 450). The following factors related to an increased likelihood of employment after high school: ability to advocate for themselves “well” or “very well” (odds ratio = 3.58, effect size = 0.70; compared to “not at all”) and received instruction in how to look for jobs (odds ratio = 1.98, effect size = 0.38) compared to no instruction in how to look for jobs.

32 Test et al. (2009) explored different predictors of post-high school outcomes for students with disabilities using data from 22 studies and 26,480 students. Researchers identified multiple categories relating to post-high school academic, career, and independent living outcomes. For example, students who left high school with a high level of career awareness had more positive academic and career outcomes (effect sizes = 0.23 to 0.27). Similarly, students who completed more occupational and career-related courses in high school had greater academic outcomes (effect sizes = 0.47 to 0.53) and more positive career outcomes (effect size = 0.09). Finally, students who participated in transition planning services in high school (compared to no participation) had greater academic (effect size = 0.45) and career-related outcomes (effect size = 0.46) after high school.

33 Cobb and Alwell (2009) conducted a review and meta-analysis of the research on transition planning and interventions for students with disabilities. Overall, planning and interventions for students with disabilities improved students’ transition-related outcomes. Student development programs primarily teach self-determination, work skills, and other related skills, and past studies find these to be effective (effect sizes = 0.67 to 0.94). Cobb and Alwell (2009) also note that studies suggest that students need transition supports to acquire and keep jobs.

34 Wehmeyer and colleagues (2003) explored how students’ self-determination abilities predicted student success after high school. Students completed a self-determination survey measure and researchers categorized students as high or low in self-determination based on their scores. Self-determination consisted of autonomy, self-regulation, perceived control, and self-realization (e.g., understanding of personal strengths and weaknesses). Using chi-square analyses, researchers found that after one year post-high school, students higher in self-determination were more likely to report maintaining a bank account, holding a job, and working full or part-time. Furthermore, after three years, those students higher in self-determination (compared to lower) were more likely to report independent living, receiving job training, or holding a job since high school.

35 Test et al. (2009) examined several predictors of post-high school outcomes for students with disabilities. Overall, students with greater self-determination skills had more positive academic (effect size = 0.21) and employment outcomes (effect size = 0.72).

36 Algozzine et al. (2001) conducted a meta-analysis of the special education literature to understand how self-determination interventions affected students with disabilities. Researchers defined self-determination as goal choice, expression, planning, evaluation, and modification, and looked at interventions largely focusing on decision-making and self-advocacy. The meta-analysis located 21 studies (largely of individuals with mental retardation and learning disabilities) including: 9 group studies (77% included adolescents) and 13 single-subject designs (56% included adults). The average effect size was 1.38 for group studies. For single-subject designs, the median percentage of nonoverlapping data (PND) between baseline and treatment was 95%. Overall, Algozzine et al. (2001) suggest that interventions emphasizing decision-making and self-advocacy can be beneficial for special education students.

37 Agran and colleagues (2002) explored the success of a goal setting/problem solving intervention in a sample of four middle school students with disabilities. Teachers asked students about a problem they wanted to solve (e.g., touching less, talking more during class) and gave students basic strategies for resolving problems on a consistent basis (e.g., asking themselves how they can fix the problem and looking to see if their actions resolved the problem). All four students met a criterion of 100% goal attainment and successfully learned from the intervention. Students felt positively about the intervention and teachers also saw benefits from their students’ participation (e.g., greater engagement, more positive classroom behavior).
Cass et al. (2003) examined how the introduction of manipulatives into math lessons could support students with learning disabilities in understanding concepts related to perimeter and area. The study sample included three junior high school students with learning disabilities. Students learned via modeling, guided practice with manipulatives, and independent manipulative practice. All three students mastered the math concepts with the support of manipulatives “made problems come alive.” (p. 117).

Styers and Baird-Wilkerson (2011) conducted an RCT of Pearson’s focusMATH program, examining the impact of providing additional hands-on math instruction for students performing at or below the 30th percentile on a math assessment, KeyMath3. The study included 357 students, randomly assigned to participate in focusMATH (treatment) or to receive no intervention (control) during the 2010-2011 school year, and 22 facilitators. Overall, treatment students had significant math learning gains at midyear (effect size = 0.65) and end-of-year (effect size = 1.12). Additionally, there was a positive impact of program participation for treatment students. Students who participated in the treatment program had higher math scores at mid-year (effect size = 0.09) and end-of-year (effect size = 0.24) compared to control students, suggesting the importance of providing additional hands-on instruction to students with learning deficits in math.

McCarthy (2005) conducted a study with 18 middle school students diagnosed with emotional disabilities, who participated in the study in self-contained classrooms, to understand differences in hands-on compared to text-based learning. Students received instruction on “Matter” for 45 minutes a day, three days a week for eight weeks. In the text-based condition, students had a 5- to 10-minute review, 10 minutes of teacher modeling, 15–20 minutes for reading the text and discussing, and 10 minutes of practice based on the previously read text (e.g., answering questions independently). In the hands-on condition, students received 5–10 minutes of review, followed by 30–40 minutes of hands-on active experimentation in small groups with teachers providing support, and 5–10 minutes of review of concepts and experiment findings. There were no significant differences in student scores on a multiple-choice test. However, there were significant differences between groups on a short-answer and hands-on test. Specifically, students who learned in the hands-on setting (compared to the text-based) had higher achievement scores on the short answer (effect size = 4.31) and hands-on tests at posttest (effect size = 2.26).

Scruggs et al. (1993) examined the effects of a textbook-based compared to a hands-on approach to learning science content with a sample of 26 junior high students with learning disabilities. Students had the opportunity to learn science concepts in both conditions, with the ordering counterbalanced across four classrooms. In the textbook condition, students had 10 minutes of review, 30–35 minutes of teacher presentation and text reading, and 10–15 minutes of worksheet review. In the active learning condition, students had 5–10 minutes of review, 35–40 minutes of hands-on activities/lessons in small groups, and 5–10 minutes of whole class review of findings. Overall, students understood more of the science content when taught in hands-on compared to text-based approaches at the immediate (t(25) = 2.19, p = .04, effect size = 0.89) and delayed posttests (t(22) = 2.28, p = .03, effect size = 1.00). Additionally, 96% of students said they preferred the hands-on compared to text-based learning and 96% indicated they would like to do the hands-on learning again.

Cameron and Pierce (1994) conducted a meta-analysis of 96 studies to understand the relationship between external rewards and intrinsic motivation. Cameron and Pierce (1994) reported that the type of reward matters. When students received tangible rewards (e.g., money, stickers), they spent less of their free time on activities (effect size = -0.21) compared to control, but were not different from control in their attitudes toward activities. Furthermore, if students received unexpected tangible rewards (e.g., receiving something after doing an activity), they showed no differences in free time use or attitudes compared to control. Rewards appeared the most problematic when treatment students received rewards contingent on doing some task (effect size = -0.23) compared to control students. There were no differences between groups when rewards were contingent on students achieving a certain level of performance.

Eisenberger, Pierce, and Cameron (1999) conducted a follow-up meta-analysis to Cameron and Pierce (1994) with new categories for different types of rewards. Overall, when students expected rewards for performance, there was no difference from control groups in how students performed on a task during their free time. Explicit rewards had a positive effect on students’ behavior on a task during their free time (effect size = 0.13) and student interest in future activities (effect size = 0.16), compared to students who did not receive rewards. Furthermore, when
students received rewards for exceeding some performance benchmark, there was no difference from control students in how they performed on a subsequent task in their free time; but students who received rewards had higher interest compared to control groups (effect size = 0.26). Additionally, when students received rewards for outperforming others, students spent more of their free time on subsequent tasks compared to control groups (effect size = 0.23) and had higher interest on subsequent tasks compared to control groups (effect size = 0.22).

44 Deci, Koestner, and Ryan (1999) conducted a meta-analysis of 128 studies examining the effects of rewards on intrinsic motivation. Overall, they found that students who received rewards spent less time on tasks in their free time (effect size = -0.24), but had no differences in self-reported interest compared to control students. However, students who received verbal praise spent more on tasks in their free time (effect size = 0.33) and had greater self-reported interest (effect size = 0.31). Furthermore, if students received unexpected rewards, their time spent on future tasks and interest in activities was no different than controls. Additionally, if students received rewards for simply completing a task (i.e., no expectations for level of performance or engagement), there were no significant differences from controls in how they spent their free time, but these students had higher self-reported interest compared to controls. Finally, students who received rewards that were dependent on their level of performance reported motivation levels no different from controls, but their time spent on future tasks decreased (effect size = -0.28).

45 Despite the argument over rewards, Hattie (2009) reports that the literature on the use of rewards has small effect sizes, suggesting that arguments for or against rewards hold little weight.

46 Hattie (2009) synthesized 23 different meta-analyses and 2,050 effect sizes to understand the impacts of feedback on achievement. Overall, feedback has a positive effect on achievement (effect size = 0.73). Hattie (2009) notes that feedback is more effective when it is reinforcing or relates to specific learning goals.

47 Kluger and DeNisi (1996) conducted a meta-analysis of 131 studies on the effects of feedback. Overall, Kluger and DeNisi (1996) noted that feedback can be helpful (effect size = 0.41) and suggest that effective feedback should be task-specific and not generic feedback or personal praise.