The Iterative Development and Initial Evaluation of We Have Skills!, an Innovative Approach to Teaching Social Skills to Elementary Students

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Abstract

We describe the development and initial evaluation of the efficacy of We Have Skills! (WHS), a video-based social skills instructional program for early elementary school students. The components of WHS were designed to be scientifically sound, maximally useful to elementary school teachers, and effective in increasing students’ social skills. Results from feasibility and social validity testing showed that teachers felt the program was easy to implement and highly recommended its use. The initial efficacy evaluation of WHS conducted with 70 classrooms randomly assigned to intervention and control conditions showed that teachers in the intervention group scored significantly higher on self-efficacy than teachers in the control group. Students in the intervention classrooms were rated significantly higher on key social skills by their teachers at posttest compared to students in the control group. Implications for further testing of WHS are discussed, along with study limitations and recommendations for future research and practice.

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Many students enter elementary school lacking basic social skills necessary to benefit from academic instruction (Hamre & Pianta, 2001; Kupersmidt, Bryant, & Willoughby, 2000; Lopez, Tarullo, Forness, & Boyce, 2000; Ryan, Fauth, & Brooks-Gunn, 2006; Walker et al., 1998). Specific social skills, such as listening, staying on task, and following teacher instructions are associated with academic success (Alexander, Entwisle, & Dauber, 1994; Algozzine, Wang, & Violette, 2011; Ervin, Schaughency, Goodman, McGlinchey, & Matthews, 2006; Horner et al., 2009; McIntosh, 2005; McIntosh, Horner, Chard, Boland & Good, 2006; Scott & Barrett, 2004; Wang & Algozzine, 2011). Peer related social skills are also associated with academic success and delayed onset of harmful behaviors such as drug and alcohol use in later grades (Eddy, Reid, & Curry, 2002).

Because of this association, explicitly teaching social skills to elementary students is strongly recommended (Cartledge & Milburn, 1978; Gresham, 2004; Walker, Ramsey, & Gresham, 2004). Not only are social skills essential for students to benefit from classroom instruction, they are critical for long-term life success (Elias, 2011). Students who engage in appropriate behaviors tend to have positive peer relationships (Ladd, 1999; Wentzel, Baker, & Russell, 2009) and better relationships with their teachers ultimately resulting in better academic outcomes (Kim, Anderson, & Bashaw, 1968; Malecki & Elliott, 2002; McClelland, Morrison, & Holmes, 2000; Swift & Spivack, 1969; Zins, Weissbert, Wang, & Walberg, 2004). Not surprisingly, students engaging in appropriate behavior receive more praise, more opportunities to respond, and less criticism (Good & Brophy, 1972). Students who receive more positive teacher attention outperform their peers who receive negative teacher attention (Baker, 2006).

Ironically, with increasing pressure to prepare students to perform well on high stakes academic tests, teachers often find little time to teach students the social skills they need to succeed academically (Anderson, 2009). In addition, teachers tend to receive little pre-service and in-service training in social skills instruction (Bromfield, 2006; Dobbins, Higgins, Pierce, Tandy, & Tincani, 2012; Priyadharshini & Robinson-Point, 2003; Reupert & Woodcock, 2010; Smart & Igo, 2010; Stoughton, 2007). As a result, they tend to resort to ineffective and unnecessarily punitive responses to student misbehavior in the classroom, rather than using effective social skills instruction (Gresham, Sugai, Horner, Quinn, & McInerny, 1998).

Effective social skills instruction, like academic instruction, consists of distinct phases: acquisition, fluency building, and generalization (Bullis, Walker, & Sprague, 2001; Walker, Schwarz, Nippold, Irvin, & Noell, 1994; White, 2005). During acquisition, instruction is
intended to develop the learner’s conceptual understanding and performance of the skill, that is, accurate knowledge of the key components of the target skill and the ability to perform the discrete behaviors associated with that skill. After initial acquisition, practice opportunities are presented and the learner is supported to build fluency through applying the skill in authentic settings (e.g., classroom, playground). Precorrection, feedback, and positive reinforcement are used to guide the learner through developing speed and accuracy when performing the skill (Colvin, Sugai, & Patching, 1993). Finally, the goal is to fully integrate the learned skill into the learner’s behavioral repertoire so that its use will generalize to novel settings, persons and situations and sustain over time. Many social skills curricula focus on skill acquisition, but neglect fluency building and generalization (Bullis et al., 2001).

This paper describes the iterative development and presents outcomes from an initial evaluation of *We Have Skills!* (WHS; Marquez et al., 2012), a social skills program for early elementary school students that was specifically designed to (a) address the needs of the large number of students who begin school with weak or limited social skills; (b) meet the needs of their teachers who lack the time, training, and expertise to provide social skills instruction; and (c) be firmly rooted in the research on effective social skills instruction. We first describe the program components and provide an overview of their intended use.

WHS comprises three separate, functional components. Module 1 delivers student instructional materials. Module 2 offers an online tool for assessing student social behavior in response to instruction. Module 3 provides professional development materials covering delivery of the instruction and more intensive forms of student support. See Figure 1 for an overview of the program components and their intended outcomes. The student instructional materials in Module 1 consist of eight 5-minute video lessons: an introductory video focuses on what social skills are and why they are important to learn and 7 lessons provide instruction in 7 core skills associated with school success and derived from the research (Hersh & Walker, 1983; Walker & Rankin, 1980; 1983). In the videos, the teacher, Mr. Lopez, and his students discuss each skill and interact with a “magic” chalk board that presents scenes, graphics, and realistic vignettes of students who are performing positive examples or negative examples of the skill. Each skill is modeled and student characters say why it is sometimes hard to do the skill (e.g., a friend distracts you, someone makes you feel bad, or your mind wanders), and difficult to get back on track. At the conclusion of the video, Mr. Lopez introduces an animal friend, an
animated character who represents the skill and who sings a catchy song about the skill. The featured interactions between the teacher and his students show students practicing the skill and inspire the viewers (students and teachers) to do the same.

The videos teach students that appropriate behavior is a skill that can be acquired through learning and practice, and they also model how to teach behavioral skills for teachers. Mr. Lopez is shown to be positive, enthusiastic, and supportive. He validates the notion that social skills have to be learned in the classroom to support school success and need to be practiced both in the classroom and in other settings such as the playground and at home. He clearly models how to present a skill to a student audience and how to provide opportunities to respond to students. Video instruction is supplemented with guided practice through role play and printed learning materials, such as fillable booklets, coloring pages, cards for complimenting others and expressing feelings such as remorse, and posters. Module 1 also includes a reinforcement system. When students use the social skills appropriately, the teacher gives students skill tickets featuring the animal friends. In addition, students self-manage with tally sheets, and parents learn of their students’ social skills success through positive notes sent home with the student. When the teacher determines, based on his/her judgment, that

Figure 1. Overview of We Have Skills! program components and their intended outcomes.
a student has mastered a social skill, the teacher gives the student a certificate of mastery.

Module 1 was developed to respond to teachers’ varying teaching styles and preferences, as well as time constraints. Based on Mr Lopez’s demonstrations, teachers could adopt similar pacing in their instruction, interrupt the video lessons to provide opportunities to respond or to practice, or provide students with practice opportunities after the video lesson is complete. The instructional materials to be delivered by the teacher to the students were designed to be flexible enough to support teachers’ varying approaches to instruction and varying needs of their students.

Module 2 consists of the online Elementary Social Behavior Assessment (ESBA; Marquez et al., 2012; Pennefather & Smolkowski, in review), an assessment tool delivered via the irisPMT™. The ESBA allows teachers to screen entire classrooms as well as progress-monitor individual students on the extent to which they exhibit prosocial behaviors. Teachers rate their students on 12 items that are also derived from the research conducted by Walker and colleagues (Hersh & Walker, 1983; Walker & Rankin, 1980; 1983) and map onto the 7 core skills taught to students.

The professional development materials contained in Module 3 consist of a series of instructional videos and clearly designed lesson plans that guide teachers’ implementation of the four components of the student instructional materials: (a) video lessons, (b) practice opportunities, (c) songs, and (d) reinforcement systems. Specific steps are provided on how to facilitate appropriate practice with positive and negative examples, regular rehearsal with feedback, and ongoing review. In addition to the lesson plans, Module 3 contains additional practice materials for students who need more than universal instruction (Tier II groups). Finally, Module 3 includes instruction on using the ESBA and irisPMT™ tool for universal screening, progress monitoring, and data-driven decision-making.

WHS purposefully blends the principles of three evidence-based practices that have emerged as critical to supporting students’ social-emotional learning (Osher, Bear, Sprague, & Doyle, 2010; Zins et al., 2004). These include positive behavior interventions and supports (PBIS; Lane, Kalberg, & Menzies, 2009; Sailor, Dunlap, Sugai, & Horner, 2009; Sugai et al., 2010), response to intervention (RtI; Brown-Chidiney & Steege, 2005; Gresham, 1991; Hawken, Vincent, & Schumann, 2008), and explicit instruction (Archer & Hughes, 2011; Engelmann & Carnine, 1982; Hall, 2009).

Research on PBIS in elementary schools has linked (a) defining expected behaviors, (b) teaching what those behaviors look like, (c)
rewarding students who engage in those behaviors, (d) consistently providing consequences for students who do not engage in those behaviors, and (e) using continuously collected data for making decisions about students’ behavioral support needs to improved social and academic outcomes (Bradshaw, Mitchell, & Leaf, 2010; Horner et al., 2009; Mitchell, Bradshaw, & Leaf, 2010). PBIS has been widely implemented in elementary schools (Horner et al., 2009).

To meet all students’ needs, it is recommended that social skills instruction, similar to academic instruction, follow the RtI logic (Algozzine, Putnam, & Horner, 2010; Brown-Chidsey & Steege, 2005; Gresham, 1991). Universal instruction is implemented for all students at all times and, if implemented well, suffices to address the needs of the majority of students. Secondary (selective) and tertiary (individual student) instructional strategies are implemented as necessary to address the needs of students who remain unresponsive to universal instruction (Hawken et al., 2008). Continuous progress monitoring helps teachers match the intensity of instruction and support(s) with student need (Sprague & Walker, 2010).

Learning occurs effectively and efficiently when the principles of explicit instruction (EI) are applied (Archer & Hughes, 2011; Engelmann & Carnine, 1982; Hall, 2009). EI is a widely used approach to instructional design derived from more than 25 years of research and linked to student gains in academic achievement as well as self-esteem (Bereiter & Engelmann, 1966; Engelmann & Carnine, 1982; Watkins, 1988). The principles of EI include (a) careful example selection and sequencing, (b) modeling, (c) adequate pacing, (d) frequent opportunities to respond and practice, and (e) error correction. Selection and sequencing refer to arranging content from easy to difficult, building on previously learned skills, and carefully scaffolding lessons to allow the learner to succeed. The teacher, or in WHS, Mr. Lopez, models each skill through examples as well as non-examples. Adequate pacing assures the learner stays engaged and constantly challenged according to his or her skill level. Continuous practice is provided through frequent opportunities to respond, and errors are immediately corrected to prevent learning misrules. Table 1 provides an overview of the key features of WHS and their derivation from evidence-based practice.

Iterative Development of WHS

In this paper, we focus primarily on Modules 1 and 3 of WHS, (i.e., the student instructional materials and the professional development materials). Development and psychometric testing of the assessment tool, the ESBA, contained in Module 2, is reported in Pennefather
and Smolkowski (2013). The development of Module 1 of WHS was guided by close collaboration with consultants, information collected during multiple focus group meetings with teachers and students, social validity testing, and feasibility testing in general elementary school classrooms.

*Initial development.* Initially, we intended to create a professional development program for teachers in order to increase their fluency in social skills instruction. Through numerous interviews and focus groups with teachers, however, we found that they needed far more than professional development. Teachers informed us that they were well aware of the need for social skills instruction, but that they

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Key Components of WHS and their Derivation from Evidence-Based Practice</th>
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<tbody>
<tr>
<td>WHS feature</td>
<td>Evidence-based practice</td>
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<tr>
<td>7 core skills are clearly defined</td>
<td>Clearly defined behavioral expectations (PBIS)</td>
</tr>
<tr>
<td>Video lessons, songs, posters, and practice activities proactively teach core skills</td>
<td>Proactive teaching of appropriate behaviors (PBIS)</td>
</tr>
<tr>
<td>• Carefully sequenced video lessons</td>
<td>• Effective selection and sequencing (EI)</td>
</tr>
<tr>
<td>• Child actors modeling skills</td>
<td>• Modeling (EI)</td>
</tr>
<tr>
<td>• 8 six-minute videos, 1 per week</td>
<td>• Appropriate pacing (EI)</td>
</tr>
<tr>
<td>• Built-in practice opportunities</td>
<td>• Opportunities to respond (practice) (EI)</td>
</tr>
<tr>
<td>• Child actors demonstrate examples and non-examples of skills</td>
<td>• Error correction (EI)</td>
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<tr>
<td>Reinforcement system</td>
<td>Acknowledgement of appropriate behaviors (PBIS)</td>
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<td>• Skill ticket pad</td>
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<td>• Student tally sheets</td>
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<td>• Happy notices (for parents)</td>
<td></td>
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<tr>
<td>• Certificates of mastery</td>
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<tr>
<td>Teacher supports for addressing students’ differing support needs:</td>
<td>Multi-tiered service delivery (RtI)</td>
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<tr>
<td>• Lesson plans for class-wide (universal) instruction</td>
<td></td>
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<tr>
<td>• Additional student activities for targeted (secondary) support</td>
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<tr>
<td>Online Elementary School Behavior Assessment</td>
<td>Use of data for decision-making (PBIS, RtI)</td>
</tr>
<tr>
<td>Use of universal screening and progress-monitoring to assess effectiveness of lessons and individual student responsiveness</td>
<td>Progress-monitoring to inform instruction and intervention (PBIS, RtI)</td>
</tr>
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</table>
lacked the time, resources, and training to develop the systems necessary to define, teach, reward, enforce, and monitor the social behaviors relevant to classroom instruction, let alone coordinate their approach across classrooms within a building. In response to this very clear message from teachers, we shifted our goal toward developing a program that offered teachers the opportunity to deliver short social skills lessons to their students with a minimum amount of effort.

Our first task was to define the content for the short social skills lessons. In collaboration with our consultants, we defined seven core social skills based on the research conducted by Walker and colleagues (Hersh & Walker, 1983; Walker & Rankin, 1980; 1983). Based on a survey of 56 descriptions of adaptive student behavior involving 1,100 K-12 teachers, Walker and Rankin (1980) identified a subset of student behaviors that teachers associated with highly “teachable” and responsive students. These behaviors clustered into three areas: work habits, self-control and responsiveness to teacher demands, and positive relationships with peers (Foulks & Morrow, 1989). We used the content of these three domains as a guide to reduce the 56 adaptive behaviors to seven core skills that would allow students to succeed socially and academically. The seven skills WHS teaches are (a) listen, (b) ask for help, (c) follow directions, (d) do the best you can, (e) follow the rules, (f) work out strong feelings, and (g) get along.

Based on teachers’ and students’ feedback to initial content matrices, we produced the student instructional materials consisting of eight video lessons: one introductory lesson about what social skills are and why they are important and one lesson each on the seven identified skills. The videos consist of modeling vignettes, animal characters, animations, and songs. Samples of the skill videos and the songs can be found at http://www.youtube.com/user/irisedonline?feature=watch.

After production of the videos and songs, our development team visited 3 elementary schools to gather information on what materials and technologies are commonly available to teachers, and to observe current practice of promoting students’ social skills acquisition. Based on our findings, we produced the additional student materials to supplement the video lessons: fillable skill practice booklets; skill posters; coloring pages; cards to help with complimenting, apologizing, or expressing feelings; self-management tally sheets; take home “happy notices” that let parents know how well students are progressing with their behavioral skills; and certificates of mastery.

Social validity and feasibility testing. We conducted a feasibility study to test whether WHS could be implemented in general elementary school classrooms. Our goal was to assess the extent to which
teachers felt comfortable and prepared in using the student instructional materials in their classrooms as well as the online assessment tool to screen and progress-monitor their students. Thirty-six kindergarten through third-grade teachers (31 female) from three school districts participated. Our project staff provided a two-hour inservice to introduce participants to the components of WHS, its theoretical background, and its intended use. Following the inservice training, teachers were asked to show their students video Lesson 1 (what social skills are and why they are important), and two videos teaching specific skills. Data on teachers’ sense of self-efficacy were collected pre- and post-implementation of WHS with the Teacher Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001). Teachers’ comfort with using the online assessment tool was assessed at posttest with the Technology Acceptance Model (TAM; Davis, Bagozzi, & Warshaw, 1989). We also collected data on overall consumer satisfaction via a questionnaire specifically designed for this project.

The TSES is a 12-item scale with three moderately correlated factors: efficacy for student engagement, efficacy for instructional practices, and efficacy for classroom management. In previous research, this instrument has shown strong internal reliability and construct validity (Tschannen-Moran & Woolfolk Hoy, 2001), and has been related to a variety of outcomes including student achievement (Moore & Esselman, 1992; Ross, 1992), teacher planning and organization (Allinder, 1994), inclination to refer students to special education (Soodak & Podell, 1993), and commitment to teaching (Trentham, Silvern, & Brogdon, 1985). Because WHS includes a training module designed to support teachers in their delivery of social skills instruction, teacher sense of efficacy in providing this instruction was assessed.

A paired t-test evaluating changes in teachers’ ratings of self-efficacy found a significant increase in teacher self-efficacy from pretest (mean = 7.2) to posttest (mean = 7.6), \( t(35) = 3.19, p < .003 \). We next examined whether the change in self-efficacy was related to teachers’ comfort with using the online assessment tool, using an Analysis of Covariance (ANCOVA) including TAM scores at posttest. We found that teachers’ TAM scores did not predict their changes in self-efficacy, \( F(1, 34) = 1.67, p = .21 \).

We found high consumer satisfaction with the WHS components. Overall, the teachers were very satisfied with the student materials, with a mean consumer satisfaction score of 5.39 out of 6. The overall consumer satisfaction for the ESBA (4.0 out of 6) was significantly higher than neutral (3.5), \( t(34) = 2.62, p < .05 \). Overall, the teachers were quite positive about the program, with 100% stating they would recommend the program to other teachers (53% said strongly
recommend) and 100% said they were likely to use the program in the classroom (56% reported the highest likelihood).

We then conducted a focus group with teachers who had participated in this study to gain insights and ideas for completing the professional development materials intended to assist teachers in implementing WHS in their classrooms (Module 3). One clear report from teachers was that students loved the program and that high student favorability encouraged teachers to use the program extensively both during and after the study. For example, in the study debriefing sessions, we heard from one teacher that her students insisted on singing all seven skill songs at the start of every school day. Other teachers described the positive impact that the instruction had made on students with challenging behaviors.

**Evaluation of WHS**

The present study sought to formally evaluate WHS delivered as intended in classrooms and with a larger sample than the feasibility trial. This study evaluated the effect of WHS implementation on elementary students and their teachers and was driven by the following hypotheses: Compared to teachers who do not use the WHS program, teachers who use WHS will (a) demonstrate greater self-efficacy for achieving student engagement, instructional practices, and classroom management, and (b) see greater improvements in their students’ classroom behaviors.

*Sample.* Participant recruitment occurred in two school districts in California, and one each in Oregon and Washington. All K–3rd grade teachers in the districts were informed about the opportunity to take part in the study and asked to volunteer if interested. Interested teachers were informed about the study requirements and asked to provide informed consent. A total of 70 teachers (67 female) in K–3rd grade classrooms and their students ($N = 1616$) participated. Within each school, classrooms were randomly assigned to either the intervention condition ($n = 37$) or the control condition ($n = 33$) receiving business-as-usual.

Demographics were collected from all teachers at pretest. Teacher age ranged from 27 to 62, with an average age of 42.2 years. Teaching experience ranged from 1 to 38 years, with an average of 13.64 years. Teachers’ educational background included Bachelor degrees ($n = 9$), some post-secondary ($n = 18$), and graduate degrees ($n = 40$), with 3 teachers not reporting. Sixty-one of the teachers were Caucasian, 3 Asian, and 6 did not report. Four teachers identified as Hispanic. Of the 70 teachers, 15 taught kindergarten, 23 first grade, 17 second grade, and 15 third grade.
To capture a maximally diverse K–3 student population, the study was conducted in demographically diverse school districts. We were unable to collect demographic data at the student level. However, across all K-3 classrooms in the participating schools, American Indian/Alaska Native student enrollment ranged from .1 to 2% with an average of .5%, Asian/Pacific Islander enrollment ranged from 1 to 29% with an average of 12%, Latino enrollment ranged from 11 to 47% with an average of 29%, African American enrollment ranged from 1 to 18% with an average of 7%, White student enrollment ranged from 13 to 77% with an average of 42%, and Multiracial student enrollment ranged from 3 to 14% with an average of 8%. The percent of students eligible for free or reduced price lunch (FRL) ranged from 41 to 88%, with an average of 61%.

Based on archival reports of school-wide behavioral support practices, 12 of the 17 schools participating in the study implemented SWPBIS. Generally SWPBIS focused on 3 school-wide behavioral expectations: Be safe, Be respectful, Be responsible. In contrast to these generic school-wide expectations, WHS focused on teaching students specific social skills necessary to be successful in the classroom and build positive teacher and peer relationships.

**Procedures**

*Experimental protocol.* Teachers attended an in-service training presented by project staff during which the purpose of the study was described. Teachers completed informed consent and pretest measures, after which they were randomly assigned to receive the WHS training and use the intervention in their classrooms, or to the business-as-usual control group who would receive access to the training and program at the completion of the evaluation. Both groups were then trained on how to use the online Elementary Social Behavior Assessment (ESBA) to collect student data at pre- and posttest. The training demonstrated how to (a) access the ESBA, (b) enter their students into the online system, and (c) complete the ESBA for each student. Control group participants were then excused, and the intervention participants were given an hour-long training on implementing WHS. Three weeks into the school year (after completing pretest ESBA assessments of their students) teachers in the intervention condition were instructed to begin using the WHS curriculum with their students. Teachers in the intervention condition taught one lesson a week (over eight weeks). Because of the short duration of the study, teachers were unable to conduct Tier II groups as part of the intervention; however teachers were trained to use ESBA data to identify students who might benefit from Tier II support.
Each week’s activities included two core components: a five- to ten-minute discussion using discussion questions from the Lesson Plan and a five minute video lesson. In addition to these core components, teachers were encouraged to use practice activities such as songs (average of 30 seconds per skill), picture cards (2-4 minutes per skill), and role plays (1-5 minutes). The skills booklets were a take-home activity for students to complete with their parents (approximately 5 minutes per skill). Reinforcement activities included asking students to complete the tally sheets (approximately 5 seconds), and handing out skills tickets, happy notices and certificates. Of the teachers in the intervention group, 34% reported spending one hour or less, 16% reported spending 1-2 hours, 6% reported spending 2-3 hours, and 43% reported spending more than 3 hours on WHS program components during the 8-week duration of the study.

Data collection. At the in-service training, teachers in both conditions completed demographics (including years of experience, education level, age, grade, and experience with internet technology) and pretest assessments of self-efficacy. Three weeks into the school year (and before using the WHS curriculum) participants in both groups completed an initial screening of their students’ classroom behaviors using the ESBA. At the completion of the eight-week intervention period, teachers in both conditions completed a posttest assessment of their students’ behaviors using the ESBA. Additionally, teachers completed the TSES. Intervention group teachers also completed measures of social validity about the WHS program.

Measures. To measure differences in teachers’ perceptions of their skill mastery and their self-efficacy in social skills instruction due to use of the WHS program, teachers in both conditions completed the TSES at pre- and posttest (see description above). To measure differences in teacher perceptions of student social behavior, teachers in both conditions completed the ESBA for all students in their class three weeks into the school year (but before the intervention teachers delivered the program to their students) and 8 weeks later, after the completion of the intervention. Teachers in the intervention condition completed a social validity measure at posttest. Each measure is described below.

Elementary Social Behavior Assessment (ESBA). The ESBA is delivered via the irisPMT™, an online application for administering universal screening and progress monitoring assessments. Teachers rate students on 12 behavioral items that map onto the seven social skills included in WHS. During universal screening, the teacher rates the extent to which each student engages in the 12 desirable behaviors on an intuitively understandable 3-point color-coded scale that corre-
sponds to the three-tiered student support models commonly used in interventions following the RtI logic (Brown-Chidsey & Steege, 2005): green means “mastery,” yellow means “needs improvement,” and red means “cause for concern.” Screening a classroom of 25 students takes approximately 15 to 20 minutes. Results of universal screenings are displayed in color-coded aggregations that allow teachers to easily and quickly determine (a) how many students in their class have mastered how many skills, (b) which individual students need additional instruction on which skills, and (c) which skills appear problematic for the majority of students. Students who need additional instruction can be selected for progress monitoring. Progress monitoring is recorded on a 6-point scale to allow teachers to record more fine-grained incremental improvements in the student’s skill acquisition. An automatically generated progress report shows the changes in ratings across time, indicating the student’s progress. Teachers can use the report to assess whether to intensify, maintain, or fade instruction.

**Social Validity.** Teachers in the intervention condition were asked about their experiences using the WHS program in their classroom. A six point Likert scale (ranging from 1 – strongly disagree to 6 – strongly agree), as well as open ended responses were used to assess teacher satisfaction with the WHS program at posttest (see Table 2 for individual items).

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
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<tbody>
<tr>
<td>Overall, I was satisfied with the quality of this program.</td>
<td>5.35</td>
<td>.63</td>
</tr>
<tr>
<td>I was satisfied with the quality of the information.</td>
<td>5.32</td>
<td>.63</td>
</tr>
<tr>
<td>The training met my expectations.</td>
<td>4.95</td>
<td>.88</td>
</tr>
<tr>
<td>I would recommend the program to other educators.</td>
<td>5.35</td>
<td>.82</td>
</tr>
<tr>
<td>The program content was well organized.</td>
<td>5.50</td>
<td>.61</td>
</tr>
<tr>
<td>It was easy to understand the ideas presented in the program.</td>
<td>5.64</td>
<td>.49</td>
</tr>
<tr>
<td>I agree with the ideas presented in the program.</td>
<td>5.73</td>
<td>.51</td>
</tr>
<tr>
<td>I am likely to use many of the strategies described in the program.</td>
<td>5.35</td>
<td>1.09</td>
</tr>
<tr>
<td>The program was engaging.</td>
<td>5.54</td>
<td>.73</td>
</tr>
<tr>
<td>It will be easy for me to implement this approach.</td>
<td>5.32</td>
<td>1.03</td>
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Results

Data were analyzed using multi-level regression. The primary outcomes of interest were condition differences in teacher self-efficacy and student behaviors (nested under teacher). For teacher self-efficacy we used an analysis of covariance (ANCOVA) examining condition differences at posttest, with pretest included as a covariate. Teachers in the two conditions did not differ significantly at pretest on years teaching ($t(65) = -.76, p = .451$), age ($t(61) = 1.41, p = .163$), gender ($X^2(1, N=70) = .48, p = .60$), grade taught ($X^2(3, N=70) = 3.38, p = .34$), education level ($X^2(2, N=68) = .32, p = .85$), or race ($X^2(6, N=70) = 2.05, p = .92$). They also did not differ on self-efficacy ($t(68) = -.068, p = .499$). Because we did not have demographic data at the student level, we were unable to conduct statistical equivalency tests. However, Table 3 indicates that the overall K-3 populations in the intervention and control schools differed only minimally on race/ethnicity and FRL. Participating students did not differ at pretest on the ESBA, ($F(1, 65) = 2.10, p = .15$). Because our study design randomized classrooms within school, school level variables such as SWPBIS implementation, should be equivalent across groups.

For student behaviors, we ran a multilevel ANCOVA on the posttest ESBA nested under teacher and including pretest ESBA scores as a covariate. We also examined possible moderation of the teacher self-efficacy condition effect due to grade level of the class and mediation due to teacher experience and age. For the effect of condition on student behavior, we included teacher experience, teacher internet experience, and student grade level as potential moderators. We included teacher self-efficacy as a potential mediator on student behavior. Finally, we examined the qualitative social validity data collected from the teachers in the intervention condition.

Teacher outcomes. A regression predicting teachers’ ratings of self-efficacy at posttest as measured by the TSES, controlling for pretest TSES scores indicated that teacher self-efficacy improved significantly more for the intervention group (mean change = .54) than for the control group (mean change = .15), $F(1, 66) = 10.2, p = .002$ (Cohen’s $d = .79$). The effect of condition on self-efficacy did not depend on teacher gender ($p = .915$), grade taught ($p = .092$), age of teacher ($p = .826$), or years of experience ($p = .985$).

Student outcomes. A multi-level regression was performed examining condition effects on student behavior ratings controlling for dependency due to teacher. We included pre-intervention ESBA scores as a covariate in the analyses to account for error present at pretest, as well as some of the teacher error. Controlling for pretest, posttest ESBA scores for students in the WHS condition were significantly
higher than scores for control students ($t(64) = 3.4, p = .001$). We found that students in the WHS condition improved by an average of 3.5 points on the ESBA while students in the control condition improved by 1.7 points (Hedges’ $g = .27$).

**Social validity outcomes.** We found high social validity and usability results for the WHS materials. Overall, teachers were very satisfied with the various student materials, with a mean social validity score of 5.4 out of 6 (see Table 2 for means and standard deviation of individual items). Teachers were quite positive about the overall program, with 100% stating they would recommend the program to other teachers (56% said strongly recommend) and 100% said they were likely to use the program in the classroom (59% reported the highest likelihood).

**Discussion**

Throughout the development of WHS, we faced considerable challenges to ensure that the program (a) was firmly grounded in evidence-based practice, (b) would have considerable appeal to early elementary school children, (c) would minimally infringe on teacher time, and (d) would be effective in improving student behavior. While the literature is clear on what constitutes best practices in social skills instruction (Gresham, 1991; Hawken et al., 2008; Lane et al., 2009), it is less clear on how to deliver social skills lessons to elementary aged students who are regularly exposed to specially designed entertainment products in theaters and television. Unless the materials can make a direct connection with children, instruction and student motivation may be difficult to sustain. Our use of child actors, realistic vignettes, animal characters, and memorable songs successfully appealed to elementary students. In many of the classrooms that tested
WHS, students demanded starting the day with the songs from the program. With each song lasting about 30 seconds, singing all 7 songs from the program would take a total of 3 minutes and 30 seconds.

Given that time is a highly precious commodity for teachers, it was paramount that our social skills instructional program would take a minimum amount of time to implement. Unfortunately, many commercially available social skills curricula require that teachers spend significant time on staff development activities and implementing the intervention. For example, Poduska and colleagues (2008) reported that in order to implement the Good Behavior Game (Embry, 2002), teachers received 40 hours of training and support during one school year. Second Step (Committee for Children, 2012) requires that teachers use scripts to deliver lessons lasting a minimum of 25 minutes (Frey, Nolen, Edstrom, & Hirschstein, 2005). Teachers can distribute a 25-minute lesson across one or several days per week. In their review of 33 commercially available social-emotional curricula, Berkowitz and Bier (2005) found that the majority of such commercially published social skills curricula rely on professional development as the primary pedagogical strategy.

In contrast to programs emphasizing professional development, WHS provides practical tools to teach social skills. WHS is designed to allow teachers to quickly familiarize themselves with the program components and fluently implement them in their classroom. Available online, teachers spend approximately 1 hour familiarizing themselves with the program components and have access to fully developed lesson plans to deliver the social skills instruction to their students. Similarly, implementing WHS in the classroom takes a minimum of time away from academic instruction: Presenting a 5-minute video and engaging students in a brief discussion and practice opportunities represents a highly efficient way of teaching social skills that are critical to students’ school success. Consumer satisfaction survey data clearly indicated that teachers were delighted to have access to practical and efficient tools to teach social skills.

Most importantly, however, a social skills program needs to effectively change student behavior. Our evaluation study clearly indicated that students in classrooms that implemented WHS behaved better than students in classrooms that did not implement WHS. The positive associations between student prosocial behavior and (a) better academic outcomes (Alexander et al., 1994; Algozzine et al., 2011; Wang & Algozzine, 2011), (b) positive peer relationships (Ladd, 1999; Wentzel et al., 2009) and (c) improved student-teacher relationships (Kim et al., 1968; Malecki & Elliott, 2002; McClelland et al., 2000; Swift & Spivack, 1969; Zinset al., 2004) underscore the potential short-term
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and long-term benefits students—and their teachers—can reap from using the WHS program.

The initial success of WHS might be due partially to the program’s inclusion of songs and practice opportunities to help students remember the target skills and integrate them into their behavioral repertoire. At the elementary level, song is commonly used to teach students academic content (e.g. the alphabet) and has been found an effective tool to retain information (Rainey & Larsen, 2002). WHS successfully transfers the use of songs from academic to social skills instruction to help students remember why the target skills are important and what they look like. Because singing together has also been linked to positive social bonding (Hunter, Schellenberg, & Schimmack, 2008), the WHS songs not only serve as a memory aid for students, but also as a tool to build positive peer relationships. The fact that teachers reported that students insisted on beginning class by singing the WHS songs appears to support the value of including song into social skills instruction.

Providing students with practice opportunities to reinforce their use of the target skills and promote their fluency in using them is equally important. The student materials included in WHS allow students to apply the learned skill in a variety of real contexts (e.g. using cards to compliment a peer) and actively engage them in the learning process. Social skills instruction thus moves beyond the conceptual mastery to fluency building and generalization across contexts.

It is important to note, however, that our study did not collect data on treatment integrity. Participating teachers reported varying amounts of time they spent using the program during the course of the study. Based on this variation, it appears reasonable to assume that teachers integrated WHS in various ways into their classroom routines and activities. Close examination of treatment fidelity in future research will allow us to draw better conclusions about the program’s ability to effect change in student behavior.

Our initial evaluation of WHS clearly documented the program’s social validity—a necessary prerequisite to its use—and its promise of effectiveness in changing student behavior. Future research will focus on documenting the program’s efficacy through a large scale randomized control trial. Given teachers’ strong interest in adopting WHS and its demonstrated effectiveness, we are confident that future studies will show that the program is functionally related to improved student behavior. Future research might also focus on expanding the program and adapting it for use in upper elementary and middle school classrooms.
Limitations

Results from our initial evaluation of WHS must be interpreted against a number of limitations. First, the relatively small scope of our evaluation study resulted in small samples that limited generalizability of outcomes. Second, we were unable to control for school level factors, (e.g., overall enrollment, urbanicity, school-wide discipline and student support policies), teacher level factors (e.g. years of experience) and student level factors (e.g. English learner status, disability status, race, gender) due to the small scope of our study. Thus, the internal validity of our outcomes, i.e. the causality of our evidence, was limited. Demonstrations of a causal relationship between WHS implementation and improved student behavior, taking into consideration teacher and student-level characteristics as moderators and school-level characteristics as mediators, will be the focus of future studies. Third, because of the limited duration of our study, we were unable to assess maintenance of skills across time. Students are able to reap the long-term benefits of social skills, such as fewer discipline referrals and better academic achievement, only if the effects of social skills instruction maintain over time. Future studies will include evaluation of the effectiveness of WHS across time. Fourth, the promise of WHS’s ability to improve student behavior was measured with the ESBA, an instrument that was part of the intervention package and designed by the program developers. Therefore, interpretation of outcomes at present appears to be limited by the lack of a standardized measure. In addition, it is important to note that the ESBA reflects teacher reports of student behavior and is thus subject to potential teacher bias. Future studies should include measures of student behavior independent of teacher judgment, e.g. direct observations coded by impartial observers. However, Pennefather and Smolkowski’s (2013) study on the relationship between ESBA and a standardized measure lends initial support to our interpretation. Finally, our study did not include measures of treatment integrity. Future research on the effectiveness of WHS should assess treatment integrity through review of permanent products, or direct observations of program administration, including the number of minutes spent on each program component.

References


