Chapter 5
Writing Effective Individual Education Programs

Overview: This chapter provides more details that assist with the activities that are described in Chaps. 7 and 8. The consultant facilitates the consultation by guiding the participants in using all the available information about the student to select objectives in communication, social, and work skills. Objectives must be well written using suggestions provided in this chapter.

In this chapter we describe the following:

1. Best practices in educating students with autism using the National Research Council (NRC) recommendations and the Individuals with Disabilities Education Act mandates
2. How to write good IEP objectives
3. How to apply the concepts of maintenance and generalization of skills and include activities that address these concepts in a teaching plan
4. How to use an IEP checklist
5. Various ways to use the IEP checklist

According to the Individuals with Disabilities Education Act (IDEA), autism is defined as a developmental disability that significantly affects verbal and nonverbal communication and social interaction, is generally evident before age 3, and adversely affects a student's educational performance. Other characteristics associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences (American Psychiatric Association, 2004).

Although students with autism share the label, they vary from one another according to intellectual ability (Chakrabarti & Fombonne, 2005; Jonsdottir et al., 2007), communication and social interaction skills (Castelloe & Dawson, 1993; O'Brien, 1996; Prizant & Wetherby, 2005; Wing & Gould, 1979), and other developmental domains (Beglinger & Smith, 2001) such as fine and gross motor skills, academic skills, and sensory processing abilities. Further, the characteristics of autism tend to change with age (Lord & Risi, 1998). Children, who were nonverbal at age 4, for example, may be verbal at age 10, but still not be able to engage in

reciprocal conversation. Children who could not imitate the action of others at age 3 may be able to play with objects appropriately at age 7, but not cooperatively with other children. Although the core impairments of autism—social and communication skills—are shared across all children with the diagnosis, due to the unique blend of strengths and weaknesses of students with autism, teachers must tailor educational interventions to individual students rather than rely on the label to guide individual program development (Ruble & Dalrymple, 2002; Ruble, McGrew, Dalrymple & Jung 2010b).

To facilitate individualization of educational programs, schools are required to follow the mandates of IDEA that each student with a disability receives an Individual Education Plan (IEP) (USDOE, 2004). The IEP is the keystone of a successful program and has several goals. First, it puts in writing a commitment of resources to the student. Second, it serves as a management tool to ensure the identification of specialized interventions and need for ancillary services such as speech and language therapy and occupational therapy. Third, the IEP is a compliance and monitoring tool and acts as an evaluation device that facilitates measurement of student progress (Armenta & Beckers, 2006). Fourth, the IEP process mandates regular and systematic reviews of progress in order to promote general education curriculum participation (Burns, 2001). Fifth, IEPs can also be used to evaluate educational progress by providing a description of short-term objectives that lead to the attainment of larger and more comprehensive goal attainment (Rodger, 1995). Finally, IEPs provide a direct connection between teaching objectives and classroom activities that are evident and observable (Smith, Slattery, & Knopp, 1993). If IEP objectives are written specifically enough for observational coding, then data can be utilized to evaluate the success of intervention methods within the school setting. If it is determined that the student is not making progress toward the short-term objective (usually lasting one grading period), then the intervention can be changed without losing an entire year on a plan that is not working (Smith et al., 1993).

Best Practices

NRC Recommendations

According to the NRC, at a minimum, educational programs of students with autism should target social skills, communication, developmentally appropriate tasks/play activities that include a motivation system, fine and gross motor skills for age-appropriate activities, cognitive and academic skills, replacement skills for problematic behaviors, and organization skills that underlie success in a general education classroom. In essence, the NRC (2001) recommends comprehensive IEPs that target a range of social/communicative, adaptive, functional, academic, and cognitive abilities. These areas for IEP planning are summarized in the forms section in Chap. 7 (Overview of Best Practices for Individualized Education Plans (IEP) for Young Students with ASD).

Federal Law

Examples of required elements in the IEP as mandated by IDEA (2004) include a description of (a) the student's present levels of academic achievement and functional performance, (b) measurable goals that include benchmarks or short-term objectives for students who take alternate assessments based on alternate achievement standards, (c) measurement of student progress, (d) related services, and (e) program modifications and supports for school personnel.

Writing Good IEP Objectives

One of the biggest challenges for teachers of students with ASD (and for other students too) is writing social and communication skills objectives that are measurable and clear to the outside observer. See Table 5.1 for examples. IDEA (2004) stipulates that the IEP must include benchmarks or short-term objectives in the IEP for students who are on the alternate assessment route based on alternate assessment standards. We would expect that all students with ASD (there may be some notable exceptions) have IEP goals that are broken down into benchmarks or short-term objectives. Essential features of well-developed objectives include the following:

- Has a description of intermediate steps that indicate how progress toward meeting the annual goal will be measured.
- Is able to be attained within a year (target dates can be less than a year, such as by quarter or semester).
- Has identified the specific behaviors to be performed, criteria for attainment, evaluation/measurement procedures, and timelines for progress measurement (more detail on these features is below).
- Is sequenced developmentally (e.g., play with five toys in a functional manner; play with five toys using pretend play), incrementally (complete an independent work task within 5 min; complete two independent work tasks within 20 min), or by level of proficiency (e.g., from 25 to 50%; five out of eight opportunities).

Table 5.2 provides more details on the components of a well-developed IEP objective (Fig. 5.1).

Table 5.1 Examples of IEP objectives

During free play when offered a toy from a peer, Johnny will respond by taking the toy three times a day over 3 consecutive days

During independent work time with visual cues only, Amy will start and complete a familiar activity, such as matching, sorting, or categorizing items, two times a day for 5 of out 5 days

During breakfast, lunch, and snack time, Joey will initiate at least one request for a desired food using pictures three times a day for 8 out of 10 days

During structured play with a peer and verbal cues from the peer, Devon will imitate an action with an object two times a day over 4 consecutive days

Table 5.2 Components of a well-developed IEP objective

Component	Definition	Examples
Condition	The circumstances or setting when behavior is to be performed; this also includes the level of prompting that may be used (physical, verbal, gestural, verbal) from the adult or peer; when prompts are not listed, it is assumed the skill is to be performed independently by the student	Given a structured small group of 2–3 students Given familiar 1–2 step directions (list to be provided) During snack/lunch time when given one verbal cue (e.g., What do you want?) Given two different situations where he/she needs help and has a visual cue (to be identified) and adult is within 2 ft. During a structured playtime with a social, verbal peer and with peer prompts only and with familiar toys During a work session and with a familiar work task that can be done independently
Performance	The action or behavior the student is to do	Follow familiar directions Point to an object Verbalize a want/need Complete familiar work task Initiate request toward peer Make on topic comments Provide full sentence answers
Criterion	The standard of performance of the behavior	8 out of 10 opportunities 5 different objects, 5 times each over 5 play times 3 tasks each for 10 times Each day of the week 10 consecutive times
Measurement	The procedures for evaluating progress toward the objective	Direct observation of skill Videotape review Products (homework, written assignments) Parent/teacher report Tests Checklists
Time line	The time line for determining progress toward objectives	Annual: Biannual Quarterly: Daily Semester: Weekly


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_____

Condition                        Performance            Criteria


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Measurement                                  Time Line
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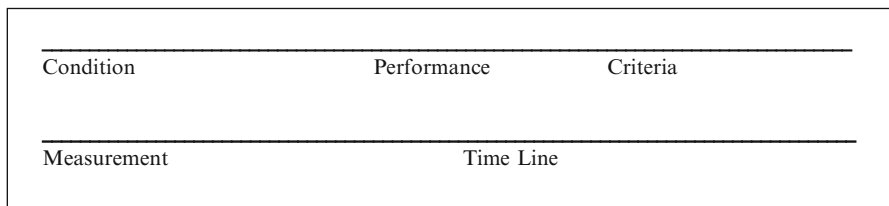
Fig. 5.1 Template for writing a well-developed IEP objective

Maintenance and Generalization

Maintenance and generalization refer to what happens when the teaching plan is stopped or when the student is in a different classroom, home or the community, working with different teachers, using different materials, or interacting with different peers. Without plans in place, the student may lose the skills that he once learned. Helping the student maintain the skills once the specific teaching plan is no longer in place is a necessity. Further, developing specific teaching plans that include teaching the student to transfer the skills to another situation is necessary. For students with ASD, generalization does not happen without intention and specific teaching.

COMPASS consultation is designed with generalization in mind. At the outset, teaching objectives are identified with parent and teacher input so that important skills that have meaning for home and school are targeted. Also included is the development of specific teaching plans that are shared with parents. Still, this is not enough to ensure maintenance and generalization. Other suggestions from Zirpoli and Melloy (1993) are:

1. Teach skills in natural settings
2. Share teaching plans with other adults and caregivers
3. Implement teaching plans in a variety of settings
4. Use natural reinforcers; if a reinforcer such as food is being used, fade to more natural consequences
5. Shift from continuous reinforcement to intermittent reinforcement
6. Gradually shift from immediate reinforcement to delays in reinforcement in the natural environment
7. Reinforce when you see the student display behavior in untrained settings or generalized activities
8. Focus on behaviors that will be reinforced by others
9. Ensure that the skill is within the student's skill set before working on generalization
10. Utilize environmental supports that will facilitate the occurrence of skills

IEP Evaluation Checklist

To assist with the development of a high quality IEP, we have provided an IEP Evaluation Checklist. This checklist was used in a study to evaluate the strengths and weaknesses of IEPs and to provide recommendations for improving IEPs (Ruble et al., 2010b). Our research showed that students with IEPs that contained objectives that were more sensitive to the needs of students with autism (i.e., IEPs that had social, communication, and work/learning skill objectives) and were more measurable made more progress on their selected objectives at the end of the school year.

Ways to Use the Checklist

There are many ways the IEP checklist can be used. The first purpose is for conducting a review of the quality of current IEPs. The IEP checklist can be used to identify weaknesses in the IEP, such as a lack of measurable objectives or a lack of social skills, communication, or learning skills objectives. The identification of weaknesses can be used as a way to establish goals for COMPASS consultation, in-service training, and other professional development efforts to improve IEPs.

A second purpose of the IEP checklist is to monitor the effects of COMPASS consultation. Recall in Chap. 4 the COMPASS Mediation Model tested. We have provided it again here (Fig. 5.2).

In the discussion of this model, we reported the results of two elements that act as active ingredients of COMPASS consultation. One of the elements was IEP quality. We expect COMPASS to result in better IEPs because the consultation ensures that (a) objectives sensitive to the needs of students with autism and described by the NRC (2001) are included in the IEP and (b) the objectives targeted as a result of COMPASS consultation are measurable and added to the IEP. The questions in the IEP checklist that have an asterisk beside them are the areas we expect to change as a result of COMPASS consultation. The other questions are also important but are not expected to change as a result of COMPASS consultation. Thus, the tool can be used to measure IEP quality before and after COMPASS to ensure that those who receive COMPASS are making changes to the IEP.
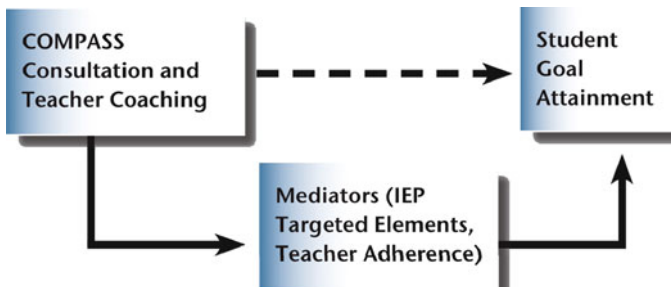

Fig. 5.2 COMPASS mediation model tested

Appendix IEP Evaluation Form

Student's Name:_____ DOB/Age:_____

Reviewer's Name:_____ Date of IEP:_____

Instructions: The evaluation form has two major parts: A and B. Part A has two components. The first section evaluates the descriptions of the present levels of performance. The second section addresses the IEP as a whole.

Part B is concerned with specific goals or objectives. The goal is the broad domain; the objective is the specific skill that is targeted under the goal. It is recommended that the entire IEP be reviewed before it is scored.

Part A: Analysis of Overall IEP

Directions: Determine if the following education performance areas are described as an area of need (if the area is checked, but no description is provided, mark "no"; if any kind of description is provided, mark "yes").

Area	No	Yes
1. Communication status		
2. Academic performance		
3. Health, vision, hearing, motor abilities		
4. Social and emotional status		
5. General intelligence (cognitive)		
6. Overall quality of description of student's performance relative to the general curriculum or developmental status is clear enough to establish well-written goals for the student. Code "no" if there is no reference to grade, age, or developmental equivalents/performance.		

Comments:

Review of Related Services

Instructions: If related services are provided, indicate "yes" and the amount of time the service is provided per week.

	No	Yes	Time of week
7. Speech therapy			
8. Occupational therapy			
9. Physical therapy			
10. Other:			

Instructions: Review the overall IEP and determine to what degree each indicator is provided. Use the Likert scale that ranges from 0 ("no/not at all") to 2 ("very much/ clearly evident"). "Not applicable" is NA. Examples of IEP objectives for each of these indicators follows the checklist.

0	1	2
No/not at all		Very much/ clearly evident

Indicator (examples of the IEP objectives for items 13–20 are provided at the end of this IEP Evaluation Form)	NA	0	1	2
11. Annual goals include goals from the COMPASS consultation				
12. Parental concerns are described (code "2" if *any* concerns are listed)				
13. Includes goals/objectives for social skills to improve involvement in school and family activities (i.e., social objective is targeted for improved functioning in school/or family life). Must have more than 1 objective to code "2" ***				
14. Includes goals/objectives for expressive, receptive, and nonverbal communication skills (code "NA" if *communication* is not listed as an area of need in present levels of performance, code "0" if communication is listed as area of need but there are no communication goals/objectives, code "1" if there is only one goal for receptive and expressive language, code "2" if there are goals for both receptive and expressive language). ***				
15. Includes goals/objectives for symbolic functional communication system (PECS, assistive technology, etc). Code as "NA" if student shows evidence of conversational speech in the present levels of performance. When augmentative/alternative communication (ACC) isn't an objective but listed as a support for objectives, code as "1." ***				
16. Includes goals/objectives for engagement in tasks or play that are developmentally appropriate (must emphasize a focus on developmental skills such as attending, sitting in circle, taking turns, etc., rather than academic), including an appropriate motivational system (code "1" if developmentally appropriate but no motivation system is described).				
17. Includes goals/objectives for fine and gross motor skills to be utilized when engaging in age appropriate activities. Must have more than one objective to code "2."				

0	1	2
No/not at all		Very much/ clearly evident

(continued)

	NA	0	1	2
18. Includes goals/objectives for basic cognitive and academic thinking skills (sorting, letters, numbers, reading, etc). Must have more than one objective to code "2."				
19. Includes goals/objectives for replacement of problem behaviors with appropriate behaviors (evidence is provided that the skill is designed to replace a problem behavior). Must have more than one objective to code "2."				
20. Includes goals/objectives for organizational skills and other behaviors that underlie success in a general education classroom (independently completing a task, following instructions, asking for help, etc). Must have more than one objective to code "2." ***				
21. Objectives are individualized and adapted from the state academic content standards (i.e., goals are assumed to be the academic content standard). Code "2" if most are individualized but some are not; code "1" if some are individualized, but most are not.				

*** Denotes targeted indicators that are expected to change as a result of COMPASS consultation.

22. Number of goals in the IEP: _____

23. Number of objectives in the IEP: _____

24. Is the need for extended school year addressed?   □ Yes   □ No

25. Is extended school year recommended as a service?   □ Yes   □ No   □ Not Addressed

Part B: Analysis of Specific IEP Objectives

Note: Use with COMPASS objectives and/or with as many objectives as desired

Objective: _____

_____

IEP goal No. and page No. on the IEP:_____ No. of objectives under goal:_____

Objective Code (select from options below):_____

0 = Academic; 1 = Social; 2 = Communication; 3 = Learning/Work Skills; 4 = Motor/ Sensory; 5 = Self-help; 6 = Behavior

Instructions: Code each objective (not goal). Use the following Likert scale that ranges from 0 ("no/not at all") to 2 ("very much/clearly evident"). "Not applicable" is NA

0	1	2
No/not at all		Very much/ clearly evident

Indicator	NA	0	1	2
26. The student's present level of performance is described for this objective (don't rate quality here). If a simple description like one sentence is given, code "2."				
27. The student's performance of this objective (in summary of present levels of performance) is described in a manner that links it *specifically* to the **general** curriculum.				
28. The student's performance of this objective (in summary of present levels of performance) is described in a manner that links it *specifically* to **developmental** curriculum.				
29. This objective is able to be measured in behavioral terms. Code "1" if it can be observed, code "2" if the description of target behavior is clear for proper measurement of goal achievement through observation.***				
30. The conditions under which the behavior is to occur are provided, i.e., when, where, with whom.***				
31. The criterion for goal acquisition is described, i.e., rate, frequency, percentage, latency, duration, as well as a timeline for goal attainment is described specifically for objective (other than for length of IEP).***				
32. A method of goal measurement is described. Code "1" if method of measurement is just checked according to a preset list and not individualized specific to objective.				
33. Is Specially Designed Instruction individualized to the objective? (Code "0" if there is no SDI specified, code "1" if SDI is checked off but not specifically designed for that objective, code "2" for individualized SDI).				

Note: Item with *** is a targeted indicator expected to change as a result of COMPASS consultation.

Examples of IEP Objectives for Each Indicator Described in Part A

Indicator Item 6

Example: During a 10-min free play activity and with a verbal or visual cue, will provide eye contact to adult/peer partner at least three times during the activity within 6 weeks.

Example: When participating in a social skills group with teachers and/or peers, will have two or more verbal exchanges three out of four times for each session for three consecutive sessions as observed and recorded in monitoring data by teachers and/or staff by the end of the school year.

Indicator Item 7

Example (Receptive Communication): When presented with an object or picture and the question "Do you want____," he will verbally answer yes or no with a visual prompt and accept his answer 4 out of 5 times over 4 consecutive days.

Example (Receptive Communication): When an adult is within 6 feet and says child's name, child will turn and look toward the speaker with no more than 2 verbal cues, 3 out of 4 trials a day for 3 consecutive days by the end of the grading period.

Example (Expressive/Receptive Communication): During a structured activity, will engage in three conversational exchanges on a topic with one peer using an appropriate voice level with visual and/or peer cues for 4 of 5 consecutive sessions by the end of the school year

Indicator Item 8

Example of a Score of 2: During free play, breakfast, lunch and work time, will request 10 items/activities/food choices through picture exchange or voice output at least one time for each of 4 daily activities over 3 consecutive days by the end of the school year.

Example of a Score of 2: Given a structured "lesson," student will give a picture to an adult to indicate something he wants for 3 objects/foods with 2 physical prompts, 4 out of 5 times over 2 consecutive weeks for each.

Example of a Code of 1: During free play and when given three choices, will make a preferred choice on three out of four trials at least once daily for 3 consecutive days in 6 weeks. (Picture exchange listed in specially designed instruction for this objective).

Indicator Item 9

Example: Given structured play time, will imitate three different adult/child actions with at least five different objects twice a day for each object for 4 out of 5 days within 12 weeks.

Example: When given familiar tasks in structured work time, will finish 3 tasks with 1 environmental cue to start and with an adult 3 feet away, with no more than 1 redirection (gestural, verbal) 2 times a day for 5 consecutive days in 36 weeks.

Indicator Item 10

Example: During written activities and a model, will hold a writing utensil using a tripod grasp at least 80% of the time during a 10-min activity daily for four consecutive days by 12 weeks.

Example: During work time and with peer models, will cut out three different forms including curvy and/or wavy lines staying within 1/2 in. of the lines at least 8 out of 10 trials 3 out of 4 days in 36 weeks.

Indicator Item 11

Example: During math, when given a visual example and a verbal prompt to start, will complete 10, 2 digit addition and subtraction problems with regrouping with 80% accuracy for 3 consecutive days by 18 weeks.

Example: During reading group, will read and demonstrate understanding of 12 new words each week in 36 weeks.

Indicator Item 12

Example: When denied a request and offered an alternative, will accept the alternative with reduced physical aggression (from baseline) with no more than 50% aggressive acts (from baseline) per day across 2 weeks by the end of the school year.

Example: Will follow a relaxation routine with two verbal cues/visual cues and be able to continue in the current activity or setting without escalating behaviors (whining, yelling out) on five consecutive occasions when he is starting to be upset/anxious within 12 weeks.

Indicator Item 13

Example: During a structured work activity when student needs help, will verbally ask adult/peer with a visual cue, "Help me please" 4 of 5×a day during a 2-week period by the end of the school year.

Example: Given a teacher directed lesson, the student will raise his hand, wait to be called on, and give his response to a teacher question with visual cues for four of five consecutive sessions.