THE CONNECTION BETWEEN SOCIAL-EMOTIONAL LEARNING AND LEARNING DISABILITIES: IMPLICATIONS FOR INTERVENTION

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Abstract. **The majority of students with learning disabilities have difficulties with social relationships. In this article, three key skill areas in social-emotional learning are identified as the main source of these difficulties: recognizing emotions in self and others, regulating and managing strong emotions (positive and negative), and recognizing strengths and areas of need. Research supporting their connection with learning disabilities is reviewed. In addition, three examples of interventions that are comprehensive and link academic and social-emotional learning are presented. The first is from language arts. The others are pedagogical procedures that draw upon the multiple intelligences to assist students with tasks such as projects or reports and working through academic and social challenges.**

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> The rationale for educating students with ... disabilities in integrated settings is to ensure their normalized community participation by providing them with systematic instruction in the skills that are essential to their success in the social and environmental contexts in which they will ultimately use these skills.
> (Gartner & Lipsky, 1987, p. 386)

Despite continued controversy surrounding the definition and diagnosis of learning disabilities (Gresham et al., 2003), there is consensus that a common feature of most students with learning disabilities (LD) is that they have difficulties with social relationships. Specifically, they tend not to be accepted by their peers, and they display shortcomings in the way they interact with peers and adults. Further, they have difficulty reading nonverbal and other subtle social cues. Some problems may be linked to the specific disabilities of the child. For example, students with more severe cognitive impairments may lack age-appropriate social understanding of complex interactions. Further, students whose language is impaired may have appropriate understanding of social situations but may have difficulty communicating effectively with others.

Educating children with disabilities in the mainstream has increasingly been identified as a priority in special education (McKleskey & Pacchiano, 1994) based on the recognition that singling children out for intervention reduces opportunities for natural peer interaction and runs the risk of increasing their social isolation and stigma. Furthermore, categorizing students and removing them from the mainstream may cause parents, teachers, and the students themselves

to lower their expectations and lose confidence in the students' abilities (Wang, Reynolds, & Walberg, 1988).

However, inclusion in and of itself is not sufficient to redress these children's social relationship difficulties. This is mainly because successful inclusion relies greatly on the power of positive peer modeling. But if the peer models are not so positive, or if the student with LD is not able to extract the right lessons from what is observed, the impact of modeling is reduced. Further, improving social relationships involves building skills, and this cannot take place effectively through modeling alone (Wallace, Anderson, Bartholomay, & Hupp, 2002). A cycle of instruction, rehearsal and practice, and feedback is needed.

Over the past decade, advances in cognitive-behavioral, preventive, and brain research have converged to provide a more thorough idea of the skills children need for positive social relationships. In particular, the work of the Collaborative for Academic, Social, and Emotional Learning has found that these skills are also essential for effective classroom interaction and a productive classroom climate (Zins, Weissberg, Wang, & Walberg, 2004).

The construct of social-emotional learning emerged in the literature in a systematic way with the publication of *Promoting Social and Emotional Learning: Guidelines for Educators* (Elias et al., 1997), which followed the blockbuster publication by Daniel Goleman (1995), *Emotional Intelligence*. Goleman's book relied on prior action research identifying programs that had been found effective in building children's social competence using rigorous experimental designs. The term "social-emotional learning" (SEL) was developed for use in research and practice in emotional intelligence as applied to the schools because it reflected a strong recognition of the role of both social and emotional factors in successful academic learning.

A look at the skills involved in SEL illuminates many of the possible connections between SEL and learning disabilities (CASEL, 2003; Payton et al., 2000):

1. Recognizing emotions in self and others
2. Regulating and managing strong emotions (positive and negative)
3. Recognizing strengths and areas of need
4. Listening and communicating accurately and clearly
5. Taking others' perspectives and sensing their emotions
6. Respecting others and self and appreciating differences
7. Including identifying problems correctly
8. Setting positive and realistic goals
9. Problem solving, decision making, and planning
10. Approaching others and building positive relationships
11. Resisting negative peer pressure
12. Cooperating, negotiating, and managing conflict nonviolently
13. Working effectively in groups
14. Help-seeking and help-giving
15. Showing ethical and social responsibility

Educators reviewing the list often say that it captures the skills they know students need in order to put their knowledge to productive use and live as responsible citizens in an increasingly complex society. In a recent study, parents of children with high-incidence disabilities identified many of these skills as being at least as essential for their children as academic competence (Kolb & Hanley-Maxwell, 2003). Indeed, think about any of the "pillars" of character that one would want students to internalize and enact. Think about respect or responsibility. What are the skills necessary to act in this way in a situation, in a stressful situation, and to conduct one's life in accordance with these as guiding principles? It would be difficult to compile a response without including many skills from the above list.

Three essential SEL principles that serve as complements to the list of skills guide interventions (National Center for Innovation and Education, 1999):

1. Caring relationships are the foundation of all lasting learning.
2. Emotions affect how and what we learn.
3. Goal setting and problem solving provide focus, direction, and energy for learning.

The essence of these principles is to highlight the importance of the learning environment, the need for educators both to establish caring relationships with students and help student develop the skills they need to establish such relationships with others. Factors such as the way in which emotion directs attention and influences learning and the importance of helping children focus amidst the many distractions that exist to their learning have been deemed important in effective classrooms that include high school students with learning disabilities (Wallace et al ., 2002). From an SEL point of view, both regular and special educators must direct attention to skill development as well as the creation of a climate and set of opportunities that allow those skills to flourish in ways that also reflect individual students' strengths (Elias, Wang, Weissberg, Zins, & Walberg, 2002; Tomlinson, 1999).

While it is beyond the scope of this article to review the field of LD, several points of intersection come to mind. First, there has been implicit understanding on the part of enlightened practitioners that children with LD require interventions that address a broad array of skills, including life skills, and are founded on the

strength of students' relationships with their educators (Smith, 1981, 1990). Second, researchers in the area of LD are finding that the skills of SEL and the principles by which they are learned are demonstrably relevant to understanding students' academic difficulties and why these are so often accompanied by social difficulty.

It is not unusual for intervention practice to be "ahead" of research. What follows are some of the more interesting examples of where the research supports the connection of SEL and learning disabilities.

The most obvious connection is in the area of nonverbal learning disabilities (NLD). Children with NLD show three categories of dysfunction: (a) motoric (lack of coordination in fine- and gross-motor skills, balance problems); (b) visual-spatial organization (difficulty taking an idea and putting it onto paper; difficulty with visual recall/copying/note-taking, spatial perception, such as maps, graphs, tables, spatial relations, handwriting laborious, spelling difficult; time/money concepts hard to grasp, as is prioritization of tasks and knowing what information is most important); and (c) social (difficulty comprehending nonverbal communication; difficulty adjusting to novel situations or transitions; challenges with social judgment and social interactions) (Thompson, 1997).

The impact of these problems on learning includes slow or effortful performance on tasks; faulty perception of text and other materials; a need to talk through all activities; misreading nonverbal cues, body and facial expressions; avoidance of novelty; an inability to comprehend personal manipulation or deception; and difficulty coping with teasing, argumentation, confrontation – intellectually as well as interpersonally – due to an inability to differentiate nuances in others' expressions and points of view.

In the last decade, increasing emphasis has been placed on understanding the many ways in which language-related difficulties can exacerbate behavior problems (Kavale & Forness, 1996). It is also clear that there is a link between literacy-related learning disabilities and SEL.

As Nelson, Benner, and Rogers-Adkinson (2003) point out, the co-occurrence of language-related difficulties and behavioral and emotional problems is described in the literature. However, research has not been conducted across the age ranges of childhood, least of all with ages 13-18. In the authors' study, a K-12 sample of 152 students with emotional disturbance (ED), comorbidity was found to be 45% between language-related LD and ED; more children than adolescents showed language problems (57% vs. 37%), and expressive disorders were more frequent than receptive across age levels. These problems translated into achievement-related difficulties, especially in mathematics.

The connections between language and social difficulties are being illuminated by brain research. Among other things, reading requires converting letters on a page into the phonetic code – beginning with phonemic awareness, accessing the sounds of spoken language and allowing them to have meaning. The strong evidence for neurobiological dysfunction at the heart of LD is matched by an increased appreciation of the effort and struggle involved in children's attempts to compensate for their disability (Shaywitz & Shaywitz, 2004). Successful intervention is intensive, and requires substantial social-emotional adjustments on the part of children.

Beyond the way in which students' effort to compensate for learning challenges drains their energy for nuanced social perception and self-controlled interaction, impairments in reading and language skills are directly linked to impaired social-emotional skills. Rinaldi (2003) examined pragmatic language competence and noted its basis in social behavior, cognitive ability, and linguistic ability (semantic and syntactic). Problems in each of these areas have implications for everyday behavioral functioning, especially in school. For example, a child may code language correctly but use it in inappropriate ways that do not support the establishment and maintenance of interpersonal relationships. A child may not have the cognitive ability to link past and present and bring it into conversations, to anticipate the reactions of others, interpret nuances, distinguishing "kidding" from serious, and so on. Social behavior is also necessary for proper etiquette in interpersonal communication (social distance, pausing during speech, tone of voice). Pragmatic language is an integrative skill that includes a child's ability to accommodate the listener's needs during the interaction. It relates to maintaining a topic of conversation, how to begin it, how to adjust language to changes in the situation and, in general, bring together all the skills necessary for effective social interaction.

There is also research showing that students with LD are at a disadvantage when trying to extract meaning from literature as well as historical and current events. Indeed, well before the field of SEL was established, it was recognized that students with LD are often at a disadvantage with regard to understanding a variety of texts and expressing their understanding in writing by using literary concepts, such as point of view, imagery, and metaphor. Their difficulties, especially in adolescence, with organization and focus in writing often reflect parallel difficulties with understanding the social world (Morocco, Hindin, Mata-Aguilar, & Clark-Chiarelli, 2001).

The parallel point can be made with regard to students' understanding of history and current events. It is

all linked to students' understanding of the subtle contours of interpersonal relationships, the ability to extract information and meaning from interactions "on the fly," and the mental habits students need to participate as informed citizens (Ferretti, MacArthur, & Okolo, 2001). In their research, Ferretti et al. (2001) noted that students' top difficulties were in taking others' perspective, realizing how different understandings of events unfold over time, discerning the varying motives that different groups and individuals might have concerning the same event, and challenges in reconciling different historical points of view.

A Social-Emotional Learning Perspective on Relational Difficulties

Many of the research and conceptual findings reported imply but do not systematically discuss students' SEL skills. As noted in the listing of skills on p. 54, many nuanced abilities are necessary for successful social interaction, particularly in the complex environment of schools. SEL, as the missing piece, helps bridge a gap in both theory and practice with regard to improving outcomes for students with learning disabilities. SEL also addresses the confluence of individual skills and the way in which the environment promotes the development of those skills and supports their use.

To illustrate these points, several SEL skills will be discussed, along with their implications for how students with LD approach various school tasks and how attending to these skills can improve performance and outcomes. The skills selected are focused on issues relating to emotions and strengths, as these are areas in which the SEL perspective provides clear value to existing research and intervention in the LD field. This will be followed by a more general discussion of recommended classroom and school-based interventions for students with LD and how an understanding SEL can confirm or enhance their effectiveness.

SEL Skill Area #1: Recognizing Emotions in Self and Others

Children with LD share a difficulty with students in special education in general, as well as a growing number of both nonclassified and gifted students: they have an inadequate feelings vocabulary and thus have trouble recognizing feelings in themselves and others. This is a more significant issue than it may appear at first. Feelings vocabulary represents the way we process the world around us. We are pre-wired to perceive an extraordinarily wide-ranging and subtle array of feelings, but we tend to not use that capacity.

For many children with LD, the principal feelings they deploy during the day are sad, glad, and mad. Imagine a student working on a math problem and having difficulty. If he or she were to take the time to do some introspection, what feeling is most likely to be detected? If you ask students, they will tell you – mad, or perhaps sad. But if you were to probe more deeply, you would likely find that the feeling was more nuanced: frustration, inadequacy, disappointment, bafflement, anxiety, perhaps even challenge. With any of these feelings, it is possible to work with a child to arrive at a more constructive response than if he or she is feeling mad (which usually leads to externalizing and lashing out at others) or sad (which often leads to resignation and learned helplessness).

This skill, like many SEL skills, also has strong academic implications. As students hear and read stories, their ability to understand the nuances of the plot and the intentions and actions of the characters depends in part on their feelings vocabularies. And at the most pragmatic level, students' ability to interact with the various helpers that they will work with over time – teachers, specialists, aides, peers, parents, among others – depends in part on their ability to read accurately the emotions of those individuals as they engage in the helping enterprise, as well as the students themselves being able to delay applying the mad and sad labels that are antithetical to progress in learning.

SEL Skill Area #2: Regulating and Managing Strong Emotions (Positive and Negative)

Students with LD inevitably sit in classes, especially in inclusion contexts, beset with strong emotions. These emotions often interfere with the learning process. Traditionally, it might be expected that students would learn anger management or some other kinds of self-control skills, and these are highly valuable.

Every educator knows that all students (but especially students with LD) are sitting in their classes often feeling confused about what is being presented. Often they also feel anger for a variety of reasons. What are they supposed to do with these strong feelings?

The SEL perspective always looks at the interaction between the child, the educators, and the learning context. From that point of view, it is unrealistic to expect students who are most impaired to exercise self-control independently. The use of a Feelings Thermometer and a Confusion (or Clarity) Thermometer recognizes that students who are in the midst of dealing with strong feelings are least able to bring them back under control without some environmental support and assistance. SEL pedagogy generally involves the use of extensive verbal and visual prompts and cues to remind students to use skills that they have been taught.

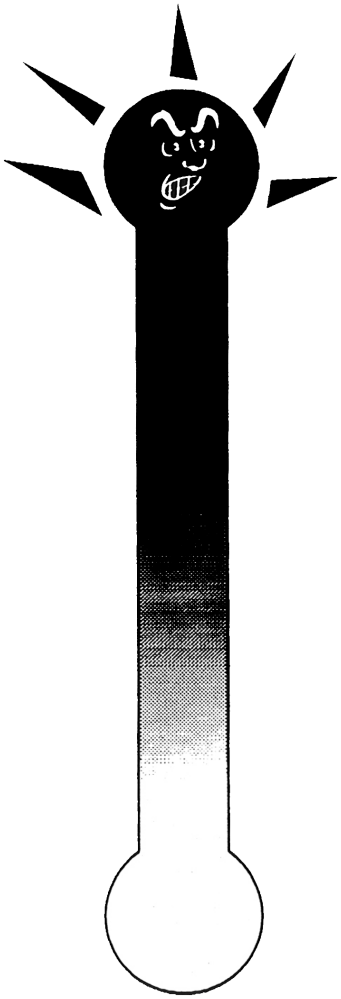
It can take years of prompting before skills are likely to internalize (Elias et al., 1997). But the point of prompting and cueing is to promote self-regulation. A

highly effective approach to helping students monitor and manage strong emotions in the classroom is to place a small version of a Feelings Thermometer on each student's the desk. Figure 1 presents a popular version, used by the Second Step program, called an Anger Thermometer (but better labeled as an Anger/Calmness or Anger/Peacefulness Thermometer). Students receive a marker and are instructed to place the marker at the point on the continuum that best expresses their feelings at a given point in time. The Confusion/Clarity

Figure 1. Feelings thermometer.

Your Anger Thermometer

Directions: List your body's cues, sensations, or actions that let you know you are angry.



Red hot:
(Livid)

Sweaty:
(Angry)

Warm:
(Beginning to get angry)

Cool:
(Not angry)

Thermometer is especially valuable, as it is anchored on the bottom by complete confusion about what the teacher is talking about, up to complete clarity. So, if students were to have both Anger/Calmness and Confusion/Clarity Thermometers, teachers would be able to check in and see where they are at appropriate periods of time, as well as to remind students to update their self-ratings.

But the most essential element is the conversations that teachers have with students prior to using the thermometers. First, teachers will acknowledge the strong feelings that students have, including how difficult it can be to find ways of giving them direct expression. Through such discussions, teachers remove some of the guilt and stigma from confusion and anger and normalize it. But at the same time, they are implicitly giving students greater responsibility for self-monitoring and following through on managing their strong feelings. Specifically, the conversation extends to the following: "When you are at various levels of the chart, what do I, as the teacher, expect you to do?" In other words, the students' job is self-monitoring. The teachers' job is to articulate the strategies that students must use when they feel the strong feelings that are preventing them from learning effectively in class. Students learn what to do as they experience different levels of strong emotions (e.g., put their head down on the desk, go sit in a calm-down area of the classroom, ask for a pass to see the school counselor, write their feelings in a special feelings journal).

This seemingly small and subtle procedure has profound effects on classrooms, as those who work with the Responsive Classroom have found (Brady, Forton, Porter, & Wood, 2003). To use this strategy effectively teachers must be clear with students about something that too often is not addressed, is assumed to be handled by individual or group self-control procedures, or learned implicitly through how teachers handle extreme examples after feelings of anger and confusion get out of control. Long before the surface manifestations occur, students have stopped, or reduced, their learning and their retention of material presented. For LD students in particular, this is not something they can afford.

SEL Skill Area #3: Recognizing Strengths and Area of Need

The third element mentioned in the SEL skills list is an emphasis on strengths. This, too, has been written about (Brendtro, Brokenleg, & Van Bocken, 2000; Seligman, 2002), but it is useful to talk about the SEL perspective. Students learn well through their strengths, and opportunities to use their strengths can leverage a greater willingness to work on areas of weakness or learning difficulty. This is accomplished by helping students work in areas of their multiple intelligences (MI) strength, or preference (Armstrong, 1994). Working through the multiple intelligences is more than just pedagogy. It represents finding windows into the soul of children and ways to reach them in powerful and meaningful ways. When students are working within their areas of MI strength, they are able to mobilize confidence and enjoyment in ways that can be cut off if they are "off-modality." Thus, it becomes vital for students to have opportunities to learn in their preferred modalities.

Think more about the modalities in which students show what they have learned. Often, it is in writing. Many children respond well when given chances to be creative within the written modality. Examples include presenting findings as a newspaper article, talk-show interview, a play, or in verse. Further inroads can be made by giving students opportunities to use other modalities, or more integrative modalities, to show what they know. They might make a diorama, create a poster, do tape-recorded interviews, create a series of charts or graphs, host a quiz show, make a video script and record it, or stage a debate. Many of these project formats involve small-group work. A great deal can be gained by such work, because it allows students a chance to build both the inter- and intrapersonal skills they need for life success as well as success in all kinds of academic circumstances (Ferretti et al., 2001).

Students with LD often find themselves in remediative settings. As helpful and valuable as these are, they send a subliminal messages that students are needy and may never find their way out of remediation. However, as Brendtro et al. (2000) note, every student is in need of inspiration and a feeling of worth. This may come from students having the opportunity to make contributions to others, to their classrooms, classmates, school, or community. In the school context, it becomes important to identify students' strengths and to provide them with an opportunity to exercise those strengths. Israeli education has incorporated two examples of this, for students with learning and behavior problems but also for other students.

The first is called "Until the Last Child." In this approach, students are given a multiple-intelligences assessment to determine their areas of strength. (At this assessment, it is essential that there be at least one person with whom the student has a positive relationship. This may not be the case manager, resource room teacher, learning specialist, etc. Sometimes it is a kindergarten teacher, building custodian, or school secretary. Regardless, the presence of this source of positive relationship is essential to build a student's sense of trust and confidence in what is happening and

what is to transpire thereafter.) Following the assessment, students are given an opportunity to make a contribution to their classroom or school in their area of strength.

One middle school girl with learning problems and behavioral and emotional problems secondary to those was assessed as having strengths in the fine-motor skills area. It subsequently became clear that she was very good at braiding hair. The school staff set her up at a table in the lunchroom, and during lunch other students (with whom she did not have good relationships and who did not especially like her) had a chance to have her make a braid for them. With a little coaxing, some students sat down and emerged shortly thereafter with wonderful-looking braids. Other students soon frequented the braiding booth.

Her new-found popularity led to consternation of sorts for the braider, however. She now had to change her negative behavior, or risk losing not only her clientele, but also her ability to have the braiding table. She asked counselors to help her learn to control her temper and was willing to work with teachers in a renewed way to learn academic material rather than give in quickly to frustration. Her receptivity was a function of her being allowed to exercise her strength and become a person of value in the school rather than someone whose self- and school identity was linked to all kinds of remediation.

This same scenario is replicated with every student (ideally), "until the last child" in the school has a vehicle for a positive connection and contribution to the school based on his or her strengths. Typically, not every student is reached by such programs, but the students with LD and related problems are in the first wave. Regardless of the nature of their disability, all students have strengths they can exercise, and SEL theory and pedagogy recognizes that from such positive experiences, much other learning can be scaffolded.

The second, related program is called "Ability and Time of Ability." As with the previous program, students are helped to identify areas of strength and then placed in groups of children with similar interests. They are allowed to meet for one period a day (42-60 minutes), from elementary through high school grades, and during that time they work on a project of their choice. Students can work in large or small groups or individually. Once they are together, they share ideas and interests, determine who might work together, and then get going. Many students cherish this opportunity to exercise their creativity, and it serves as a "hook" and positive agent of socialization for students who find traditional academic tasks elusive and/or taxing.

A variation of this approach in American middle schools involves working with a mentor from another grade level, different school, or even someone outside the school district, as a "consultant" on a project (Elias & Bruene, 2005). This is based on something many students value later on in college, the independent study. But as business and industry experts have discovered (Senge et al., 2000), giving employees time and resources to work on their own projects pays great dividends in morale and productivity. Since Friday afternoons are typically "winding-down" times in most schools (or business settings), the time lost from academic instruction at the end of a week is negligible and is more than made up for in other benefits. Again, by following the SEL principle of strength-based learning (Dalton, Elias, & Wandersman, 2001), students with LD are helped to reconnect with their value and potential.

SEL APPROACHES TO SKILL-BUILDING INTERVENTIONS

We will now elaborate a bit further on the kinds of interventions that build SEL skills and improve academic competence.

There is a clear compatibility between standard sets of recommendations designed to improve the classroom environment for students with LD and the kinds of skills included on the SEL list. For example, Thompson (1997) suggests that interventions should include problem solving, strategies for remembering things said and presented, and coping techniques. Thompson also emphasizes the importance of ongoing support functions because of students' difficulties with internalization.

The following accommodations are widely agreed upon for children with diverse disabilities: (a) setting minimum goals and sharing them with students; (b) providing guiding questions prior to reading; (c) providing work in smaller units; (d) having consistent order and structure in the classroom; (e) offering immediate and specific feedback in a firm but caring tone; and (f) providing extensive review and reinforcement (Bayar, 2000; Hall, Hughes, & Filbert, 2000; Lloyd, Hallahan, Kauffman, & Keller, 1991). Jawary (2000) adds that successful inclusion depends on students having the social and emotional skills necessary to manage a range of social interactions between students with disabilities and their diverse peers. She also points out that successful, inclusive settings are characterized by a strong supportive climate, a clear value structure, and the necessary resources, especially staff.

From an SEL point of view, interventions that are comprehensive and link academic and social-emotional learning have the greatest likelihood of helping students with LD. Three examples are presented below. The first is from the academic subject area of language arts. The other two are pedagogical

procedures that build a number of SEL skills in integrative ways. They draw upon the concept of multiple intelligences and can be used to assist students with tasks such as doing projects or reports and working through academic and social challenges.

Applications to language arts. The Supported Literacy Program (Morocco et al., 2001) in urban 7-8th-grade classrooms focuses on themes of relevance to students for their lives outside of school (e.g., How do families survive crises? What can you do when your friends do something you think is wrong?). Community share sessions, peer discussion circles, and whole-class constructive conversations embed the text and themes from the text into the daily rhythm of the classroom. The focus is on one type of writing – writing persuasively – toward the goal of positive personal change. Writing in reflective journals is also used, along with response journal prompts designed to help students make literary inferences of greater depth, sophistication, and generalization that parallel their understanding of their social world and social interaction.

An encouraging impact on writing was found in an empirical study of the implementation of this approach. It would have been interesting to have a parallel assessment of social-emotional interactions. If interventions of this kind were to be more explicitly informed by SEL theory and pedagogy, their effectiveness might be enhanced. Perhaps this is what SEL contributes to work in LD, that is, an understanding of the continuity between social-emotional understanding and the ability to do academic work, especially related to literacy topics.

Using computer-assisted instruction to engage reluctant learners. There is little doubt that learning disabilities can be both taxing and discouraging for students. Their experience with multiple helpers and their persistent need for help can make them reluctant learners. The use of computers in the process of social and emotional skill building has become an extremely useful tool in reaching out to children with LD. For many, the computer format reduces their discomfort and resistance, and allows them to use a strength or positive interest as a way to overcome their difficulties. Thus, resistance that one might typically expect is replaced by openness.

The effectiveness of computer-assisted instruction is that it serves as an exemplar of working through the multiple intelligences using a combination of motion, sound, color, text, and physical activity. It engages spatial skills, cognitive skills, and, in recent innovative applications, emotions. Because it allows children and adolescents to work in a context of strength as opposed to a context of deficit, the computer becomes a tool for positive self-exploration and change. As will be described below, activities designed for computer-assisted use can even be used effectively without the computer, albeit not engaging the same array of modalities.

Research has shown more and more clearly how human memory blends together information, context, and emotion (Elias, Friedlander, & Tobias, 2001; Goleman, 1995). This has important implications for what children take with them when they leave skill-building sessions. Emotional intelligence theory suggests that the context in which the child and the professional work strongly influences the extent to which what happens in a session is transferred into everyday memory, cognition, affect, and behavior. Generalization is fostered when learning takes place in situations that are not highly noxious, in which there is hope and expectation that the learning can be put to use, and the individuals in the learning situation feel both self-efficacy and support for carrying out what they have learned.

Growing recognition of the shift in many children from auditory to visually centered learning also supports the use of computer-based approaches as an adjunct to or even full partner with talking approaches. In schools, children at all grade levels encounter visual tools such as thinking maps, brainstorming webs, concept maps, and task-specific organizers. These tools serve to integrate:

1. auditory/written language and visual/pictorial images
2. linear thinking and non-linear, holistic thinking
3. isolated facts and "bits" of information and related concepts, patterns, and interconnections
4. what is known with what is not known, or received and constructed knowledge.

Bringing this array of tools into working with resistant, reluctant children is enhanced tremendously by the use of the computer and its ability to provide visual representations. Of course, auditory integration is provided through adult-child dialogue, as well as auditory media brought into the computer.

Elias et al. (2001) have collected a set of innovative uses of the computer that have been used effectively with children with a range of disabilities. Two will be described briefly next.

Multimedia autobiography. This technique uses the computer's ability to scan pictures, link sound to pictures, and create a slide show through commonly available word-processing software and Power Point. Students are helped to look at their lives and define themselves in terms of their strengths, not their disabilities. They are helped to examine times when they have been successful, met and overcome challenges, and had feelings of

Table 1
Taming Tough Topics Outline

First: Define your problem and goal

1. What is the topic?
2. What are some questions you would like to answer about the topic, or some things about the topic you would like to learn?

Second: List alternative places to look for information

1. Write at least five possible places where you can look for information.

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

2. Plan which ones you will try first.
3. If these ideas do not work, who else can you ask for ideas? Where else can you look for information?

Third: List alternative ways to present the topic

1. Write at least three ways in which to present the topic. If it is a written report, write three different ways it can be put together.
2. Consider the consequences for each way, choose your best solution, and plan how you will do it.

Fourth: Make a final check, and fix what needs fixing

1. Does your presentation answer the topic and the questions you asked?
   Is it clear and neat?
   Is the spelling correct?
   Will others enjoy what you have done?

positive self-worth. These examples are put onto the computer in ways that are tangible, through pictures, stories, video clips. There is no practical limit to what children can do in this modality. Even if all they do is type (or dictate or use voice-activated typing software or adaptive keyboards) text in different fonts, sizes, and colors, they learn to bring their accomplishments to the forefront. This then serves as a bridge to consider the challenges of inclusion and what they can draw from to be successful.

Personal problem-solving guide software. Some of the most important skills students must develop are problem solving and decision making. The Personal Problem-Solving Guide takes students through an eight-step problem-solving process, with one of two foci, depending on the subroutine used: (a) how to avoid getting into trouble similar to the kind that just occurred, or (b) how to make an action plan that can bee used to tackle a peer, academic, or other inclusion-related problem that is of concern. The adult's role is to

serve as a guide or aide, to help students follow up on the action plans they generate, and to be available to deal with any questions students might have. Research and clinical case studies have shown the effectiveness of this procedure for building important critical thinking skills and confidence in children as they enter the mainstream environment. While created for children in middle and high school, the Personal Problem-Solving Guide has been used effectively with children as young as 8 years old, by diverse professionals dealing with students' learning, behavioral, and emotional problems. Poedubicky, Brown, Hoover, and Elias (2000-01) demonstrated the effectiveness of the Personal Problem-Solving Guide in facilitating the decision-making skills of children with social and academic difficulties, and Elias et al. (2001) describe individual cases in which the guide was effectively used.

A format for planning and carrying out projects and reports. Among the many skills needed for social and academic success, the process of planning and carrying out projects and reports typically receives too little attention. This process can invoke rote procedures geared toward "getting finished," or it can engage and promote critical thinking. Diverse groups of learners, including those with LD, respond well when they have a choice about (a) what it is within a topic they will focus on, (b) where they will look for information, and (c) how they will present it. The worksheet in Table 1 is based on a highly successful lesson plan for accomplishing the above purposes (Elias & Tobias, 1996).

Given choices, students become more motivated to expend effort. In one special education class using Taming Tough Topics (see Table 1) as a framework for studying the topic, Indians of New Jersey, students wanted to learn more about what happened to them, the sports they played, even the radio station they listened to. They generated places to look for information, which included museums, sound filmstrips, and finding people of Indian ancestry. Their presentation formats ranged from a written interview with an Indian to a series of dioramas to a "period play"; older students also have created videos. Typically, teachers review the Taming Tough Topics worksheet with a group or an entire class, brainstorming answers to each question and writing them on the board. This engages students in shared social problem solving. This process continues as they select their own preferences and carefully plan and check their work before deciding their final product is completed.

One fascinating use of Taming Tough Topics has been around HIV/AIDS. As a means of gauging students' knowledge and concerns, educators have introduced the topic of HIV/AIDS and then engaged classes or other groups of students in grades K-12 in discussions of the various questions. Based on the responses, developmentally and informationally appropriate assignments have been generated, ranging from a simple focus ("What is it?") to the more philosophical ("Why do people have to die from it?"), to the extremely difficult ("Why don't some people seem to die from it?"). The projects that result, when shared among classmates, capitalize on the benefits of peer-mediated learning and evoke visibly engaged, interested responses.

The worksheet has also been used as a vehicle for preparing classes for inclusive education. In one situation, a child with a reading disability was going to join a 5th-grade class. The class used Taming Tough Topics as a way to learn about the nature of reading problems, and by the time the student was ready to enter the class, the students were ready for him. They had an understanding of how best to include the student in the classroom and to respond to him when he experienced frustrating times. Applications of Taming Tough Topics have also broadened the perspectives of students with LD in self-contained classes. Some special education classes organize some of their assignments into projects that they can present to educate other members of the school community.

Finally, the importance of role models in students' learning is substantial. This can be capitalized on through the medium of written biographies, for example. Taming Tough Topics can be an excellent vehicle for teaching students about the details – especially the hard work, determination, commitment, and other skills – that are part of the successes of the people they find admirable. Biographical information on figures such as Martin Luther King Jr., many of the U.S. presidents, the explorers, inventors and scientists like Ben Franklin and Marie Curie, entertainment figures such as Walt Disney, Gloria Estefan, Leonard Bernstein, and Judith Jamison brings to life the realities of success, as well as certain historical periods. Students often draw particular inspiration from biographies of famous individuals with learning difficulties, such as Thomas Edison, Albert Einstein, and Nelson Rockefeller.

Summary

Social-emotional learning has a great deal to contribute to both theory and practice in the area of LD. The emotional and relational factors in learning and remediative situations have not received sufficient attention to date. SEL provides many approaches that can be incorporated into interventions. SEL theory also shows that group interventions afford important opportunities for building skills necessary for effective social interaction and relationships; multimodal interventions provide greater likelihood of positive results, which mobilize greater confidence and hope. Overall,

SEL helps fill some of the missing pieces in understanding the difficulties faced by students with LD, and how to reach them in ways that better prepare them for success in school and life

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