OBJECTIVE. This purpose of this study was to describe school-based occupational therapy practice for kindergarten through twelfth-grade students in Colorado and to examine occupational therapy practice in light of current education policy and published views of best practice.

METHOD. Study data were provided by 105 occupational therapists and occupational therapy assistants who completed a 24-item questionnaire.

RESULTS. Occupational therapists carried an average caseload of 43.68 students; most frequently served kindergarten through third-grade students with perceptual or communicative disabilities; and delivered services most often in pullout treatment areas. Practitioners spent most of their work week providing direct services. Remedial or developmental approaches were used 62% of the time and compensatory and educational approaches 37% of the time. Individualized education program goals addressed by occupational therapists were most frequently developed by the occupational therapist and targeted students' sensory or motor impairments. Workshops on autism and sensorimotor intervention techniques were reported as the primary and preferred forms of professional development.

CONCLUSION. The strong majority of reported occupational therapy services contrasted with emerging views of best practice. They were, however, consistent with the Colorado Department of Education's guidelines for "motor specialists" that address occupational therapy, physical therapy, and adaptive physical educators working in schools. Study findings are discussed.


Occupational therapists have long been a part of public education for children with disabilities. As an education-related service, the primary job of school-based occupational therapists is to enable students with disabilities to benefit from their specialized education including access to and participation in the general education curriculum (American Occupational Therapy Association [AOTA], 1999; Individuals with Disabilities Education Improvement Act of 2004 [IDEA]). Because federal law closely links occupational therapy with special education, any policy or practice reforms affecting special education necessarily impact the design and delivery of school-based occupational therapy.

The 1997 reauthorization of IDEA ended a long period during which special education and general education were viewed as separate programs serving separate populations. Lipsky’s and Gartner’s (1997) review of education policy, court cases, and research sheds light on events leading to passage of IDEA ’97 and the gradual dismantling of separate general and special education systems. As general and special education practices have aligned around the general curriculum, occupational therapists have been called upon to examine their role in schools (AOTA, 1999; Kellegher & Allen, 1996; Mu & Royeen, 2004). Supporting the inclusion of students with disabilities in the general curriculum, interdisciplinary collaboration among team members, and calls for research-supported interventions now characterize best practices for occupational therapists working in school settings. Each of these areas will be briefly discussed here.

education” (p. 9). Once a part of the general education context, students with disabilities may receive special education and related services to support their access to and participation in the general curriculum and extracurricular activities alongside their age peers without disabilities (Falvey, 2005). A comprehensive and systematic research review by McGregor and Vogelsberg (1998) revealed that students with disabilities educated with support alongside their typical peers in inclusive settings demonstrated higher levels of social interaction, greater social competence and communication, and greater skill acquisition than students educated in noninclusive settings. Rea, McLaughlin, and Walther-Thomas (2002) examined the relationship between student placement and academic and behavioral outcomes among eighth-grade students with learning disabilities. Two placement alternatives were studied: inclusive and pull-out. With inclusive placements, students with disabilities were educated in the general classroom with special education or related service supports coming in as needed. Pull-out placements were defined as removing students with disabilities from the general classroom to an alternative setting for specialized instruction. Findings revealed that students placed in inclusive programs earned higher grades, received higher or comparable scores on standardized tests, and had better school attendance when compared to students enrolled in pull-out programs. A multivariate study by Spencer and Sands (1999) found that placement of high school students with disabilities in the general classroom was a predictor of self-determined action-taking by the students. According to numerous authors, removing students with disabilities from the general education environment for specialized services can negatively affect their reputation among age peers and limit their participation in school contexts (Doubt & McColl, 2003; Giangreco, Dennis, Cloninger, Edelman, & Schattman, 1993). Low performance expectations for students with disabilities appear to be related, in part, to the maintenance of separate instructional environments and curricula for students with and without disabilities (Fairburn & Davidson, 1993; Tomlinson, 2001).

**Collaboration.** A growing body of research suggests that collaboration between general educators, special educators, and related service providers on behalf of students with disabilities can improve student performance (Barnes & Turner, 2001; Clark & Miller, 1996; Mostert, 1998; Nochajski, 2001) as well as job satisfaction and commitment among the professional members of the education team (Nochajski; Snell & Janney, 2000). Collaboration as defined by Rainforth and York-Barr (1997) is “an interactive process in which individuals with varied life perspectives and experiences join together in a spirit of willingness to share resources, responsibility, and rewards in creating inclusive and effective educational programs and environments for students with unique learning capacities and needs” (p. 18). Interdisciplinary collaboration among team members has become a central theme in discussions of best educational practices for students with disabilities.

**Emerging views of best occupational therapy practice.** Contemporary views of best practice for school-based occupational therapists have been influenced by federal legislation (AOTA, 1999), the profession’s renewed and strengthened focus on human occupation (Fisher, 1998), special education research (McGregor & Vogelsberg, 1998), and calls for evidence-based practice within the occupational therapy profession (Holm, 2000). Two additional factors appear to have contributed to current views of “best practice” in schools: calls for collaboration among members of the education team (Mostert, 1998; Rainforth & York-Barr, 1997), and a strengthened focus on promoting student participation and access to the general curriculum through accommodation and adaptation (AOTA, 2002; Kellegrew & Allen, 1996; Mu & Royeen, 2004; Orr & Schkade, 1997; Schwartz, Finkelstein, & Orentlicher, 2003).

The expectation that all members of the education team, which includes occupational therapy, help students participate and progress in the general curriculum requires occupational therapists to collaborate with teachers and other members of the education team. Occupational therapy services focused on educating staff and consultation with teachers can help staff and teachers “reframe” their view of a particular student in a positive way while increasing the professional’s understanding of a student’s disability (Case-Smith, 1997; Niehues, Bundy, Mattingly, & Lawlor, 1991). A study by Case-Smith and Cable (1996) found that occupational therapists felt their students were best served when their occupational therapy interventions were consistently accompanied by in-class (vs. pull-out) services and consultation with teachers. A study by Kemmis and Dunn (1996) found that for teacher or occupational therapist pairs involved in weekly consultations, student performance was positively affected. These teachers also reported a favorable view of occupational therapy and stated a preference for the occupational therapist to link services directly to the student’s academic goals and to use compensatory more than remedial approaches. Numerous studies reported positive teacher perceptions of occupational therapy when the occupational therapist interacted with the teacher and collaborated during planning and service delivery (Clark & Miller, 1996; Fairbairn & Davidson, 1993; Nochajski, 2001; Scott, 1997).

In addition to collaboration with other members of the team, best practice for school-based occupational therapists involves intervention at the environment level. The environment includes a student’s performance context at...
school including physical, academic, and social factors that impact student participation and well-being (AOTA, 1999; Doubt & McColl, 2003; Richardson, 2002). This contextual focus contrasts with student-focused interventions designed to reduce a student’s disability-related deficits (AOTA, 2002; Kellegrew & Allen, 1996; Mu & Royeen, 2004; Orr & Schkade, 1997; Schwartz et al., 2003). To illustrate the growing relevance of environmentally focused interventions, Hemmingsson, Borell, and Gustavsson (2003) completed a qualitative study to examine the behavior of classroom assistants working with students who had disabilities. They found that the way classroom assistants helped a student either hindered or facilitated that student’s participation in educational activities. Occupational therapy intervention, they suggest, must address the general teaching environment including the helping styles used by various adults. In a single state survey of special education directors, positive value was placed on the extent to which occupational therapists working with high school age students could modify the student’s learning environment and provide assistive technology to enable student performance (Spencer, Emery, Schneck, 2003). Again, occupational therapy intervention focused on changing or adapting the performance environment was perceived to be helpful. Another study on the effects of occupational therapy-directed changes to the physical classroom set-up reported positive results. Schilling, Washington, Billingsley, and Dietz (2003) studied the effect of seating on student performance. In a general classroom that included students with attention deficit hyperactivity disorder (ADHD), the researchers replaced conventional classroom chairs with therapy balls. Results revealed that ball seating had a positive effect on in-seat behavior and legible word production for the students with ADHD. This study further demonstrated the effect of a modified classroom environment on individual student performance.

The purpose of this survey study was to describe the work of Colorado’s school-based occupational therapists working with kindergarten through twelfth-grade (K–12) students and to examine the alignment of reported occupational therapy practices with recent education reforms and contemporary views of best practice. Four questions guided data collection:

1. What are the characteristics of the occupational therapists providing school-based services in Colorado?
2. How do school-based occupational therapists describe a typical work week and the recipients of their services?
3. What types of services are provided by occupational therapists?
4. What professional development activities do occupational therapists choose and prefer?

Methods

Participants

The target population for this study included all occupational therapists and occupational therapy assistants working in Colorado’s public schools with children in kindergarten through twelfth grade, including transition programs. The existence of statewide general education standards for these grade levels provided the selection criterion for study participants and explains why occupational therapists working with preschool students were not included.

Using the most up-to-date list available from the Colorado Department of Education, 344 members of the target population were identified and mailed questionnaires. A total of 179 questionnaires were returned (52%) however 86 were not analyzed for the following reasons: Twelve of the questionnaires were undeliverable. Another 46 questionnaires could not be analyzed because the respondents worked exclusively with preschool students (not the focus of this study). Finally, 28 questionnaires were not analyzed because the respondent no longer worked in the schools or the questionnaire was incomplete. A convenience sample of 105 school-based occupational therapists working with students enrolled in K–12 or transition programs provided data for this study.

Instrument

Questionnaire items were developed by the researchers based on the initial research questions, a review of the literature, and input from a panel of experts that included four occupational therapists experienced in research and school-based occupational therapy practice (experience ranged between 6 and 21 years), plus an elementary teacher/researcher with more than 20 years of experience.

Questionnaire items sought information about the characteristics of occupational therapy services, the students receiving occupational therapy, how each therapist’s time was distributed across a typical week, school and district information, demographic descriptors of the participating occupational therapists, and finally, two narrative items. One narrative item asked occupational therapists to share one student’s individualized education program (IEP) goal or objective they addressed and who had written that goal or objective. The second item asked participants to list professional topics they would like to access in the future. An initial version of the questionnaire was piloted with five school-based occupational therapists. Their feedback was used to improve the wording and format of items. A final group of 24 items comprised the questionnaire, which is included in the Appendix.
Procedures and Data Analysis

Following human research committee approval and in cooperation with the Colorado Department of Education, potential participants were mailed a cover letter, questionnaire, and a stamped return envelope. All questionnaires were returned in 2001 with the majority coming back following the first mailing and the remaining following a mailed reminder. Using survey research methods, descriptive numeric data from the completed questionnaires were compiled and summarized (frequencies, means) using statistical software.

Open-ended questionnaire items that focused on the student goals and objectives, and professional development activities produced narrative data. These data were transcribed then categorized for reporting purposes by the research team (Fowler, 1993).

Results
Characteristics of Occupational Therapists Working in Colorado's Schools

Of the 105 participants in this study, 92 were occupational therapists (87.62%) and 12 were occupational therapy assistants (11.43%). One participant did not specify an occupational therapy credential (.95%). All geographic regions of the state were represented including urban, suburban, and rural settings. Approximately two thirds of the sample reported their highest earned degree as a bachelor’s degree (61%) and approximately one third reported having master’s degrees (30.5%). The remaining 7.6% of the sample reported their highest earned degree as an associate's degree. The mean participant age was 40.93 years with a range from 24 to 65 years of age. When asked about years of experience working as school-based practitioners, participants reported a range of .5 to 29 years with an average of 9.49 years. All had completed their initial occupational therapy education programs between 1967 and 2001 with 53% of the respondents completing before 1990 and 47% completing since 1991. Seventy-eight percent (78%) completed their initial occupational therapy education prior to passage of the IDEA 1997 amendments.

Employers for the participating occupational therapists were primarily school districts (n = 78, 74.3%) followed by Boards of Cooperative Education Services (BOCES or BOCS; n = 18, 17%), which provided special education and related services to a cooperative of rural school districts. A relatively small number of participants (n = 5, 4.8%) worked for agencies that contracted directly with public schools, and 2.9% (n = 3) were self-employed occupational therapist contractors. Study participants generally worked for one school district (n = 88, 83.8%) although a small number served students in multiple districts (n = 15, 16.2%). When asked how many separate schools they served, participants reported serving between one and 20 different schools with an average of 5.54 schools per therapist.

Students Receiving Occupational Therapy Services and Occupational Therapy Service Characteristics

Participants carried an average caseload of 43.68 students who had IEPs with a range between 7 and 115 students per therapist (n = 104). Occupational therapists reported serving very few students who qualified for accommodations through section 504 of the Rehabilitation Act: an average of one student per occupational therapist (range 0–12). Table 1 describes the students served by the occupational therapists according to grade level and disability.

Descriptions of the occupational therapy services provided were obtained by asking participants to report “What percent of your services focus on the following:
• Providing students/teachers/parents with information, compensatory strategies, or making environmental modifications (e.g., technology, modified/adaptive activity)
• Remediation of students’ underlying skill deficits or developmental problems (e.g., motor, sensory, social, behavioral, cognitive)”

Therapists reported using remedial-type approaches 62% of the time (range 0% to 90%) and informational or compensatory approaches 37% of the time (range 10% to 100%) of the time. The most frequently used service location was a pull out treatment area (61% of the time). For

Table 1. Occupational Therapy Caseload by Grade Level and Disability

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>N</th>
<th>Mean</th>
<th>Range</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>K–3</td>
<td>99</td>
<td>25.66</td>
<td>0–75</td>
<td>15.58</td>
</tr>
<tr>
<td>4–6</td>
<td>101</td>
<td>8.27</td>
<td>0–30</td>
<td>6.52</td>
</tr>
<tr>
<td>7–9</td>
<td>103</td>
<td>2.22</td>
<td>0–40</td>
<td>4.86</td>
</tr>
<tr>
<td>10–12</td>
<td>103</td>
<td>2.37</td>
<td>0–70</td>
<td>7.90</td>
</tr>
<tr>
<td>12–Transition</td>
<td>103</td>
<td>0.69</td>
<td>0–45</td>
<td>4.57</td>
</tr>
</tbody>
</table>

Primary Disability

-POD*= perceptual or communicative disability.
-SLIC*= significantly limited intellectual capacity.
-Multi-C* = multiple disabilities: cognitive impairment.
-SIED* = significant identifiable emotional disability.
-Multi-DB* = multiple disabilities: deafness and blindness.

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non-pull-out services, the special education classroom and general education classrooms were used most frequently, 24% and 23% of the time, respectively. Other intervention areas were used occasionally. These data are summarized in Table 2.

Information about the nature of specific occupational therapy services was elicited by asking participants to “Think about one K–12 student you are currently serving and for whom you feel your services are particularly effective. For this student, please share one IEP [individualized education program] goal that you address . . . and a related objective or benchmark.” The participant was also asked to identify who had written the goal or objective. A total of 87 participants shared this information (83%). The reported goals and objectives were categorized into two large groups: (1) those focused on changing the student’s specific motor or sensory skills (remediation), and (2) those focused on promoting student participation in educational activities. Some of the goals and objectives included both remediation and participation components. Following an extensive review and despite content and format variability in the reported goals and objectives, a dominant theme emerged: School-based occupational therapy services focused primarily on changing the child by remediating sensory or motor problems. An example of a remedial goal follows:

“Student will improve his fine motor skills for greater success in the academic setting.”

To a lesser extent, reported goals and objectives focused on student achievement of state-established education standards or student participation in available education activities. Two examples follow:

“Student will write and speak for a variety of purposes and audiences” (state language-arts standard);

“Student will participate in and complete classroom assignments using class tools and adaptive equipment as necessary.”

Due to the variability of reported goals and objective data, only a very general analysis was completed and further research is strongly recommended.

A majority of reported goals and objectives were written by the occupational therapist (n = 64, 74%). To a lesser extent, reported goals and objectives were written by the student’s education team (n = 16, 18%) or taken directly from state education standards (n = 7, 8%).

Typical Work Week

School-based occupational therapy practitioners reported working an average of 32.33 hours per week with a range between 7 and 42 hours (n = 103). Reported unpaid overtime work for a typical week ranged from 0 to 15 hours with an average of 4 hours per week per therapist (n = 103).

To understand how Colorado’s school-based occupational therapists divided their time during their most recent work week, participants estimated the number of hours they had spent doing a variety of work-related activities. As Table 3 indicates, by far the greatest amount of time was spent providing direct services to students (an average of 15.56 hours per week). Indirect service (consultation, evaluation of team members) consumed a smaller proportion of the work week (an average of 4.22 hours per week).

Professional Development Activities

Participating occupational therapists identified professional development activities they had participated in over the most recent two years. Additionally, they identified professional development resources available to them. These data are summarized in Table 4. Fifty-eight percent of the respondents (n = 61) had access to an employer provided professional development budget that averaged $106.00 per year. Over half of the occupational therapists (55%, n = 58) reported using an average of $248 of their personal budgets to support their own professional development. Sixty-two percent of occupational therapists (n = 65) had access to employer-paid release time for professional development and 33% (n = 35) had access to unpaid release time.

An open-ended question asked occupational therapists what professional development topics they would like to access in the future. With only a portion of the participants responding (56%), the most requested training topics related to sensory integration, followed by training on autism. Training in adaptive technology, consultation, assistance

Table 2. Most Frequently Used Occupational Therapy Service Location (N = 105)

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency of responses</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational therapy “pull-out” area</td>
<td>65</td>
<td>61.9</td>
</tr>
<tr>
<td>Special education classroom</td>
<td>25</td>
<td>23.8</td>
</tr>
<tr>
<td>General education classroom</td>
<td>24</td>
<td>22.9</td>
</tr>
<tr>
<td>Other school environments (lunch room, recess)</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.19</td>
</tr>
<tr>
<td>Community environments (bus, stores)</td>
<td>1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Note. Fourteen occupational therapists reported two or more locations as the most frequently used.

Table 3. Average Occupational Therapy Hours Spent in Most Recent Week for Each Activity (N = 104)

<table>
<thead>
<tr>
<th>Activity</th>
<th>M</th>
<th>Range</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct service</td>
<td>15.56</td>
<td>0–38</td>
<td>8.74</td>
</tr>
<tr>
<td>Indirect service</td>
<td>4.22</td>
<td>0–16</td>
<td>3.12</td>
</tr>
<tr>
<td>Prescheduled meetings</td>
<td>4.14</td>
<td>0–15</td>
<td>2.5</td>
</tr>
<tr>
<td>Post-referral meetings</td>
<td>3.15</td>
<td>0–15</td>
<td>2.91</td>
</tr>
<tr>
<td>Preparation and clean up</td>
<td>2.10</td>
<td>0–10</td>
<td>1.82</td>
</tr>
<tr>
<td>Travel</td>
<td>2.01</td>
<td>1–10</td>
<td>2.01</td>
</tr>
<tr>
<td>Documentation</td>
<td>1.83</td>
<td>0–8</td>
<td>1.49</td>
</tr>
<tr>
<td>Spontaneous meetings</td>
<td>1.46</td>
<td>0–6</td>
<td>1.33</td>
</tr>
<tr>
<td>Administration/supervision</td>
<td>1.36</td>
<td>0–19.5</td>
<td>2.77</td>
</tr>
<tr>
<td>Pre-referral assessment</td>
<td>0.98</td>
<td>0–8</td>
<td>1.44</td>
</tr>
<tr>
<td>Other</td>
<td>0.35</td>
<td>0–7.5</td>
<td>1.04</td>
</tr>
</tbody>
</table>
with goal writing, and techniques for improving student handwriting were infrequently desired.

Discussion

Consistent with the stated purpose of this research, school-based occupational therapy practices in Colorado for students in grades K–12 have been described. The characteristics of occupational therapists working in Colorado’s schools, how they spent their time at work, who they worked with, what type of services they provided, and their professional development interests have all been reported. Findings can be discussed in light of recent education reforms and contemporary views of best occupational therapy practice. Limitations of this study will also be discussed along with suggestions for future research.

The occupational therapists participating in this study appeared committed to their roles as related service providers in schools. This was demonstrated by their longevity on the job, management of consistently high caseloads distributed across multiple school sites, participation in unpaid overtime work, and widespread personal financing of professional development.

It is important to note that 78% of the respondents completed their initial occupational therapy education prior to passage of the 1997 amendments to IDEA. Although this study cannot determine what effect, if any, the timing of initial occupational therapy education had on the reported school-based occupational therapy practices, questions do arise regarding the role of initial occupational therapy training, availability and nature of ongoing professional development, and the extent to which practicing occupational therapists access information about current and changing education policy.

When examined together, findings suggest that many of the reported occupational therapy services for K–12 students were provided apart from general education activities, focused on goals developed by the occupational therapist rather than the team, and were frequently based on developmental or remedial approaches emphasizing the student’s sensory or motor function. This general pattern of service contrasts with studies reviewed earlier which suggest that occupational therapist contact and collaboration with teachers and others is important as is a focus on student participation and performance in the classroom. A previous nationwide survey of school-based practices indicated that collaborative and consultative services, on average, may be occurring at a higher rate nationally than what was found in this Colorado study (Case-Smith & Cable, 1996).

School-based occupational therapists participating in this study reported spending 62% of their service time working to remediate students’ underlying skill deficits or developmental problems. The reason for this pattern of service is not discernable from this study. It is, however, a theme that has been reported in other studies (Barnes, Beck, Vogel, Grice, & Murphy, 2003; Burtnett, McMain, & Crowe, 2002; Lowman et al., 1999). Given the growing body of literature demonstrating the value of consultation and education approaches, and the value of working with individuals within their natural performance contexts, it is not clear why school-based occupational therapists in Colorado rely so heavily on remedial interventions in pull-out environments.

Interestingly, findings from this study appeared largely consistent with the Colorado Department of Education’s guideline document titled, The Role of Adapted Physical Education, Occupational Therapy, and Physical Therapy in Meeting the Motor Needs of Students with Handicapping Conditions in Educational Settings (Colorado Department of Education, 1997). The document directs “motor specialists” (physical and occupational therapists and adapted physical educators) to help students succeed in educational settings by reducing the effects of disability. The guidelines further state that motor specialists address the “concepts of sensorimotor, sensory feedback, stability, mobility, and the integration of these components into functional activities” (p. 3).

The motor specialist guidelines, written in 1989 and most recently revised in 1997, do not appear uniformly consistent with the general education focus of IDEA ‘97, Colorado’s general education standards and inclusive state policies (Colorado Department of Education, 2001), or

### Table 4. Professional Development Activities and Resources

<table>
<thead>
<tr>
<th>Activities Participated In Over the Past 2 years (N = 103)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshops</td>
<td>99</td>
<td>94</td>
</tr>
<tr>
<td>Reading journals or books</td>
<td>85</td>
<td>81</td>
</tr>
<tr>
<td>Mentoring</td>
<td>62</td>
<td>59</td>
</tr>
<tr>
<td>University courses</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>35</td>
<td>33</td>
</tr>
<tr>
<td>Correspondence courses</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>AOTA listserv for school-based occupational therapists</td>
<td>14</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Opportunities Available (N = 102)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshops provided by employer/district</td>
<td>84</td>
<td>80</td>
</tr>
<tr>
<td>Journals/books</td>
<td>81</td>
<td>77</td>
</tr>
<tr>
<td>University courses</td>
<td>45</td>
<td>43</td>
</tr>
<tr>
<td>Correspondence courses</td>
<td>33</td>
<td>31</td>
</tr>
<tr>
<td>AOTA listserv for school-based occupational therapists</td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Professional Development Resources (N = 102)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget provided by employer</td>
<td>61</td>
<td>58</td>
</tr>
<tr>
<td>Personal money used</td>
<td>58</td>
<td>55</td>
</tr>
<tr>
<td>Employer paid release time</td>
<td>65</td>
<td>62</td>
</tr>
<tr>
<td>Unpaid release time</td>
<td>35</td>
<td>33</td>
</tr>
</tbody>
</table>

AOTA = American Occupational Therapy Association.
published accounts of best practice. The guidelines, developed to help related service professionals and their administrators understand related service roles, should be studied as a possible factor influencing current occupational therapy practices.

In summary, this descriptive study builds understanding of school-based occupational therapy practices in one large western state and allows for the examination of those practices in light of current education policy and what is considered “best practice.” Further research is needed to understand why occupational therapists practice as they do and why those practices contrast with current views of best practice.

As with all survey research, this study has inherent limitations and must be interpreted cautiously. A restricted sample size within one state does not allow for widespread generalization of findings. Furthermore, the use of an investigator-developed questionnaire raises questions regarding its reliability and validity. Although preliminary content and face validity testing was completed on the questionnaire, limitations still exist. Despite known limitations, the study begins to paint a picture of current school-based occupational therapy practices—a necessary first step towards understanding the extent to which services align with research, reports of best practice, and current policy.

### Acknowledgments

We would like to thank the occupational therapists who so generously provided data for this study. The Colorado Department of Education provided critical support for which we are very grateful.

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Appendix

Questionnaire for Colorado’s School-Based Occupational Therapists

1. Do you work with any K–12 students?  ☐ Yes  ☐ No
   If you answered yes, please continue. If you answered no, please stop here and return questionnaire in the envelope provided.

2. Approximately how many students in each of the following categories do you serve?
   • Number of K–12 students with IEPs ______
   • Number of K–12 students receiving 504 accommodations ______
   • Number of K–12 students in general education ______

3. Of all the K–12 students with IEPs that you serve, approximately how many have each of the following disabilities? If students have more than one disability, please indicate the primary disability.
   • Significant Limited Intellectual Capacity______  • Significant Identifiable Emotional Disability______
   • Physical Disability ______  • Traumatic Brain Injury ______
   • Perceptual or Communicative Disability______  • Multiple Disabilities: Deafness & Blindness______
   • Vision Disability ______  • Multiple Disabilities with Cognitive Impairment______
   • Hearing Disability ______  • Autism ______
   • Speech Language Disability ______

4. Of all the students you serve, how many are in the following age groups/programs?
   • Birth to 3 program ______  • 7th–9th grades ______
   • Preschool ______  • 10th–12th grades ______
   • K–3rd grades ______  • 12+ school–adult transition ______
   • 4th–6th grades ______

5. For the student age group you serve most, how many of their IEP meetings do you attend? ______ Which age group is this? ______
   (If you serve equal numbers in more than one age group, select the ONE you feel most effective with.)

6. For the student age group you serve most, please check the most frequently used service location.
   ☐ General education classroom
   ☐ Special education classroom
   ☐ OT treatment area (pull-out)
   ☐ Other school environments (e.g., lunch, recess)
   ☐ Community
   ☐ Other: __________________________________________________________________________

7. For the student age group you serve most, approximately what percent of your services focus on the following (make sure your total adds up to 100%)?
   • Providing students/teachers with information, compensatory strategies, or making environmental modifications (e.g., technology, modified/adapted activity) ______%
   • Remediation of students’ underlying skill deficits or developmental problems (e.g., motor, sensory, social, behavioral, cognitive deficits) ______%

8. During your most recent full work week, approximately how many hours did you work during paid work time and how many hours did you work on your personal time?
   • Hours of paid work time ______?
   • Hours of unpaid work time ______?
9. During your most recent full work week, approximately how many hours (paid and unpaid) did you spend in each of the following areas?

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student assessment (including related documentation)…</td>
<td></td>
</tr>
<tr>
<td>Before referral for OT services</td>
<td></td>
</tr>
<tr>
<td>After referral for OT services</td>
<td></td>
</tr>
<tr>
<td>Direct services</td>
<td></td>
</tr>
<tr>
<td>(direct with children individually or in groups inside or outside the classroom)</td>
<td></td>
</tr>
<tr>
<td>Indirect services</td>
<td></td>
</tr>
<tr>
<td>(Teaching other adults, consulting, collaborating with teachers or family or others who support students)</td>
<td></td>
</tr>
<tr>
<td>Meetings</td>
<td></td>
</tr>
<tr>
<td>Prescheduled (IEP, OT department meetings, etc.)</td>
<td></td>
</tr>
<tr>
<td>Spontaneous (face-to-face, phone, e-mail, etc.)</td>
<td></td>
</tr>
<tr>
<td>Preparation/set-up/clean up</td>
<td></td>
</tr>
<tr>
<td>Documentation (not including assessment-related documentation)</td>
<td></td>
</tr>
<tr>
<td>Travel between work sites</td>
<td></td>
</tr>
<tr>
<td>Administration and supervision</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>TOTAL HOURS (does this number approximate the numbers you provided for question 8, above?)</td>
<td></td>
</tr>
</tbody>
</table>

How typical was the week you just described? Circle your response: 1 2 3 4 5

Not at all  Very typical

10. Think about one K–12 student you are currently serving. For that student,
    a) share one IEP annual goal that you address,
    b) related to this goal, share an objective or benchmark that you address,
    c) identify who wrote the goal and objective or benchmark.
    (Please do not include any student names.)

    Age of student _______ Grade ____________________ Disability__________________________________________________

    Annual IEP goal:                                                                 Who wrote the goal?
    Related objective or benchmark:                                                  Who wrote it?

School/District Information (based on your current employment)

11. Who is your employer? (check one)
    ❑ School District
    ❑ Board of Cooperative [Educational] Services (BOCES/BOCS)
    ❑ Contractor (self-employed or agency that contracts to schools)
    ❑ Self (self-employed contractor)
12. How many schools do you serve? ______ How many districts? ______

13. Approximately how many total students are served by your district or BOCES/BOCS? ______

14. How many full time equivalent (FTE) OTRs and COTAs are working in your school district or BOCES/BOCS? OTRs ______ COTAs ______

15. How many full time equivalent (FTE) support staff work with the OTs in your school district or BOCES/BOCS? Paraprofessionals/Aides: ______ Office staff: ______

**Personal Background**

16. What is your OT credential? OTR ______ COTA ______

17. How many years have you been employed as an OT in schools? ______

18. How many years were you employed as an OT in other settings? ______

19. What is your age? ______

20. What is the highest degree you have earned? (check which applies)
   - [ ] Associate's degree
   - [ ] B.A./B.S.
   - [ ] M.A./M.S.
   - [ ] Ph.D. or equivalent

21. Year you graduated from your initial OT education program ____________

22. Please identify your professional development/continuing education activities over the past two years

<table>
<thead>
<tr>
<th>Professional Development Activities</th>
<th>Topic Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>University courses</td>
<td></td>
</tr>
<tr>
<td>Workshops</td>
<td></td>
</tr>
<tr>
<td>Correspondence courses (Web-based or U.S. mail)</td>
<td></td>
</tr>
<tr>
<td>Reading professional journals/books</td>
<td></td>
</tr>
<tr>
<td>Participation in AOTA listserv for school-based OTs</td>
<td></td>
</tr>
<tr>
<td>Mentoring</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

23. What professional development topics/content would you like to have access to in the future? ________________________________

24. What professional development resources did you have access to this year? (check all that apply)
   - [ ] Budget provided by employer to support your professional development (Amount $__________ )
   - [ ] Personal budget available to support your professional development (Amount $__________ )
   - [ ] Employer paid release time
   - [ ] Unpaid release time
   - [ ] Workshops, classes provided by employer or district
   - [ ] University courses
   - [ ] Correspondence courses (Web-based or mail correspondence)
   - [ ] Professional journals/books
   - [ ] Other: ________________________________

Thank you for completing this questionnaire!