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Evaluation of a Self-Instructional Manual

For The

Assessment of Basic Learning Abilities Test

Lorraine DeWiele

University of Manitoba

A Thesis Submitted

in Partial fulfilment of the Doctoral of Philosophy degree

at the University of Manitoba

© April, 1999

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FACULTY OF GRADUATE STUDIES
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EVALUATION OF A SELF-INSTRUCTIONAL MANUAL
FOR THE ASSESSMENT OF BASIC LEARNING ABILITIES TEST

A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University

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of

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Acknowledgements

This dissertation is dedicated to the memory of John F. Topshee.

I would like to thank my advisor, Dr. Garry Martin, for his advice and guidance during each phase of this research, and throughout my graduate training in its entirety.

Abstract

Direct-care service providers offering programs to individuals with developmental disabilities face a daily challenge in selecting training and work tasks that are appropriate for the abilities of the clients. An assessment tool that has considerable predictive validity for selecting such tasks is the Assessment of Basic Learning Abilities test (ABLA: Kerr, Meyerson, & Flora, 1977). Thus far, however, research and applications using the ABLA test have been conducted largely by graduate students. The purpose of this research was to investigate the efficacy of a Self-Instructional Manual (SI-M) for teaching direct-care service providers to use the ABLA test for assessing individuals with developmental disabilities, and for analyzing training tasks according to the highest ABLA levels that clients must pass in order to learn such tasks readily. The research included four progressive studies to assess an SI-M for the ABLA test. The results demonstrated that, after studying the SI-M and practising with a partner for approximately six hours, direct-care service providers met mastery criteria for knowledge of the ABLA, applying the test to assess clients, and classifying training and work tasks according to the highest level of the ABLA needed to perform them. Moreover, the SI-M was considerably more effective in accomplishing these tasks than was the original description of the ABLA test.

Introduction

In the field of developmental disabilities, professionals have often noted that certain individuals may learn one task with relative ease while displaying repeated errors when attempting to learn another task that seems similar (McDonald & Martin, 1991). Kerr, Meyerson and Flora (1977) suggested that such individuals may be deficient in their ability to make relatively simple position, visual, and auditory discriminations which are prerequisites for learning various self-care, educational, and vocational tasks. Because each individual is only able to complete a task based on his/her repertoire of pre-requisite skills, training tasks involving more advanced skills than that which the individual demonstrates are not practical tasks to request of that person. Thus, Kerr et al. (1977) recognized a need for an assessment instrument to measure an individual's repertoire of pre-requisite skills in order to determine realistic training tasks for that individual.

In order to assess basic discrimination acquisition or learning-to-learn skills of developmentally disabled persons, Kerr et al. (1977) developed the Assessment of Basic Learning Abilities Test (ABLA), formerly referred to as the AVC Test. The ABLA is a practical, easily-implemented testing instrument comprised of an imitation task and five two-choice discrimination tasks which are presented to a participant in an attempt to assess the client's ability to readily learn those tasks. The six tasks, which require only a nonverbal, motor response, include the following: Level 1, imitation; Level 2, position discrimination; Level 3, visual discrimination; Level 4, visual match-to-sample discrimination; Level 5, auditory discrimination; and Level 6, combined auditory and visual discrimination. The ABLA discrimination tasks have a consistent hierarchical pass-fail pattern in the order listed

above, in that an individual who has passed a particular level will be successful when taking the lower levels. Conversely, an individual who has failed a particular level will not be successful when attempting higher levels (Kerr et al., 1977; Martin, Yu, Quinn, & Patterson, 1983).

The ABLA is a potentially important assessment tool in the area of developmental disabilities because of its demonstrated predictive validity for certain educational, prevocational, and vocational tasks (Stubbings & Martin, 1995; Tharinger, Schallert, & Kerr, 1977; Wacker, Kerr, & Carroll, 1983). As an illustration of the application of the ABLA, successful completion of Level 4, visual match-to-sample, allows the instructor to make generalizations about the client's likely success in mastering other, everyday, visual match-to-sample tasks (e.g., sorting socks into pairs). Further, if a client passed Level 4 but failed when tested on Level 5, this would enable the instructor to make predictions about the client's ability to successfully complete every-day Level 3 visual discrimination tasks (e.g., left glove from right glove), and the client's inability to successfully complete a Level 5, auditory discrimination (e.g., being able to discriminate between the spoken words "stop" vs. "go").

Although the ability to classify daily tasks according to the basic discrimination level necessary to perform these tasks, in conjunction with ABLA test results with clients, provides trainers with a potentially powerful easy-to-use tool (Stubbings & Martin, 1998; Yu, Martin, & Williams, 1989), research to date has been conducted by individuals who have Masters and Doctorate degree levels of education. Direct-care service providers who might make use of the ABLA test, however typically have less education. In order to facilitate use

of the ABLA test to direct-care service providers, it would be desirable to have a self-instructional manual (SI-M) to teach direct-care service providers to reliably assess an individual's ABLA level, and to reliably categorize routine daily tasks according to the highest level of the ABLA test that the clients must pass in order to readily perform those tasks. The current research assessed the efficacy of such an SI-M.

The next three subsections will provide a detailed description of the ABLA test, a brief review of previous research on the ABLA test, and a brief review of research in the field of staff training in general.

<u>Detailed Description of the ABLA</u>

When Kerr et al. (1977) constructed the ABLA test they considered two factors: 1) the ease of its administration, and 2) the similarity of its test levels to training tasks in applied settings (Yu et al. 1989). The ABLA requires items that can easily be obtained. The test materials include a round yellow can and a square red box with dark red stripes. The manipulanda are a piece of irregularly shaped foam, a small yellow cylinder, and a small red cube with dark red stripes.

The ABLA is comprised of an imitation task and five separate, two-choice discrimination tasks (or levels) which are administered in a specific order. Each learning task involves a non-verbal motor response. The six levels were chosen because they were thought to encompass all the two-choice discrimination tasks encountered in curricula for severely mentally-handicapped individuals.

Prior to the client's attempt at a discrimination level, the trainer demonstrates the required response for that level. Following this demonstration, the trainer provides hand-

over-hand physical guidance for the correct response. The client is then given an opportunity for an independent response. The testing of a level begins after the client has demonstrated an ability to perform the task, at that level, once without assistance.

Clients are reinforced for each correct response with praise, and on an intermittent basis with edible reinforcement contingent upon correct responses. An error is followed by a demonstration, a physical guidance trial, and an opportunity for an independent response. This error correction procedure is repeated as necessary until the client demonstrates an independent correct response.

Mastery criterion for a particular level is achieved after eight consecutive correct responses (not including a correct response during error correction). A client is failed on a level if he/she makes eight cumulative errors (including errors on an independent-response trial after error correction). Following a pass or a fail, testing on that level is terminated. In considering a passing criterion, Kerr et al. (1977) wanted a stringent criterion. The passing criterion was chosen by Kerr et al. because the probability of eight consecutive correct responses occurring in a two-choice task with successive independent trials, by chance alone, is only once in 256 trials.

During the testing of Level 1 (Imitation), the red box is placed before the client. The teacher always models the correct response immediately prior to each trial. After four consecutive correct trials, the teacher continues without interruption with the exception of replacing the red box with the yellow can. Level 1 is mastered if the client can demonstrate eight consecutive correct responses (four with the red box and four with the yellow can).

For Level 2 (Position Discrimination), both containers, the yellow can and the red

box, are placed before the client. The containers remain in the same left-right position and the client is required to place the foam in the same container for each trial. An error is defined as placement of the foam into the incorrect container.

Level 3 (Visual Discrimination) is similar to Level 2 with the exception that the containers randomly change positions. The client must place the foam into the same container each time regardless of its position.

In Level 4 (Match-To-Sample Discrimination) the containers are placed in random positions for each trial as in Level 3. However, during this level, the manipulandum is either the cylinder which must be matched to the can, or the cube which must be matched to the box. A correct match involves the placement of the manipulandum into the matching container.

Level 5 (Auditory Discrimination), requires the placement of the two containers in stable positions, with the foam used as the manipulandum. The trainer verbally requests the client to place the foam into either the yellow can, which is stated in a long, drawn out fashion, or the red box, which is stated in a short, staccato manner. The requests are alternated randomly.

The final discrimination, Level 6 (Auditory-Visual Combined Discrimination) is identical to the previous Level 5 with the exception that the containers are randomly alternated from left to right. The client must respond to the verbal cue as well as attending to the location of the container.

Testing of each level occurs in the order described above. Testing is usually conducted for all six levels in approximately 30 minutes or less. For certain individuals,

testing may be conducted over several sessions as required, with only a few levels assessed during each session.

The ABLA has been demonstrated to have high test-retest reliability in the absence of formal training of clients between successive administrations of the test (Kerr et al., 1977; Martin et al., 1983). Martin et al. tested 42 mentally handicapped individuals on the ABLA and retested the same individuals three months later. The results demonstrated no changes in the assessment of the client's ABLA level from the initial test to the retest. The results of Martin et al. also suggest that high intertester reliability is obtainable. This information was provided as several individuals administered the test and the retest to the clients. In all cases there was complete agreement between the classification of the client by one tester on the first assessment, and the classification of the client by another tester on the second assessment.

Research on the ABLA

Hierarchical order of the test levels of the ABLA. The six levels of the ABLA have been demonstrated to have a hierarchical pass-fail order as indicated above. In other words, those individuals who pass a certain level on the ABLA will pass the lower levels, and those individuals who have failed one level of the ABLA will be unsuccessful at higher levels of the test. Kerr et al. (1977) demonstrated this consistent hierarchical pattern with 117 children and adults with degrees of retardation ranging from profound to mild. They found only six exceptions to this pattern. Martin et al. (1983) replicated these findings with 135 clients ranging from 17 to 60 years of age. The majority of these clients were reported to function at severely or moderately retarded levels. All but two of the clients conformed to

the hierarchical sequence of the six levels. Wacker, Kerr, and Carroll (1983) demonstrated this same consistency with 12 clients, ranging in age from 19 to 55 years. Six clients were functioning in the moderate range of mental retardation, five in the severe range, and one in the profound range. Wacker et al. (1983) concluded that the ordering effect held constant in the sample studied, and remained stable across subsequent assessment trials.

Predictive validity of the ABLA with educational, vocational analogue, and prevocational tasks. The ABLA has been used to predict performance on other tasks requiring similar discrimination skills. Meyerson (1977) determined that if a particular level of discrimination was demonstrated by a client in the ABLA, tasks thought to involve similar discrimination skills were easily mastered by that client. Conversely, tasks that involved failed discrimination levels on the ABLA were difficult to teach even after hundreds of trials using standard prompting and reinforcement procedures. Tharinger et al. (1977) studied the use of the ABLA tasks to predict classroom learning in mentally retarded children. Participants were 11 children, 4 to 14 years of age, who had been classified as mildly to profoundly retarded. The study revealed that 83% of a total of 72 predictions were confirmed. Almost half of the 17% of the failed predictions were due to one child who acquired the relevant ABLA discrimination skill part way through the study. In another study Wacker et al. (1983) assessed ABLA discrimination skills as a predictor of performance on analogue prevocational tasks with institutionalized developmentally disabled clients. Of the nine clients who participated, the results of the assessment errorlessly predicted the performance of each client during every condition.

Stubbings and Martin (1995) investigated whether performance on the ABLA test

could reliably predict the ease with which clients could learn to perform prevocational tasks. Participants included nine clients with an age range of 7 to 36 years, and with diagnoses from mildly to profoundly retarded. Three of the clients' highest ABLA level passed was Level 2 (motor group), three of the clients' highest ABLA level passed was Level 4 (visual group), and three of the clients' highest ABLA level passed was Level 6 (auditory group). Six tasks were chosen for training for which staff had shown 100% agreement regarding the predicted level of the ABLA that would be necessary for easy acquisition of that training task. The six selected tasks consisted of the following: two tasks that required motor discriminations; two tasks that required visual discriminations; and two tasks that required auditory discriminations. Each client received training on each of the six tasks. Training sessions were conducted twice a day, three days a week, and were administered in the sequence as indicated in the ABLA. The training procedure approximated the testing procedure of the ABLA, with the exception that the failure criterion adopted was much more stringent (120 total errors versus 8 total errors). This stringent failure criterion was followed to provide a convincing demonstration of the difficulty encountered when attempting a task involving a failed discrimination level. Results supported the predictive validity of the ABLA, with 50 of the 54 (or 92.5%) predictions confirmed. That is, participants who passed only up to Level 2 were able to learn only the motor tasks; participants who passed only up to Level 4 were able to learn the motor and visual tasks; and, participants who passed up to Level 6 were able to learn all the tasks.

Classification of training tasks according to the highest level of the ABLA needed to perform them. Stubbings and Martin (1995) examined the degree to which prevocational

training tasks in an applied setting could be reliably classified according to the basic discriminations assessed on the ABLA test. The clients included a rehabilitation counsellor, a psychologist with a Master's degree, and a graduate psychology student, all of whom had extensive experience working with developmentally disabled persons. Each of the participants was classified as an expert regarding the ABLA by meeting a certain set of criteria: a minimum of 20 hours studying descriptions of each of the ABLA tasks and scoring criteria; a minimum of 10 hours observing clients being assessed on the ABLA; and personal experience administering the ABLA to a minimum of 30 clients.

Training tasks were selected and defined from a prevocational program at a residential training centre for developmentally disabled individuals. Tasks were chosen which the experimenter assumed adequately represented all the discrimination levels within the ABLA. The ABLA test was briefly reviewed with each of the experts; following this, the experimenter described each of the selected tasks. For each task, the judges individually and privately recorded what they believed was the highest discrimination level necessary for a developmentally disabled client to learn to perform the task with little difficulty.

Results indicated that there was 100% agreement between judges on 16 of the 19 tasks. Thus, experts in administration of the ABLA were able to reliably classify tasks from an applied setting according to ABLA levels that clients would need to pass in order to readily perform the tasks.

The ABLA test versus experienced staff for predicting client performance on training tasks. Stubbings and Martin (1998) examined the accuracy with which results from the ABLA test could be used as a predictor of learning performance of developmentally disabled

clients as compared to predictions made by experienced staff. The study consisted of three groups of participants.

The first group were 18 individuals with developmental disabilities. This group was comprised of three clients at each of Levels 1 through 4, one client at Level 5, and five clients at Level 6. (There were a disproportionate number of clients at Levels 5 and 6 to compensate for the fact that most individuals who passed Level 5 also passed Level 6.)

The second group of participants consisted of experienced staff who had worked with the clients mentioned above during five days per week for a minimum of eight months preceding the study. These individuals included six teachers with certified education certificates and four instructors with agency inservice training. These individuals had a mean length of experience of 8.4 years with developmentally disabled individuals.

The third group of participants were experienced staff who made predictions regarding the clients' ability to perform certain tasks based upon 30 minutes of interaction with the clients (the amount of time typically required to administer an ABLA test). This group consisted of seven certified teachers and five adult program instructors. The individuals in this group had a mean length of experience of 5 years with developmentally disabled individuals.

To select and assess training tasks, Stubbings chose 21 tasks across the levels of the ABLA and then asked two experts on the ABLA to independently indicate, for each task, the highest ABLA level needed for a client to learn that task readily. The experts agreed on 20 of the 21 tasks. Twelve of those tasks with total agreement (two tasks at each of the six ABLA levels) were then chosen to be included in the study.

Predictions of client performance on the 12 tasks based on ABLA test results were that a client who passed ABLA Level 1 would learn, within 120 training trials, only tasks rated as Level 1, that a client who passed ABLA Level 2 would learn only tasks rated as either Level 1 or Level 2, etc. Predictions of client performance on the 12 tasks by the first group of experienced staff were based on frequent contact with those clients. The teacher of each client was given a written description of a task and the training methods used to teach that task, and the teacher was asked to predict if the client would learn that task. Learning the task was defined as the ability to perform that task successfully on eight consecutive trials within 120 attempts. Predictions of client performance on the 12 tasks by the second group of experienced staff were based on allowing a staff member or teacher to spend 30 minutes with a client with whom s/he was unfamiliar. The teacher was permitted to use any materials or assessment devices desired, with the exception of the ABLA. The teacher was then asked to predict which of the training tasks that client could learn, given the training methods and definition of learning described for the other group of teachers.

The clients were then trained on all of the 12 tasks until a pass or failure criterion was met. The training procedures were similar to the assessment format of the ABLA. The results revealed that of the 216 predictions made by each of the three groups, 90% were confirmed on the basis of ABLA test performance; 81% were confirmed on the basis of the experienced teachers with frequent client contact; and 73% were confirmed on the basis of 30 minutes of interaction. These results were highly statistically significant, and indicate that the ABLA was a significantly better predictor of students' ability to learn specific tasks than either group of experienced teachers.

The above results clearly indicate that a client's performance on the ABLA test can reliably predict the ease or difficulty that clients will experience in learning various training tasks. However, before the ABLA test is widely adopted for use by staff in training facilities for developmentally disabled persons, a practical question must be addressed.

Teaching Assessment Procedures to Direct-care Service Providers

A practical question concerns the most efficient way to teach direct-care service providers to administer the ABLA test reliably to clients, and to reliably categorize training tasks according to the highest ABLA level needed for clients to perform them. Such actions are prerequisite for front-line staff to effectively match the learning abilities of clients to the difficulty of training and/or work tasks. To date, the description of procedures for administering the ABLA test most commonly used by researchers is the original description contained in the monograph issue of *Rehabilitation Psychology* published by Kerr and colleagues (1977). However, a procedural description in an academic journal may not be the most effective vehicle for instructing direct-care service providers on how to follow such a procedure.

Approaches to teaching direct-care service providers include seminars, workshops, conferences, and training manuals. However, there are several disadvantages to such traditional didactic approaches. For example, seminars, workshops and conferences incur considerable expense for both registration and staff time. Staff are required to register at times when the conference or workshop is offered, frequently causing work-scheduling difficulties. On-site presenters are an alternative to avoid travel time and expense, however, presenters' fees are often expensive and inaccessible to rural and more remote communities.

On the other hand, there are numerous advantages of having an effective SI-M on site. Some of these advantages include: availability of training in rural communities where professional consultation may be limited; availability of training in settings with few direct-care service providers, such as foster homes or parental homes; the ability for staff to self-educate at times that are most convenient to schedule; and mastering techniques within the setting where those techniques will be used, which may enhance generalization of skill acquisition.

A literature review of research on methods for teaching direct-care service providers how to accurately use behavioral assessment instruments yielded very little information. Although a number of studies examined characteristics of effective training programs for teaching intervention skills to direct-care service providers, a literature review of PsychLit from 1988-1998 using the descriptors "staff training and behavioral skills," "staff training and developmental disability," "staff training and behavioral assessment," and "staff training and self-instruction," revealed only one study (Morch & Eikeseth, 1992) designed to teach direct-care service providers how to accurately use behavioral assessment instruments.

Morch and Eikeseth (1992) compared the effects of training in behavioral assessment and treatment versus training only in treatment on client and staff behaviors. Participants were 62 clients with moderate to severe developmental delays and 62 staff members. Staff training consisted of a 12-hour course based on The Behavior Assessment and Training Manual. This manual taught staff how to: develop treatment programs; select target behaviors for clients and assess clients' performance of these behaviors; develop a prompt-fading procedure for clients' behaviors; reinforce clients' behaviors; and monitor clients'

improvements. For comparison, a 12-hour Treatment Only course was developed. The

Treatment Only course taught staff how to provide correct S^D's, use reinforcers, use

prompts, fade prompts, use shaping, determine clients' target behaviors, and individualize

treatment programs for clients. Results illustrated that although staff training in behaviorally

oriented treatment and assessment did not produce greater improvement in the behavior of

clients and staff than training in treatment alone, there was clear evidence that both clients

and staff improved following training. Further, the authors suggest that future research

should explore the efficacy of spacing training in assessment as opposed to massed

presentation of information.

Morch and Eikeseth's (1992) study differs from the present study in two fundamental

ways. First, their manual focused on both assessment and training techniques for individuals

with developmental disabilities, whereas the present study focused on assessment alone.

Second, Morch and Eikeseth's study did not attempt to evaluate the manual as a self-

instructional tool. The detailed description of the actual training components was very

limited. Although it appears that training was based predominantly on the manual, there was

no mention that training was exclusively self-instructional.

Further review of the literature revealed two additional studies that are directly

relevant to the present study (Pallotta-Cornick & Martin, 1983; Yu, Martin, Hardy, Leader

& Quinn, 1985). Both studies evaluated SI-Ms with direct-care service providers, and the

later examined the efficacy of an SI-M on a behavioral assessment tool.

Pallotta-Cornick and Martin (1983) evaluated a staff training manual for improving

work performance of individuals with developmental disabilities in a workshop setting. The

SI-M outlined a production supervisory strategy (PSS) to help staff supervise employees with developmental disabilities, and the SI-M was introduced to staff in a multiple-baseline design across three sheltered workshops. The SI-M incorporated the components of the PSS, recommendations for implementing the PSS, and prompts for data recording and graphing. Staff were provided with a copy of the manual and asked to read and study the manual, then discuss among themselves how they might use the manual to facilitate implementation of the PSS. Results indicated an average hourly production increase for 77 of the 80 clients compared to baseline levels, with an average increase for all clients of 68%. Thus, the PSS was effectively implemented by staff after studying the SI-M.

Yu et al. (1985) developed an assessment system, called the Objective Behavioral Assessment (OBA), for assessing a variety of life and vocational skills of individuals with developmental disabilities. The OBA is based on precisely described, observable behavior and is administered as a direct testing and/or questionnaire rating device. Yu et al.'s study also encompassed an SI-M to teach direct-care service providers how to use the OBA accurately. Field testing of the OBA SI-M involved 13 participants reading the manual and completing exercises during a study session. Following the session, each participant conducted direct testing with a client on a wide range of behaviors. Two observers simultaneously scored the performance of the clients and the number and types of errors made by each participant during direct testing. Results indicated that following less than two hours (mean = 1.5 hours) studying the manual, all participants scored 90% or better on a final review exam, agreed with the primary observer on scores attributed to clients 84% of the time, and made an average of 0.37 errors per testing opportunity. Thus, the SI-M for

teaching service providers how to administer the OBA appeared to be an efficient, cost-effective staff training technique.

Although the studies by Morch and Eikeseth (1992), Pallotta-Cornick and Martin (1983), and Yu, et. al. (1985) are the only directly relevant studies to the current research, there has been considerable research on procedures to teach behavioral principles and procedures to direct-care service providers responsible for instructing individuals with developmental disabilities. Before describing the studies on the SI-M for the ABLA test, some research on the efficacy of training packages for direct-care service providers of developmentally disabled persons will be briefly reviewed.

Research on the Efficacy of Training Packages for Direct-care Service Providers of Persons with Developmental Disabilities

A number of studies reviewed by (e.g., Jahr, 1998) have described components typically used in teaching staff training skills, behavioral skills, and behavioral assessment of individuals with developmental disabilities. Typical components include the following: (1) instructional procedures (e.g., lectures, discussions, videotapes, and written and/or verbal information); (2) role-playing; (3) modelling; (4) oral or written feedback; (5) self-management (e.g., setting daily goals, monitoring own data, and graphing data); (6) rehearsal; (7) out-of-class assignments; (8) sessions in the natural environment; (9) a self-instructional manual (with unspecified training components); (10) group training; (11) training of multiple exemplars; (12) written program description; (13) praise; and (14) training on how to provide staff training. Whereas most of these components have been shown to be effective when used alone, staff training usually involves a number of these

components. Although none of the studies reviewed by Jahr (1998) were concerned with directly evaluating an SI-M, it may nevertheless be informative to review the procedures used in several studies that evaluated the effectiveness of various approaches to training direct-care service providers.

Parsons, Reid, and Green (1996) developed a training program designed to teach basic behavioral training skills to staff working with individuals with developmental disabilities. There were four teaching skills taught to the staff: correct order, correct prompt, correct reinforcement, and correct error correction. The training program consisted of an introduction to the program and rationale for its use; a written prequiz; videotapes describing the teaching skills; roleplaying; out-of-class assignments; a written postquiz; and on-the-job sessions in which the experimenter observed staff teaching students at the work site. Parsons et al. (1996) found the multicomponent training package to be effective for increasing the percentage of correct teaching behaviors demonstrated by the staff, and increasing staff verbal skills.

In another study, Shore, Iwata, Vollmer, Lerman, and Zarcone (1995) examined the efficacy of pyramidal staff training in the implementation of behavior-reduction procedures. Supervisors were taught how to instruct direct-care service providers, who in turn were taught to treat self-injurious behavior of eight residents diagnosed as functioning in the profound range of developmental disability. Supervisor training consisted of an initial phase that provided training in data collection, calculation, and review of the intervention, a second phase in which supervisors administered the intervention to clients while the research staff provided assistance and feedback, and a third phase that instructed the supervisors with

respect to training of direct-care service providers. The results following pyramidal training intervention with supervisors revealed noticeable improvements in direct-care service providers behaviors and concurrent decreases in the residents' inappropriate behavior. A control condition involving traditional inservice training showed negligible improvement in any of the target behaviors even when augmented by additional information on program development and the use of videotaped demonstrations.

Smith, Parker, Taubman, and Lovaas (1992) conducted two studies that investigated how well staff could learn a number of behavioral techniques to teach self-help, language and cognitive skills, and then generalize these behavioral techniques to group home settings. In the first study assessing the ability of staff to learn behavioral techniques, 31 staff participated in a 1-week training workshop on using behavioral techniques. Eighteen staff who received no training were assigned to a comparison group. During the week-long workshop, staff received one day of lectures on basic behavioral principles, and the remaining four days were spent role-playing with instructors, watching videos of instructors teaching clients, directly observing instructors teaching clients, and finally, teaching clients on their own and receiving feedback. Following training, there was no improvement in the techniques of the staff in the comparison group. However, the experimental group now correctly used behavioral procedures during one-to-one teaching one-third of the time, and their clients responded correctly about the same amount of the time. In addition, they used the correct procedures during role-playing about 50% of the time. The second study assessed how well these behavioral skills could be generalized to a group home setting. Results indicated that there were no significant differences between pre- and post-workshop

assessments in terms of staff presence, staff interaction, client interaction with others, and self-stimulation.

In order to evaluate the effectiveness of instructional strategies used to teach behavioral training and assessment skills to direct-care service providers working with individuals with developmental disabilities, the studies reviewed previously had two standard elements. First, there was a mechanism to directly assess knowledge, such as an oral or written quiz. Second, there was a method of measuring the participants' ability to apply their knowledge, such as direct observation of the application of behavioral techniques when the participants were assessing or training clients.

A field test of an SI-M to teach direct-care service providers the knowledge and skills needed to reliably use the ABLA test, therefore, should assess: a) the amount of time staff are required to invest to become proficient at ABLA administration and task classification; b) how knowledgeable staff are of ABLA testing conditions and data recording procedures; c) whether staff can administer the ABLA to individuals with developmental disabilities; and ultimately, d) how closely staff can match the results, regarding ABLA classification of individuals and tasks, produced by an expert on the ABLA test.

Results from a pilot study conducted by DeWiele and Martin (1996) suggested the viability of an SI-M on the ABLA test to teach direct-care service providers the knowledge and skills needed to reliably use the ABLA test. The current research tested the SI-M for the ABLA test.

Statement of the Problem

This research included four studies to assess an SI-M developed by DeWiele and

Martin (1998, see Appendix A) for instructing individuals about the ABLA test. Azrin's strategy of applied research (1977) suggests that a new treatment should be compared to the best available alternative treatment. Researchers have typically used appendices from the monograph issue of *Rehabilitation Psychology* (Kerr and others, 1977) to obtain information for administering the ABLA test. The first study, therefore, compared that information to the SI-M for teaching undergraduate students about the ABLA test. Although the results of Study 1 clearly favoured the S-IM, the S-IM was not particularly effective for teaching participants how to classify training tasks according to the highest levels of the ABLA that a client would need to pass in order to perform those tasks. Therefore, following Study 1, the S-IM was revised.

The second study then examined how well another group of undergraduates who had studied the revised SI-M could classify training tasks according to the levels of the ABLA. The third study field tested the SI-M for teaching five direct-care service providers to assess reliably clients' abilities on the ABLA test, and how to classify reliably daily tasks according to the levels of the ABLA. Although the participants mastered the ABLA after studying the S-IM, the study time required to do so was considered excessive. Therefore, following Study 3, significant manual revisions were made. The fourth study field tested the final version of the manual for teaching four direct-care service providers and two volunteers about the ABLA test.

Study 1

A Comparison of A Self-Instructional Manual

Versus the Kerr et al. (1977) Information Package

for Teaching ABLA Administration and Task Classification to Undergraduates

Setting and Participants

This study was conducted in a lecture room, containing several tables and chairs, at the University of Manitoba, Winnipeg, Manitoba. The participants were 21 undergraduate university introductory psychology students who participated in the research for partial course credit. None of the students had any prior experience with the ABLA. Six additional undergraduate psychology university students served as confederates by role-playing developmentally disabled persons who were "tested" by the 21 participants using the ABLA test.

Materials

SI-M. The manual (see Appendix A for the final revised copy) consisted of 1) a general introduction to the ABLA; 2) guidelines for using the ABLA; 3) guidelines for testing specific ABLA levels; 4) information on classifying training tasks according to the levels of the ABLA needed to perform those tasks; and 5) tips for task classification according to the levels of the ABLA. Study questions and answer keys were inserted throughout the manual to assist the students in mastery of the content of the SI-M. The manual was written at a difficulty level of Grade 8.8 as judged by the readability statistics within the Ami Pro computer program: Flesch Reading Ease Grade Level.

As indicated in the introduction, the original ABLA test contained six levels. All six

levels were described in the SI-M used in Studies 1, 2, and 3. However, in six studies

(DeWiele & Martin, 1996b; Kerr et al., 1977; Lin, Martin, & Collo, 1995; Martin et al.,

1983; Stubbings & Martin, 1998; Walker, Lin, & Martin, 1994) involving 197 clients who

passed Level 5, all but 8 of those clients also passed Level 6. In other words, 96% of a

large sample of individuals tested who passed Level 5 also passed Level 6. Therefore, in the

final version of the SI-M shown in Appendix A and used in Study 4, Level 5 of the ABLA

was deleted.

Information Package (IP). The information package (see Appendix B) from Kerr et

al. (1977) contained a brief introduction and some core research findings summarized by the

author to provide a framework within which to present the information, pages 95-97 from

Kerr et al. (1977) describing the levels of the ABLA; a brief description of the main research

findings about the ABLA; and pages 180-190 from Kerr et al. consisting of the data

recording form, passing criteria, and general instructions for test administration, respectively.

Comprehension Exam. A general comprehension exam was used to assess

participants' knowledge of ABLA testing procedures. The exam contained 21 short-answer

and multiple-choice questions. There were no time constraints for completing the exam.

(The original version of this exam was identical to the final version administered in Study 4,

with the exception that two questions on Level 1 were adjusted, and three questions were

adjusted to address the revised data recording form. See Appendix C for the final revised

copy.)

Speed Exam. This exam assessed how quickly and accurately participants responded

to questions about the ABLA. When administering the ABLA, the tester must be able to

respond quickly and appropriately to reactions of the testee. The speed exam was designed to assess the ability to do so. The exam consisted of 31 short answer and multiple-choice questions that were to be answered within 20 minutes. (The original version of this exam was identical to the final version administered in Study 4 with the exception that two questions on Level 1 were adjusted to reflect the changes to that level. See Appendix D for the final revised copy.)

Task Classification Exam. A task classification exam was used to assess participants' ability to reliably classify training tasks according to the highest ABLA level necessary for clients to readily perform them. This exam consisted of a description of 12 training tasks compiled from programming and residential areas within the Manitoba Developmental Centre (MDC, described below), and reliably classified by experts (as defined by Stubbings & Martin, 1995) on the ABLA test. Some of the tasks had subcomponents, so that participants were required to classify a total of 30 task components. (The original version of this exam was identical to the final version administered in Study 4 with the exception that two task-steps were deleted from one question, two questions were supplemented by pictures, and questions 7-12 were added. See Appendix E for the final revised copy.)

Procedure

The 21 participants were randomly assigned to either the SI-M group (11 participants) or the IP group (10 participants). The two conditions were applied concurrently, in three experimental blocks. Three experimental blocks were run due to participant availability and roleplaying scheduling. In each of the first and second experimental blocks there were four participants assigned to the SI-M Condition and four participants assigned to the IP

Condition, for a total of eight participants per block. In the third block there were three participants assigned to the SI-M Condition and two participants assigned to the IP Condition, for a total of five participants.

In the initial session of each block (approximately three hours in duration) the participants were given either the SI-M or the IP, and were instructed to study the material while remaining in the room (see Appendix F for an example of the session instructions). In the last 45 minutes of the session, both the comprehension exam and the speed exam were administered to the participants in each group as a probe to determine their relative progress. During the second session of the block (also approximately three hours in duration), participants were once again instructed to study the respective materials, and they then retook the comprehension exam and the speed exam.

During the third session (approximately 1 and 1/2 hours in duration) all participants were required to administer the ABLA individually to three confederates who role-played an individual with developmental disabilities. The roleplaying confederates had received training in role-play procedures prior to the commencement of the study. The students had been taught to follow a coded script for responding correctly or making errors across trials on the ABLA, to control for variation across participants and between conditions. Thus, when a participant from the SI-M group attempted to assess a confederate who was role-playing a client who performed at a particular ABLA level (such as Level 3), and when a participant from the comparison group attempted to assess that same confederate, the confederate followed the same pattern of correct responses and errors in both cases. Each confederate portrayed an individual capable of passing one level of the ABLA. Thus, all

participants from each of the two conditions tested confederates capable of passing the same three levels of the ABLA. During the five minutes prior to the formal test administration, all participants were provided with an opportunity to practice with the testing materials and one of the confederates. No feedback was given to the participants during this practice opportunity.

The levels of the ABLA assessed were counterbalanced across the three groups of participants such that for the first group of 8 participants the confederates role-played individuals capable of passing Levels 1, 3, or 5; for the second group of 8 participants the confederates role-played individuals capable of passing Levels 2, 4, or 6; and for the last group of 5 participants the confederates role-played individuals capable of passing Levels 1, 4, or 6, the levels on which the participants in the first two blocks made the most procedural and scoring errors.

In the fourth and final session (approximately three hours in duration) the participants were requested to review and study the respective materials once again, while remaining in the lecture room. Prior to the session's completion, the exam on task classification was administered to the participants in each group.

Reliability

Interobserver reliability (IOR) regarding the scoring of individual trials during ABLA testing of the roleplayers was assessed for four of the participants in each of the SI-M and IP conditions. To assess IOR, both the participant and two additional observers recorded each trial that the roleplayer completed as either correct or incorrect on the data recording form (see Appendices A and B). Following administration of the test, the total number of trials

upon which the two observers agreed was divided by the total number of trials and multiplied by 100%. To assess whether a participant was actually scoring individual responses correctly on the data recording form, the total number of trials upon which the participant and an observer agreed was divided by the total number of trials and multiplied by 100%.

Procedural reliability (POR) with respect to whether a participant followed the correct testing procedure was determined by having two observers, independent of the participant, complete a procedural reliability checklist (see Appendix G) during the first ten trials of each level of the ABLA assessment. To assess the POR, both observers recorded whether the participant followed the necessary steps in the procedure. Following administration of the test, the total number of steps upon which the observers agreed that the participant followed the procedure was divided by the total number of steps and multiplied by 100%.

Social Validation

A five question Consumer Satisfaction Questionnaire was provided to the participants upon completion of their assigned block to determine their view of the benefit of the manual that they were assigned (see Appendix H).

Results of Study 1

Comprehension Exam

The participants in the SI-M group demonstrated knowledge of content with respect to general questions about the ABLA, with an average score of 92% on the Comprehension Exam following Session 2. In comparison, the individuals in the IP group scored an average of 66% on the Comprehension Exam. (See Table 1 for individual and group exam scores.)

Table 1

Study 1. Individual Data and Group Means for the

Comprehension Exam

SI-M Group	IP Group
82%	50%
100%	46%
96%	75%
100%	79%
97%	58%
97%	71%
94%	48%
74%	58%
84%	81%
100%	94%
87%	-
Mean: 92%	66%

Speed Exam

Participants in the SI-M group had an average score of 79% on the Speed Exam following Session 2. In comparison, the individuals in the IP group scored an average of 59% on the Speed Exam following Session 2. (See Table 2 for individual and group exam scores.)

Classification of Roleplaying Confederates at Appropriate ABLA Level

Participants in the SI-M group were able to correctly classify confederates role-playing individuals at particular ABLA levels 94% of the time, on average. In contrast, the individuals from the IP group were able to correctly classify role-players 80% of the time on average. (See Table 3 for individual and group results).

Accuracy of Administering the ABLA Test

IOR was calculated on a trial-by-trial basis for all three assessments completed by four of the participants within each experimental condition to assess participants' ability to reliably observe and record the testees' performance on individual trials. Mean agreements of 99% and 66% were found for the SI-M and IP Conditions respectively, with respect to whether an observer agreed with the participants' recording of trials as either correct or incorrect (see Table 4). POR measures, calculated to assess if participants correctly followed the administration procedures, revealed means of 85% and 68% for the SI-M and IP Conditions, respectively. (See Table 5 for individual and group results).

Table 2

Study 1. Individual Data and Group Means for the Speed Exam

SI-M Group	IP Group
92%	56%
92%	61%
92%	58%
86%	61%
75%	58%
86%	58%
83%	50%
36%	64%
71%	50%
87%	76%
69%	-
Mean: 79%	59%

Table 3

Study 1. Individual Data and Group Means on

ABLA Classification of Roleplayers

SI-M Group	IP Group
100%	67%
100%	100%
100%	100%
100%	67%
33%	67%
100%	100%
100%	67%
100%	67%
100%	100%
100%	67%
100%	-
Mean: 94%	80%

Table 4

Study 1. Individual Data and Group Means for IOR

SI-M Group	IP Group
100%	77%
95%	17%
99%	81%
93%	88%
Mean: 97%	66%

Table 5

Study 1. Individual Data and Group Means for POR

SI-M Group	IP Group
100%	67%
95%	65%
99%	79%
93%	66%
75%	60%
84%	75%
79%	24%
70%	72%
86%	97%
93%	76%
67%	-
Mean: 85%	68%

Classification of Tasks According to ABLA levels

Finally, participants in the SI-M group were able to reliably classify a list of typical training tasks presented to developmentally disabled individuals, according to the highest level of the ABLA that would be necessary in order to complete that task with relative ease, with an average agreement of 52% when compared to the task classification of an individual with extensive experience with the ABLA. This rather low score exceeded those individuals assigned to the IP Condition who yielded a mean of 43%. (See Table 6 for individual and group results).

Significance of Differences Between Group Means

The mean differences between the two groups were tested for the five variables including the Comprehension Exam, Speed Exam, ABLA Classification, POR, and Task Classification Exam, using two-tailed t-tests not assuming equal variances. When comparing the overall means between groups across these variables statistically significant differences between groups were obtained for three of the five measures excluding the ABLA Classification of roleplayers and the Task Classification Exam. (See Table 7 for the results of the t-tests). Although the difference between group means with respect to ABLA Classification of roleplayers was not statistically significant, the participants in the SI Condition yielded a mean of 94% accuracy compared to a mean of 80% yielded by the participants in the IP Condition.

Table 6

Study 1. Individual Data and Group Means on Task Classification

SI-M Group	IP Group
90%	60%
40%	30%
70%	50%
40%	30%
20%	70%
60%	60%
50%	10%
40%	40%
29%	47%
85%	26%
50%	-
Mean: 52%	43%

Table 7

Study 1. t-Tests Between Group Means

Dependent Variable	SI Group x̄ (SD)	IP Group x̄ (SD)	t	df	p
Comprehension Exam	91.909 (8.803)	66.000 (16.303)	4.468	13.547	<.001
Speed Exam	79.000 (16.474)	59.200 (7.421)	3.604	14.177	<.003
ABLA Classification	93.909 (20.201)	80.200 (17.041)	1.686	18.909	<.108
POR	85.546 (11.544)	68.100 (18.574)	2.555	14.790	<.022
Task Classification	52.182 (22.167)	42.300 (18.691)	1.112	18.885	<.280

Social Validation

With respect to social validity as measured by the Consumer Satisfaction Questionnaire, there was little difference between the two conditions. A mean positive endorsement of 4.2 and 4.0 (i.e., good) out of a possible 5 was yielded across items for the SI-M and IP Conditions respectively.

Study 2

Use of a Revised SI-M to Teach Task Classification to Undergraduates

Study 1 indicated that the S-IM was considerably more effective than the information package from Kerr et al. (1977) on all measures with the exception of the Task Classification Exam. However, both groups scored poorly on the task classification exam. Therefore, revisions were made to the section of the S-IM involving task classification. Revisions that were made included: adding pictures to illustrate some of the more complex tasks; adding additional clarification for the classification of tasks with multiple steps; and general wording changes to facilitate readability. Following these revisions, this portion of the manual was re-assessed.

Setting and Participants

The setting in this Study was identical to Study 1. Thirteen undergraduate introductory university psychology students participated for partial course credit. None of the students had any prior experience with respect to the ABLA.

Materials

The materials included Part I of the SI-M, up to and including p. 8, which provides an introduction to the assessment and some guidelines for using the ABLA. (The version of this introduction was identical to the introduction in the revised version of the SI-M in Appendix A, with the exception that the revised version contains some minor wording changes, the addition of a study exercise, and the omission of ABLA Level 5.) In addition, Part II of the SI-M, "Using the ABLA to Classify Training Tasks," was provided. (The version of Part II provided was analogous to Part II in the revised version of the SI-M in

Appendix A, with the exception that the revised version contains some minor wording

changes; an additional introductory paragraph; an additional paragraph providing clarification

on classification of tasks at Level 2 vs. Level 3; and the omission of information relevant to

Level 5.)

Procedure

The participants studied the portion of the SI-M described above for approximately 2

hours. Participants then completed the Task Classification Exam as in Study 1. In this

Study however, participants were given page 3 and the top of page 49 ("Important Questions

to Ask if You want to Classify Tasks Correctly") of the SI-M contained in Appendix A to

refer to while writing the exam. The provision of these pages during the Task Classification

Exam was considered appropriate as, in an applied setting, individuals administering the

ABLA and classifying training tasks would have the opportunity to refer to the SI-M.

Results of Study 2

The scores on the revised Task Classification Exam from the Supplementary Block

yielded a mean of 76% (see Table 8), representing a substantial increase from the previous

mean of 52% in the prior SI-M Condition.

Following this study, additional steps were taken to improve the task classification

section of the manual and the Task Classification Exam. First, the task classification section

was again reviewed and modified. Second, with respect to the Task Classification Exam, a

split-half analysis was conducted on the results of Study 2 whereby the five highest and the

five lowest scoring participants were selected for comparison of their respective test items.

Each test item was compared between the highest and the lowest scoring participants to

determine test construction error. Such an analysis enables an assessment of "poor" test questions. For example, test questions in which the higher-half scored incorrectly and the lower-half scored correctly would suggest the possibility of distracter cues in the question that were only attended to by the individuals in the higher-half. Moreover, this procedure allows test items which were consistently scored incorrectly by both halves to be identified and either omitted or clarified. A revision of the Task Classification Exam was again conducted in accordance with the results of the split-half analysis. Specifically, three test items were omitted and four test items were re-worded as a result of a 50% or higher participant error rate on these items.

Table 8

Study 2. Individual Data and Group Mean on Task Classification

Participant	Score
S1	61%
S2	67%
S3	67%
S4	67%
S5	76%
S6	79%
S7	88%
S8	88%
S9	88%
S10	91%
S11	76%
S12	70%
S13	70%
MEAN	76%

Study 3

Field Testing of a Revised SI-M for Teaching ABLA Administration and

Task Classification to Direct-Care Service Providers

<u>Setting and Participants</u>

The third study was conducted at the Manitoba Developmental Centre (MDC), a large

residential facility for the provision of care and training to individuals with developmental

disabilities. The residents living at MDC have a diagnostic range from borderline to

profoundly developmentally disabled. The participants in this study were five direct-care

service providers, employed at MDC, who agreed to participate following a brief description

of the study provided by their supervisors in team meetings. All participants had a minimum

of 2 years experience (range = 2-18 years) working with developmentally disabled

individuals. Two participants had some high school credits, one was a high school graduate,

and two had completed a post-secondary degree.

During the study, participants administered the ABLA to three undergraduate and

three graduate psychology students who role-played persons with a developmental disability,

and to six residents with developmental disabilities at MDC. The residents included one

individual at each of ABLA levels 1, 2, 3, 4, and 6, and a second participant at ABLA level

4. No Level 5's were included as there was no known individual classified at ABLA Level 5

at MDC (DeWiele & Martin, 1995; DeWiele & Martin, 1996).

<u>Procedure</u>

Five direct-care service providers were provided with the SI-M. This manual was

identical to the SI-M described in Study 1, with the exception of improvements made to the

section on task classification (described in Study 2) and revisions made prior to Session 5

(described in the following text under Session 5 of this study). There were six experimental

sessions in total. The general format of the first four sessions was similar to the description

of the sessions in Study 1.

Following each session the participants were requested to complete a time log to

record their total time spent studying, completing the exams, and administering the ABLA to

the confederates during the role-playing activities.

Session 1. Participants studied the SI-M for approximately 2.25 hours, and they then

completed the first comprehension exam (Comp. I) and the first speed exam (Speed I) as in

the SI-M Condition of Study 1, Session 1.

Session 2. Participants studied the SI-M for one hour. They were then given the

ABLA test materials and given the opportunity to practice administering the ABLA to each

other for 0.75 hours. Finally, as in the SI-M Condition of Study 1, Session 2, they once

again completed the comprehension exam (Comp. II) and the speed exam (Speed II).

Session 3. During the first part of Session 3, participants were provided with the

opportunity to once again break into smaller groups and practice administering the ABLA to

each other. Staff were requested to keep a record of this additional practice time. Each

participant then tested three confederates who role-played individuals with developmental

disabilities, with each confederate role-playing a different level of the ABLA. Across all of

the participants, all of the ABLA levels were assessed. Unlike Study 1, during the test

administration the participants were allowed to refer to the SI-M. The provision of the

manual during test administration was considered appropriate as it approximates the likely

behavior of other individuals administering the ABLA in an applied setting. A mastery criterion for procedural reliability was set at 95%. This criterion was established as it reflects a high degree of accuracy and has been demonstrated by individuals who have had considerable experience with the ABLA.

Session 4. The participants studied the materials once again, and then completed the first exam on task classification. The Task Classification Exam was as described in the Results section of Study 2. As in Study 2 on Task Classification, the participants were provided with page 3 and the top of page 49 ("Important Questions to Ask if You want to Classify Tasks Correctly") of the SI-M shown in Appendix A. A mastery criterion was established for the score on the Task Classification Exam of 90%. This criterion was established as it both reflects a high degree of accuracy and had been demonstrated to be achievable by experts on the ABLA (Stubbings & Martin, 1995).

As staff did not meet the mastery criterion for either procedural reliability or task classification during sessions three and four, they received an additional session to restudy the manual and be reassessed. Prior to this fifth session, the manual was once again revised. Specifically, a section was added which listed frequent errors that people make while they are testing (see p. 35 of Appendix A), and a "Summary of Steps to Follow When Testing" (see pp. 38-42 of Appendix A). The participants were alerted to these revisions and permitted to use these additional pages along with the manual during formal test administration.

Session 5 - Additional Session to Facilitate Mastery. Participants studied the revised manual for approximately one hour, and then retook the task classification exam. All

participants met the mastery criterion. They then practised administering the ABLA to each other for an additional one hour. They then repeated the ABLA testing of confederates who role-played different ABLA levels. All participants met the procedural reliability mastery criterion during the role-playing sessions.

Session 6 - Administration of the ABLA to Clients. After achieving mastery criteria in Session 5, participants were provided with an opportunity to administer the ABLA to residents at MDC. Two participants administered the ABLA to three individuals who had been assessed by an expert as passing up to and including ABLA Levels 1, 3, and 4, respectively. One participant administered the ABLA to three individuals who had been assessed by an expert as passing up to and including ABLA Levels 1, 3, and 6, respectively. One participant administered the ABLA to three individuals who had been assessed by an expert as passing up to and including ABLA Levels 2, 4, and 6, respectively. Finally, one participant administered the ABLA to three individuals who had been assessed by an expert as passing up to and including ABLA Levels 2, 4, and 6, respectively. Thus, each client was assessed three times by three different staff.

Reliability

To assess whether participants correctly followed the ABLA procedure while testing the role-playing confederates, sessions were videotaped and examined by an ABLA expert. The expert used a procedural reliability checklist to assess the first 10 trials of each ABLA assessment. To obtain a POR score, the total number of steps upon which the expert recorded that a participant followed the procedure was divided by the total number of steps on the checklist, and multiplied by 100. Although only one expert was available to assess

POR, the opportunity to replay the videotape minimized the likelihood of errors. In addition to POR, inter-tester reliability with regard to the ABLA classification of the residents by participants was assessed by comparing the ABLA level of a resident as determined by a participant to the ABLA level of that resident as determined by an expert on the ABLA.

Results of Study 3

Comprehension Exam

Following Session 2, the participants demonstrated knowledge of content with respect to general questions on the ABLA, with an average score of 92% on the second Comprehension Exam (Comp. II). (See Table 9 for individual and group results.)

Speed Exam

Following Session 2, participants demonstrated knowledge of content with respect to specific questions on the ABLA regarding testing and data collection, with an average score of 72% on the second Speed Exam (Speed II). (See Table 9 for individual and group results.)

Classification of Residents at Appropriate ABLA Level

The results of Session 6 indicated that Participants 2, 3, and 4 matched the ABLA classification of residents determined by the expert, on all three assessments (see Table 10). Participants 1 and 5 matched the ABLA classification of residents determined by the expert on two of the three assessments (see Table 10).

Table 9

Study 3. Participants' Scores on Exams

EXAM SCORES						
Participant	**Comp. I**	**Comp. II**	**Speed I**	**Speed II**	**Task Classification**	
					1	**2**
S1	90%	93%	53%	78%	80%	100%
S2	79%	93%	25%	64%	70%	90%
S3	83%	97%	64%	67%	70%	97%
S4	93%	93%	72%	67%	80%	97%
S5	86%	83%	86%	83%	73%	93%
MEAN	86%	92%	60%	72%	75%	95.4%

Table 10

Study 3. Classification of Residents According to ABLA Levels

By An Expert and Study 3 Participants

Residents' Level as Assessed by Expert	Residents Level as Assessed by Participants				
	S1	S2	S3	S4	S5
Roberta 1	*2	1	1		
Mark 2				2	2
Luke 3	3	3	3		
Gerry 4					*2
Kate 4	4	4		4	
James 6			6	6	6

*   Discrepant classifications are marked with an asterisk.

Accuracy of Administering the ABLA Test

POR measures calculated from Session 3 data, which assessed if the participants correctly followed the administration procedures while testing roleplaying confederates, revealed a mean of 84.8% (see Table 11). The results of Session 5, conducted to facilitate

Table 11

Study 3. Participants' Procedural Reliability

During ABLA Administration

Participant	Trial 1	Trial 2	Trial 3
S1	91%	98%	-
S2	71%	95%	-
S3	84%	100%	-
S4	90%	100%	-
S5	88%	64%	100%
Mean	84.8	91.4	98.6

reaching mastery criteria, indicated that following approximately 2.5 hours of additional

practice time with a partner on how to administer the ABLA, POR scores increased to yield

a mean of 91.4% (see Table 11). Four of the five participants achieved the mastery criterion

of 95%. Participant 5 yielded a POR score of 64% as a result of a major procedural error

repeated throughout Level 2. Prior to Participant 5 administering the ABLA in an applied

setting, he was provided an opportunity to read the additional pages, "Summary of Steps to

Follow When Testing" (p. 38- 42 of the SI-M) for approximately 5 minutes and subsequently

test the author who role-played an individual with developmental disabilities. This additional

5 minute review was sufficient for Participant 5 to correct the procedural error in Level 2

and achieve the mastery criterion, yielding a POR score of 100%. The final mean POR

score of all participants obtained following Participant 5's correction was 98.6% (see Table

11).

Classification of Tasks According to ABLA Levels

The first Task Classification Exam administered in Session 4, measuring an

individual's ability to classify tasks according to the level of the ABLA needed to perform

that task, yielded a mean score of 75%. (See Table 9 for individual and group scores).

The results of Session 5, conducted to facilitate reaching mastery criteria, indicated that

following an additional one hour reviewing task classification related materials, all five

participants met the 90% mastery criterion with a mean score of 95.4% on the second Task

Classification Exam. (See Table 9 for individual and group scores).

All five participants spent a total of 9.5 hours of structured time reading the manual

and practicing with a partner. The additional practice time recorded by the participants

ranged from 0 to 1.5 hours with a mean of 0.5 hours. Thus, across all sessions, excluding

the time taking exams, testing a role-playing confederate, and testing actual residents,

participants spent an average of 9.9 hours (range of 9.5 - 11 hours) studying the S-IM and

practising with a partner. At the end of this time, all participants met the preset mastery

criteria.

Study 4

Additional Field Testing of a Revised SI-M for Teaching

ABLA Administration and Task Classification to Direct-Care Service Providers

Although Study 3 indicated that sufficient study of the S-IM by direct-care staff would

enable them to accurately apply the ABLA to test clients, and to accurately classify training

tasks according to the highest ABLA level needed for clients to perform them, the subjective

judgement of the researcher was that the length of study time necessary to achieve the results

of Study 3 could be shortened if additional changes and improvements were made to the S-

IM. Revisions that were made included: inserting frequent prompts throughout the manual

for readers to practice with a partner, the sections that had just been studied; simplification

of the data recording forms; changing the verbal cues provided by a tester to a testee when

assessing ABLA levels 1, 2, 3, and 4, so that they were simplified and consistent across

levels; making additional wording changes to the manual to make it more user-friendly, and

deleting ABLA level 5. Level 5 was deleted because, as indicated previously, 96% of a

large sample of individuals tested who passed level 5 also passed level 6. Following these

changes, Study 4 was conducted.

Setting and Participants

There were six participants in this study, and they were divided into three pairs for

some of the sessions. The first pair, two volunteers obtained by "word of mouth,"

completed all sessions at the University of Manitoba. One individual had completed high

school and the other had completed two years of university. Neither individual had any prior

experience with the ABLA. As in Study 1, a graduate psychology student role-played a

developmentally disabled client.

The other four participants were direct-care service providers employed at the St. Amant Centre who volunteered to participate. The St. Amant Centre is a residential and community resource centre for people with developmental disabilities in Winnipeg, Manitoba. Residents at St. Amant Centre range from being profoundly to mildly developmentally disabled. The participants from St. Amant Centre had a minimum of four years of experience working directly with individuals with developmental disabilities. Two participants had completed high school only, one participant had completed some university courses, and one participant had a post-secondary degree. During Study 4, participants administered the ABLA to 10 individuals with developmental disabilities who reside at St. Amant Centre.

Procedure

There were four sessions in total. As in Study 3, preset mastery criteria were used. Participants were required to score 90% on all three of the exams (comprehension, speed, and task classification).

Session 1. The two participants at the university read the manual for 1.75 hours and then completed the general comprehension exam and the speed exam. The four participants from St. Amant Centre read the SI-M for 2.25 hours. They then completed the comprehension exam. Due to time constraints, these four participants did not complete the speed exam at this time.

Session 2. The university participants read the manual for 0.41 hours, after which they completed the speed exam again. They then practiced administering the ABLA with

each other for 0.5 hours. The St. Amant participants reviewed the manual for 0.41 hours, and then completed the speed exam. After an additional 0.33 hours of studying the material, they retook the comprehension and speed exams. They were then given 0.67 hours to practice administering the ABLA to each other.

Session 3. The university participants practiced with each other for 0.75 hours, after which each participant tested one individual who role-played a developmentally disabled client. As in Study 3, during the test administration the participants were able to use the SI-M for reference. When not testing, participants kept a record of the time spent studying/practising.

During Session 3, the St. Amant participants each tested residents from the St. Amant Centre. While doing so, participants were permitted to refer to the SI-M. The participants tested residents who had been previously assessed by an expert on the ABLA test. One participant administered the ABLA to three individuals at ABLA levels 4, 4, and 6, respectively. One participant administered the ABLA to three individuals at ABLA levels 3, 6, and 4, respectively. One participant tested three individuals at ABLA levels 4, 3, and 3, respectively. One participant tested two individuals at ABLA levels 4 and 6, respectively. When participants were not testing residents, they were instructed to either study the manual or role-play with each other. Participants kept a record of the amount of time spent studying and role-playing.

Session 4. The university participants studied the SI-M for 0.87 hours and then completed the exam on task classification. The St. Amant participants studied the manual for an hour and then completed the task classification exam. Because mastery criterion was not

met for four of the six participants, these individuals studied the manual for an additional 0.5

hours, and then retook the task classification exam.

Reliability

Interobserver reliability (IOR) and procedural reliability (POR) were calculated in this

study as they were in Study 1.

Social Validation

The Consumer Satisfaction Questionnaire used in Study 1 was given to the

participants upon completion of the four sessions.

The opinions of individuals who are experts on the ABLA test as well as professionals

in the field of developmental disabilities were solicited concerning the relative merits of the

two approaches to teaching direct-care staff about the ABLA test: the use of the S-IM in

Study 4 versus the use of the Kerr et al. information package that was evaluated in Study 1.

That is, in Study 1, undergraduate students who studied the IP achieved certain test scores

and demonstrated a certain ability for assessing role-playing confederates on the ABLA test.

Direct-care staff in Study 4 achieved better results in a shorter period of time. The experts

were asked to judge whether or not the improved results with the S-IM in Study 4, as

compared to the results using the IP in Study 1, represented a clinically significant

difference. This judgement was rendered by five experts who had: spent a minimum of 50

hours studying the ABLA and relevant literature, administered the ABLA to a minimum of

16 clients, and worked as a professional in the field of developmental disability for at least

five years. The experts were provided with information on the results with the IP in Study 1

versus the results with the S-IM in Study 4, and were asked to compare the two studies on

the dimensions of: the length of study and practice time of participants; results obtained on the comprehension, speed, and task classification exams; and interobserver and procedural reliability scores while assessing confederates (in Study 1) versus confederates (for two participants in Study 4) and clients (for four participants in Study 4). For each dimension, the experts were requested to use a 7-point rating scale, where 1 indicated no clinically significant difference between the results from the two studies, and 7 indicated an important clinically significant difference. Also, because several test items had been deleted or changed on the task classification exam from Study 1 to Study 4, task classification results from the two studies were recalculated so that they were based only on questions that were common to both tests.

Results of Study 4

Comprehension Exam

Only two of the six participants were required to rewrite the Comprehension Exam after Session 1 because they had not reached mastery criterion. After Session 2 all participants demonstrated knowledge of content with respect to general questions on the ABLA, with an average score of 98% on the Comprehension Exam (see Table 12 for individual and group results).

Speed Exam

Five of the six participants were required to rewrite the Speed Exam because they had not reached mastery criterion. After Session 2, all participants demonstrated knowledge of content with respect to specific questions on the ABLA regarding testing and data collection, with an average score of 96% on the Speed Exam (see Table 12 for individual and group scores).

Table 12

Study 4. Participants' Scores on Exams

Participant	Comprehension Exam	Speed Exam	Task Classification Exam
S1	100% *	94% *	93% **
S2	97%	100% *	97% **
S3	97% *	99% *	93% **
S4	94%	91%	100% **
S5	100%	97% *	93%
S6	97%	97% *	97%
MEAN	98%	96%	96%

*   Score achieved after Session 2
**   Score achieved after retaking the exam

Classification of Clients at Appropriate ABLA Level

All participants were able to correctly classify residents/roleplayers 100% of the time when compared to the ABLA classification determined by an observer.

Accuracy of Administering the ABLA Test

IOR was calculated across all testing sessions and participants to assess the

participants' ability to reliably observe and record the clients' performance. The mean

agreement across all participants was 86%, ranging from 54% - 100% with respect to

whether the observer agreed with the participants' recording of a trial as either correct or

incorrect. (See Table 13 for individual and group results.) POR measures calculated to

assess if the participants correctly followed the test administration procedure revealed a mean

of 83% across all assessments, ranging from 69% - 93% (see Table 14).

Classification of Tasks According to ABLA Levels

Four out of the six participants were required to rewrite the Task Classification Exam

because they had not reached mastery criterion. After reaching mastery criterion, the mean

score on the Task Classification Exam was 96%. (See Table 12 for individual and group

results).

Total Time to Master the ABLA

The total structured time spent reading the manual and practicing with a partner was

5.17 hours for the four St. Amant participants, and 4.28 hours for the other two

participants. The overall additional studying/practice time recorded by all six participants

ranged from 0 to 1.5 hours, with a mean of 0.6 hours. Therefore, the average time spent

reading the manual and practising with a partner (not including test-taking time nor test

administration time with confederates or clients) was 5.42 hours (range of 4.28 hours to 6.67

hours).

Table 13

Study 4. Individual Data and Group Mean for IOR

Participant	Assessment 1	Assessment 2	Assessment 3
S1	54%	98%	-
S2	94%	100%	100%
S3	71%	62%	89%
S4	90%	100%	61%
S5	98%	-	-
S6	100%	-	-
MEAN	85%	90%	83%

Table 14

Study 4. Participants' Procedural Reliability

During ABLA Administration

Participant	Assessment 1	Assessment 2	Assessment 3
S1	87%	92%	-
S2	93%	69%	87%
S3	72%	82%	86%
S4	86%	69%	79%
S5	88%	-	-
S6	90%	-	-
MEAN	86%	78%	84%

Significance of Differences Between Group Means

Following Study 4, the mean differences between the IP Condition of Study 1 and the SI participants of Study 4 were tested for the four variables including the Comprehension Exam, Speed Exam, POR, and Task Classification Exam, using two-tailed t-tests not assuming equal variances. When comparing the overall means between groups across these variables, statistically significant differences between groups were obtained for all measures. (See Table 15 for the results of the t-tests).

Table 15

Study 4. t-Tests Between Group Means

Dependent Variable	SI Group $\bar{x}$ (SD)	IP Group $\bar{x}$ (SD)	t	df	p
Comprehension Exam	97.500 (2.258)	66.000 (16.303)	-6.015	9.567	<.001
Speed Exam	96.333 (3.327)	59.200 (7.421)	-13.696	13.344	<.001
POR	84.833 (5.231)	68.100 (18.574)	-2.670	11.115	<.022
Task Classification	95.500 (2.950)	42.300 (18.691)	-8.891	9.744	<.001

Social Validation

With respect to social validity as measured by the Consumer Satisfaction

Questionnaire, the mean was 4.4 out of five. This score indicates a relatively good

endorsement from the participants.

When experts were asked to compare the results obtained with the S-IM in Study 4

versus those obtained with the IP in Study 1, with a score of 1 indicating no difference and a

score of 7 indicating the highest clinically significant difference, the experts responded as

follows: the difference on the comprehension test was clinically-significant with a mean equal

to 6.6; the difference on the speed test was clinically-significant with a mean equal to 6.4;

and the difference on the task classification exam was clinically-significant with a mean equal

to 6.8. Further, when considering the combined results of the applied measures of the

ABLA (following the test procedures, scoring accuracy, and classifying individuals according

to the levels of the ABLA), experts rated the difference between the groups as clinically

significant with a mean equal to 5.6. Finally, on a question which asked the experts to

consider the overall results in addition to the time the SI-M group and the IP group invested

in studying the respective manuals, the experts recommended the SI-M for instructing direct-

care service providers about the ABLA with a mean equal to 6.8. (See Table 16 for

individual and group ratings on the survey questions.)

Table 16

Expert's Ratings on the Survey of Clinically-Significant Difference

Question	Expert's Rating out of 7*					
	S1	S2	S3	S4	S5	Mean
Difference between Comprehension Test?	6	6	7	7	7	6.6
Difference between Speed Test?	5	6	7	7	7	6.4
Difference between Task Classification?	6	7	7	7	7	6.8
Difference on applied measures?	6	6	7	5	4	5.6
Would you Recommend SI-M?	6	7	7	7	7	6.8

* A rating of 1 indicated that the results of Study 4 with the SI-M and Study 1 with the IP indicated no clinically significant difference, whereas a score of 7 indicated an important clinically significant difference.

Discussion

Efficient and effective matching of a developmentally disabled individual's ability to the demands of presented tasks is a crucial element of program design. A deficiency in this area may result in program participants who do not have the prerequisite skills for the tasks with which they are presented. Presentation of training and/or work tasks to clients that are above the clients' ABLA levels is likely to lead to a considerable waste of valuable training time (Stubbings & Martin, 1998). Moreover, a mismatch of the ABLA ability of clients and

ABLA difficulty of training tasks is likely to lead to increased aberrant behaviors by those clients (Vause, Martin, & Yu, 1998). It is therefore desirable to have an effective and efficient method for teaching direct-care service providers about the ABLA test.

Collectively, the four studies indicate that the S-IM is such a method. Study 1 demonstrated that the initial version of the S-IM was considerably more effective than an information package (from the monograph issue on the ABLA by Kerr et al.) for teaching undergraduate students about the ABLA, and how to apply it to assess role-playing confederates. Study 2 demonstrated that a revised S-IM effectively taught undergraduate students how to classify tasks according to the highest ABLA level necessary to perform them, and to do so with a reliability similar to that of experts on the ABLA test. Study 3 demonstrated that the revised S-IM effectively taught five direct-care service providers to meet mastery criteria on exams and on the application of the S-IM to assess actual clients after an average of approximately 10 hours of studying the S-IM and practising with a partner.

The intertester assessment in Study 3 illustrated that the participants were able to replicate assessment results of the expert, with respect to the highest ABLA level an individual is able to perform, on 13 of the 15 assessments conducted. The discrepancies observed on the two assessments which were not replicated appeared to be a function of the participants' inexperience in administration.

In the case of Roberta's assessment at ABLA Level 2 by S1, as opposed to ABLA Level 1 by the expert, S1 was observed to provide cues to Roberta inadvertently. For example, Roberta frequently tipped the containers over while attempting to place the foam

inside. To correct this situation, S1 stabilized the can in Level 2 - Position Discrimination, as opposed to stabilizing both the can (the target stimulus) and the box (the distracter stimulus). When S1 touched only the target stimulus immediately prior to the participant's response, the result was that the participant attended to the target stimulus and thus performed more correct responses, reaching the passing criteria. Throughout the testing of the same level by the expert, these inadvertent cues were not provided; therefore the participant did not attain the passing criteria for Level 2.

In the second instance, S5 classified Gerry at ABLA Level 2, as opposed to the expert's classification of Gerry at ABLA Level 4. For this discrepancy, the speed of testing was hypothesized to be a relevant variable. The pace of testing when Gerry was assessed by S5 was considerably slower than the pace established by the expert. The slower pace established by S5 was caused by providing Gerry with edible reinforcement following each correct response. Gerry required a significant amount of time to consume the reinforcement resulting in long intertrial intervals. Gerry would often emit errors following the long intertrial intervals; potentially not remembering how to perform the task. During Gerry's ABLA assessment by the expert, the assessment progressed rapidly. The expert observed the increased error rate following trials consequented with an edible, and therefore, discontinued the provision of edibles following correct trials. Further, Gerry's hearing was reported to be somewhat impaired. Therefore, the expert progressed rapidly with the assessment, providing no edible reinforcement, and using very loud praise. These administrative adjustments by the expert allowed the participant to perform to his highest potential.

Study 4, which also occurred in an applied setting, further demonstrated the efficacy

of the final version of the SI-M in teaching individuals how to administer the ABLA. In addition, revisions to the manual on the task classification section improved staffs' ability to correctly classify tasks according to the levels of the ABLA. Although staff were not required to achieve mastery criterion on procedural reliability prior to administering the ABLA to residents, a mean of 83% was obtained across assessments. In addition, all staff were able to correctly classify the residents according to their ABLA levels on 100% of the trials when compared to the classification determined by an observer. Overall the revised SI-M in Study 4 proved to be effective in teaching direct-care service providers skills in test administration and task classification, with the longest time any participant spent reading the manual and practicing with a partner being 6.67 hours.

As mentioned previously, with respect to social validity in Study 1, as measured by the Consumer Satisfaction Questionnaire, there was little difference between the two conditions. A mean positive endorsement of 4.2 and 4.0 (i.e., good) out of a possible 5 was yielded across items for the SI-M and IP Conditions respectively. These comparable ratings may be accounted for by a number of factors. First, the participants may have been influenced by demand characteristics of the Study. Second, as the two groups were only knowledgable of their respective conditions, there was no barometer for their comparison. That is, if the participants had been exposed to the alternate condition available, and then been requested to rate each condition, a greater discrepancy may have been yielded. Finally, the results clearly indicate that individuals' subjective feelings with respect to the efficacy of the manuals are not the best indicators. For example, some individuals in the IP condition may have attributed their poor test scores to their own cognitive inabilities as opposed to a

deficiency in the manual. For these reasons, more objective measures are essential. The social validation of the SI-M was therefore further attested to in Study 4 through the expert's Ratings on the Survey of Clinically-Significant Difference in which they recommended the SI-M with a mean rating of 6.8 out of 7.

Two limitations of the current research should be noted. First, although the S-IM in Study 3 and the revised S-IM in Study 4 effectively taught direct-care staff to use the ABLA test, it did so when studying the S-IM was accompanied by practice with a partner, the requirement of taking three exams (comprehension exam, speed test, and task classification exam), and with opportunities to apply the ABLA test (to a role-playing confederate or to a client) while being observed by an ABLA expert (even though the experts did not provide feedback). Therefore, use of the S-IM to instruct direct-care staff in agencies for developmentally disabled persons should be accompanied by these conditions.

Second, although this research demonstrated the SI-M's efficacy with respect to task classification, it did not target task analysis directly. That is, individuals who studied the manual were able to classify tasks according to the levels of the ABLA required to perform those tasks, when those tasks were presented to them in a step-by-step fashion, already analyzed into their individual steps by the expert. To further promote generalization to natural settings so that an individual could select a given task and subsequently classify that task according to the levels of the ABLA, some practice at breaking tasks down into sequential related components may be needed.

In his discussion of current issues in staff training, Jahr (1998) indicated that few studies have documented long-term effects of attempts to teach knowledge of behavioral

assessment and training techniques to direct-care staff working with developmentally disabled

persons, and that such skills acquired by staff in training programs are seldom transferred

beyond the training conditions to different programs, clients, and settings that were not a part

of the training. Future research on the S-IM might profitably address these issues.

References

Azrin, N.H. (1977). A strategy for applied research learning based but outcome oriented. *American Psychologist, 32,* 140-149.

DeWiele, L.A., & Martin, G.L. (October, 1995). ABLA assessment of training tasks in a large residence for persons with developmental disabilities. Presentation at the *4th Annual Conference on Research and Applications Related to Developmental Disabilities, sponsored by St. Amant Inc.,* Manitoba, Canada.

DeWiele, L.A., & Martin, G.L. (1996). Can the ABLA test help staff match training tasks to the abilities of developmentally disabled clients? *International Journal of Practical Approaches to Disability, 20(2),* 7-11.

DeWiele, L.A., & Martin, G.L. (1998). *A self-instructional manual for the ABLA test of developmental disabilities.* Winnipeg, Manitoba: University of Manitoba.

Ducharme, J. M., & Feldman, M. A. (1992). Comparison of staff training strategies to promote generalized teaching skills. *Journal of Applied Behavior Analysis, 25,* 165-179.

Feldman, M.A., Bowman, T., & Ducharme, J.M. (1980, May). *Generalized effects of feedback: Training multiple exemplars simultaneously through role-playing.* Paper presented at the sixth annual meeting of the Association for Behavior Analysis, Dearborn, MI.

Jahr, E. (1998). Current issues in staff training. *Research in Developmental Disabilities, 19,* 73-87.

Kerr, N., Meyerson, L., & Flora, J.A. (1977). The measurement of motor, visual and auditory discrimination skills. *Rehabilitation Psychology, 24,* [Monograph], 95-112.

Kerr, N., and others (1977). The measurement of motor, visual, and auditory discrimination skills in mentally retarded children and adults and in young normal children. *Rehabilitation Psychology, 24,* [Monograph], 87-206.

Lin, Y.H., Martin, G.L., & Collo, S. (1995). Prediction of auditory matching performance of developmentally handicapped individuals. *Developmental Disabilities Bulletin, 23,* 1-15.

Martin, G.L., England, G., Kaprowy, E., Kilgour, K., & Pilek, V. (1968). Operant conditioning of kindergarten class behaviour in autistic children. *Behaviour Research and Therapy, 6,* 281-294.

Martin, G.L., Yu, D., Quinn, G., & Patterson, S. (1983). Measurement and training of AVC discrimination skills: Independent confirmation and extension. *Rehabilitation Psychology, 28,* 231-237.

McDonald, L., & Martin, G.L. (1991). The ABLA test: A practical approach for assessing and teaching two-choice discriminations. *Exceptionality Education Canada, 1,* 95-114.

Morch, W., & Eikeseth, S. (1992). Some issues in staff training and improvement. *Research in Developmental Disabilities, 13,* 43-55.

Meyerson, L. (1977). AVC behavior and attempts to modify it. *Rehabilitation Psychology, 24 (Monograph Issue),* 119-122.

Pallotta-Cornick, M.A., & Martin, G.L. (1983). Evaluation of a staff manual for improving

work performance of retarded clients in sheltered workshops. *International Journal*

of Rehabilitation Research, 6(1), 43-54.

Parsons, M.B., Reid, D.H., & Green, C.W. (1996). Training basic teaching skills to

community and institutional support staff for people with severe disabilities: A one-

day program. *Research in Developmental Disabilities, 17* (6), 467-485.

Shore, B.A., Iwata, B.A., Vollmer, T.R., Lerman, D.C., & Zarcone, J.R. (1995).

Pyramidal staff training in the extension of treatment for severe behavior disorders.

Journal of Applied Behavior Analysis, 28, 323-332.

Smith, T., Parker, T., Taubman, M., & Lovaas, O.I. (1992). Transfer of staff training from

workshops to group homes: A failure to generalize across settings. *Research in*

Developmental Disabilities, 13, 57-71.

Stokes, T.F., & Baer, D.M. (1977). An implicit technology of generalization. *Journal of*

Applied Behavior Analysis, 10, 349-367.

Stubbings, V., & Martin, G.L. (1995). The ABLA test for predicting performance of

developmentally handicapped persons on prevocational training tasks. *International*

Journal of Approaches to Disability, 10, 12-17.

Stubbings, V., & Martin, G.L. (1998). Matching training tasks to abilities of people with

mental retardation: A learning test versus experienced staff. *American Journal on*

Mental Retardation, 102, 473-484.

Tharinger, D., Schallert, D., & Kerr, N. (1977). Use of AVC test tasks to predict classroom learning in mentally retarded children [Monograph]. *Rehabilitation Psychology, 24*, 113-118.

Vause, T., Martin, G.L. & Yu, D. (1998). Aberrant behavior of persons with developmental disabilities as a function of the characteristics of training tasks. Manuscript submitted for publication.

Wacker, D.P., Kerr, N.J., & Carroll, J.L. (1983). Discrimination skill as a predictor of prevocational performance of institutionalized mentally retarded clients. *Rehabilitation Psychology, 28*, 45-59.

Walker, J.G., Lin, Y.H., & Martin, G.L. (1994). Auditory matching skills and the Assessment of Basic Learning Abilities Test: Where do they fit? *Developmental Disabilities Bulletin, 22,* 16-26.

Yu, D., Martin. G., Hardy, L., & Quinn, G. (1985). Developing a behavioral assessment system for the mentally handicapped: A behavioral approach. *Canadian Journal for Exceptional Children, 1(4),* 117-123.

Yu, D., Martin. G., & Williams, L. (1989). Expanded assessment for discrimination learning with mentally retarded persons: A practical strategy for research and training. *American Journal on Mental Retardation, 94,* 161-169.

Appendix A

The Kerr Meyerson

Assessment of Basic Learning Abilities:

A Self Instructional Manual

Lorraine DeWiele & Garry Martin

University of Manitoba

March, 1998

Acknowledgements

TABLE OF CONTENTS

PART I

Assessing Individuals on

the ABLA Test

INTRODUCTION

A major difficulty in teaching basic skills to severely developmentally disabled persons is to decide what should be taught to whom. Why are some severely developmentally disabled individuals capable of performing a certain task while others of the same developmental level are unable to perform that task even after hundreds of attempts? Why are certain individuals successful at mastering some training tasks, yet unable to perform seemingly similar tasks even after hundreds of trials? How can teachers know which types of tasks an individual can readily learn to perform? Psychologists Nancy Kerr and Lee Meyerson devoted considerable time to the study of such questions. They noted that successful performance of many self-care, educational, and work-related tasks require the ability to imitate simple actions of a teacher, to recognize the difference between the positions of objects (position discriminations), between the appearance of objects (visual discriminations), and between various sounds (auditory discriminations). For example, for a person to be capable of a simple visual discrimination they must be able to recognize the difference between two sights, such as a picture of a bat verses a picture of a ball. For a person to be capable of a simple auditory discrimination they must be able to recognize the difference between two sounds, for example, the spoken words "bat" and "ball". If a person does not have the ability to make such visual and auditory discriminations, then tasks which require these abilities will be very difficult for that person to learn.

Kerr and Meyerson developed a practical, easy to construct, and easy to use instrument called the **Assessment of Basic Learning Abilities** test (**ABLA**; formerly called the AVC test) which measures the ease or difficulty with which an individual can readily and reliably learn to perform the position, visual, and auditory discriminations involved in many daily tasks. As indicated in the research papers listed in the bibliography, the ABLA test is an extremely useful tool for assessing and teaching many developmentally disabled individuals.

This manual is designed to provide "self-instruction" in the administration of the ABLA and its use for matching the difficulty of various training tasks to the learning abilities of clients. Study exercises are presented throughout the manual to assist you in achieving mastery of ABLA administration and task classification.

Who can use the ABLA?

The ABLA is a particularly useful measuring tool for individuals responsible for educating and caring for many profoundly developmentally disabled persons, most severely developmentally disabled persons, and many moderately developmentally disabled persons, all of whom are referred to as students or clients in this manual. For example, the ABLA may be helpful for parents who want to teach their developmentally disabled child how to carry out daily hygiene tasks, for direct-care staff teaching their clients how to follow simple instructions, and for rehabilitation staff teaching their students how to complete various tasks required in a job contract.

The Levels of the ABLA and What They Tell You

The ABLA is made up of five separate tasks (or levels) which are presented to a client in a specific order to assess the client's ability to readily learn those tasks. The first task is an imitation task. Each of the remaining tasks require a student to make the correct response when given two options (called two-choice discriminations). The tasks were chosen by Kerr and Meyerson because they were thought to reflect all of the two-choice discrimination tasks typically found in curricula for severely developmentally disabled individuals. Each level requires only that a student be able to put an item into a container (see Table 1). To help you obtain an overview of the ABLA, take a few minutes and carefully study Table 1 on the next page.

Study Exercise #1

Before reading further, study Table 1 until you can answer the following questions correctly. The answer key is provided on page 4 for your reference.

1. Each of the following tasks is an everyday example of one of the ABLA levels. Which level is each task?

Task	ABLA Level
a. Pairing up several actual objects with individual photographs of each of them?	_____
b. Taking turns stirring cake batter?	_____
c. Lining up at the door when a buzzer rings, and sitting in a desk when a bell rings?	_____
d. Putting pencils in a pencil box that is bolted to the desk?	_____
e. Locating the family car in the parking lot when it is parked in different places on different days?	_____

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d. Putting pencils in a pencil box that is bolted to the desk?	_____
e. Locating the family car in the parking lot when it is parked in different places on different days?	_____

Table 1

A Brief Description of ABLA Levels

LEVEL	TEST TASK	EVERYDAY EXAMPLES
Level 1 **Imitation**	When given a piece of foam, can the student imitate the teacher placing the foam into a can?	-Children playing Follow-the-Leader. -Rolling a ball from one person to the other.
Level 2 **Position** **Discrimination**	When presented with a yellow can and a red box in a stable position, can a student consistently place a piece of foam into the container on the left?	-Turning on the cold (vs. the hot) water tap. -Placing a fork on the left side of a plate when setting a table.
Level 3 **Visual** **Discrimination**	When presented with a yellow can and a red box, can a student consistently place a piece of foam into the can, even when the positions of the can and box are randomly alternated?	-Locating own printed name on the blackboard. -Finding a particular shirt in a closet when the location changes each time it is replaced.
Level 4 **Visual Match-to-Sample** **Discrimination**	When presented with a yellow can and a red box, can a student consistently match a small yellow cylinder to the can, and a small red cube to the box, even when the positions of the can and box are randomly alternated?	-Sorting socks into pairs. -Restocking a partially emptied salad bar. -Filling containers that are partly full.
Level 6* **Auditory-Visual** **Combined** **Discrimination**	When presented with a yellow can and a red box, can a student consistently place a piece of foam into the correct container when the teacher requests either "red box" or "yellow can", even when the positions of the can and box are randomly alternated?	-Responding appropriately to the spoken words 'Stop' and 'Go'. -Responding to requests such as 'Stand up' vs 'sit down'.

*Kerr, Meyerson, and Flora (1977) originally included level 5, auditory discrimination, which was the same as level 6 except that the yellow can and red box remained in the same position from trial to trial in level 5, rather than being randomly alternated from trial to trial as in level 6. However, in four studies involving 188 clients, all but 4 who passed the original level 5 also passed the original level 6. In other words, only 4 clients passed level 5 and failed level 6. Therefore the original level 5 has been deleted.

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┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│                          ANSWER KEY                               │
│                       Study Exercise #1                           │
│                                                                   │
│    a. LEVEL 4;  b. LEVEL 1;  c. LEVEL 6;  d. LEVEL 2;  e. LEVEL 3  │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
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As indicated in Table 1, The ABLA discrimination tasks are arranged from Level 1, least difficult, to Level 6, the most difficult. This is referred to as a difficulty hierarchy. An individual who has passed a particular level will be successful when tested on the lower levels of the hierarchy. Further, an individual who has failed a particular level will not be successful when attempting higher levels. As illustrated in Table 1, performance on the ABLA provides a clear indication of the kinds of daily training tasks the student will be able to perform with relative ease.

Consider, for example, the case of Jane, a developmentally disabled trainee in a job placement program in her home town. Jane often performs training tasks incorrectly. Sometimes she doesn't attempt the tasks at all, but simply stares at the teacher. Some of the staff believe that Jane is just "being difficult". Others believe that she doesn't understand instructions; and some staff think the tasks are just too hard for Jane.

John, one of the staff, decided to assess Jane on the ABLA. Jane passed the first four levels, but failed Level 6. How is this information useful?

At a basic level of understanding, Jane could 'see' the difference between two objects, such as the can and the box. John knows this to be true because independent of the left-right position of the can, Jane was able to place the foam into the can consistently when tested at Level 3 (see Table 1). However, Jane had difficulty telling the difference between two simple instructions. When presented with the auditory cue of either "yellow can" or "red box" (during the test at Level 6, see Table 1), Jane could not consistently place the foam into the correct container.

Of course, in everyday living, teachers seldom request students to complete tasks using boxes and cans, unless they are employed in a re-cycling depot! Therefore, this information is of value to the teacher only if it can be applied to typical training tasks presented to students. Fortunately, one of the most significant merits of the ABLA is that the student's test performance can be used to predict the type of daily tasks that a student will be able to learn with relative ease. This ability of ABLA test results to predict a student's performance on other tasks is called *predictive validity*.

Because Jane passed Level 3, for example, John knew that Jane could complete everyday Level 3 (visual discrimination) tasks, such as recognizing when vegetables are free from dirt, when washing them. Because Jane had passed Level 4, visual match-to-sample, John could predict that Jane would readily learn everyday, level 4 (visual match-to-sample) tasks, such as sorting silverware at a restaurant. On the other hand, because Jane failed level 6 (auditory discrimination), John knew that she would experience great difficulty mastering a level 6 task, such as being able to discriminate between the words "cream" versus "sugar" spoken by a customer in the cafeteria on the job site.

Study Exercise #2

Before reading further, study the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is provided on page 6 for your reference.

1.   The ABLA contains a simple _____ task and 4 _____-_____ discrimination tasks which are presented to the student in a specific order.

2.   Level 1 assess a client's ability to _____.

3.   Level 2 is a _____ discrimination.

4.   Level 3 is a two-choice _____ discrimination.

5.   Level 4 is a visual _____ to _____ discrimination.

6.   Level 6 is an _____ plus _____ combined discrimination.

7.   As a student moves from one level of the ABLA to the next highest level, the tasks increase in _____.

8.   If a student fails Level 3 of the ABLA, the student is likely / not likely to pass Level 4.

9.   If a student passes Level 3 of the ABLA, the student is likely / not likely to pass Level 2.

10.   Performance on the ABLA will / will not indicate how the student is likely to perform on other similar discrimination tasks.

11.   What was the difference between the original level 5 and level 6 on the ABLA test? _____

_____

12.   The original level 5 was deleted from the ABLA test because most clients who passed level 5 passed / failed level 6.

```
ANSWER KEY
Study Exercise #2

1. IMITATION; TWO-CHOICE. 2. IMITATE. 3. POSITION. 4. VISUAL.
5. MATCH; SAMPLE. 6. AUDITORY; VISUAL. 7. DIFFICULTY. 8. NOT
LIKELY. 9. LIKELY. 10. WILL. 11. FROM TRIAL TO TRIAL IN LEVEL 5,
THE CAN AND BOX REMAINED IN THE SAME POSITION; IN LEVEL 6,
THE CAN AND BOX ARE RANDOMLY ALTERNATED. 12. PASSED.
```

GUIDELINES FOR USING THE ABLA

The Testing Materials

All of the materials required for the ABLA can be easily constructed with everyday household items (see Figure 1 on the next page). Two containers are necessary to administer the ABLA, a yellow can and a red box (diagonal white stripes on the box are optional). In addition to these containers, there are three test objects which will be presented to the student during the assessment: a small piece of irregularly shaped foam that is neither red nor yellow in color, and that is approximately 5 cm in diameter; a small yellow wooden cylinder approximately 9 cm long and 3 cm in diameter; and a small red cube with dimensions of approximately 5 cm x 5 cm x 5 cm, the cube should have red and white stripes if the box is striped.

Stop!!

For best results, you should have the ABLA testing materials in front of you while studying the remainder of this manual. If your agency has already prepared test materials, we encourage you to have them in front of you. Otherwise, we suggest that you make the test materials before continuing to study this manual.

The Testing Environment

Ideally, you will have had some interaction with the student before the assessment. Unfamiliar faces can often cause unusual responses from the student, especially when the tester is requesting specific task demands. Similarly, it is desirable to administer the

assessment in a testing area that is commonplace to the student. The testing room should contain a flat surface or table upon which the assessment materials may be placed, and should be relatively free of distractions.

General Testing Procedures

The ABLA may be administered to an individual as early as 1 ½ years of age through to adulthood. Generally, the student is seated at a table in a chair directly across from and facing you. Alternate seating accommodations may be necessary for very young students or individuals who are confined to a wheelchair. The table surface should be clear with the exception of the testing apparatus needed for the particular level being assessed. Social reinforcement, for example, praise, is provided following each correct response. Edible reinforcement, for example raisins, peanuts, or juice, is provided on an intermittent basis. For example, following approximately every three correct responses you might give to the student a small piece of his or her favourite fruit to maintain his or her attention. On an empty chair beneath the table surface or in another location within your reach, you should place a variety of edible reinforcers, an extra pencil, and the testing materials not required for the level currently being assessed.

The test is administered in the order presented above beginning with Level 1 through to Level 6. Testing is usually conducted for all five levels in approximately 30 minutes or less. At any given level, the student will usually either pass or fail within approximately 30 trials. For certain individuals, testing may be conducted over several sessions as required, with only one or two levels assessed during each session.

Study Exercise #3

Before reading further, study the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is located on page 10 for your reference.

1. The two containers involved in the administration of the ABLA are a
    _____ _____ and a _____ _____.

2. The three test objects presented to the student throughout the ABLA test
    are a _____, a _____, and a piece of _____.

3. Ideally, the tester should be **known / unknown** to the student for the most
    accurate reflection of the student's ability.

4. Following each correct response, you should provide _____ to the
    student.

5. Other rewards such as _____ may be provided after approximately
    every _____ correct responses.

Initial Instructions

Before the administration of the ABLA you should greet the student and introduce yourself if required. The student should be asked if they will agree to participate in the assessment. If they are unable to provide informed consent, then consent of participation must be obtained from their legal guardian. If at any point during the administration of the ABLA the student appears distressed (for example, frequently pushing the testing materials away, crying, attempting to leave the room), then testing should be stopped and attempted at a later date.

Three-Step Prompting Sequence Before Testing Each Level

Prior to assessment of each level of the ABLA, you provide the student with a demonstration, a guided trial, and an opportunity for independent response. Before the student's attempt at an ABLA level, you should demonstrate the required response while stating, "When I say, 'Where does it go?' It goes in here." Following this demonstration, you should provide hand-over-hand guidance while stating "Let's try together... Where does

```
ANSWER KEY
Study Exercise #3

1. RED BOX (or striped box); YELLOW CAN.  2. CUBE; CYLINDER; FOAM.
3. KNOWN.  4. PRAISE.  5. FRUIT (or other edibles); THREE
```

it go?...It goes in here." Following the guided trial you should state "Now you try on your own" and provide the verbal cue again and then give the student the opportunity to make the correct response independently.

Sometimes you may offer to the student an opportunity to make an independent response and the student will just hold the object and stare into the distance. If this happens wait for about ten seconds then repeat the student's name and repeat the verbal cue. You should not provide any additional physical guidance in this situation.

The testing of a level begins after the student has successfully performed one independent response at that level, thus demonstrating an ability to perform the task without assistance. If the individual is unable to complete a single independent response at a particular level, then his or her ABLA classification is determined to be at the preceding level. **You should memorize the basic verbal instructions to say to the student during the testing of levels 1 through 4** (see Table 2). As you will see later, the instructions are a little different for level 6.

Reinforcement Following Correct Responses

Immediately following each correct response you should provide the student with social reinforcers, for example, enthusiastic praise, a smile, clapping, or a pat on the back. You should attempt to use a variety of praise statements when testing students to avoid sounding dull. (See Table 3 on page 12 for examples of praise statements.) After approximately every 3 correct responses, you should give to the student a small piece of one of their favorite foods, in addition to praise, to maintain the student's attention and effort.

Table 2
Verbal Instructions to Say to the Student During Testing of Levels 1 Through 4

Situation	Instructions
Introduction	"I am going to ask you to do a task."
Demonstration	"When I say, 'Where does it go?', it goes in here".
Guided Trial	"Let's try together ... Where does it go?"
Opportunity for Independent Response	"Now you try on your own. Where does it go?"
Error Correction	"No, that's not where it goes."
Statements Between Levels	"We're finished with this task, now let's try something new."
Concluding Statement	"We're all finished now, thank-you for working with me."

Table 3
Examples of Praise Statements

Praise Box		
Good for you!	Way to go!	That's Great!
Well done!	Very Good!	Excellent!
Terrific!	Magnificent!	Fabulous!
Wonderful!	Good Work!	Fantastic!
Super!	Splendid!	Marvellous!
Amazing!	Yes, that's where it goes!	

Error Correction Following Incorrect Responses

When a student makes an error, you must immediately conduct a three-step error correction procedure, which includes a demonstration, a guided trial, and an opportunity for an independent response, just like the initial prompting sequence before testing a level. That is, immediately following the student's mistake you should provide the student with verbal comments such as "No, Mary that's not where it goes." You should then demonstrate the correct response. Following this demonstration, ask the student to perform that task while you provide hand-over-hand physical guidance for the correct response. Following this guided response, the student is given an opportunity for an independent response.

This correction procedure is repeated as necessary until the student demonstrates an independent correct response, or until the student has met the failing criterion (described later).

Passing and Failing Criteria

Scoring for a level begins only after the initial prompting sequence for a level, that is, after a demonstration, a guided trial, and a correct independent response. Passing criterion for a particular level is achieved after 8 correct responses in a row (not including correct responses during error correction). A student is failed on a level if she or he makes 8 total errors (whether or not they are all in a row, and including errors on an independent-response part of error correction).

Let us repeat how scoring during error correction affects the passing and failing criteria. A correct response on an opportunity for an independent response during error

correction does not "count" as a correct response towards passing that level, it simply allows the student to move on to the next scoring trial. But an error on the independent response part of error correction does count as an error towards failing that level.

Following a pass or a fail, testing on that level is stopped. The student's ABLA level of functioning represents the highest level upon which she or he achieved 8 correct scoring trials in a row. This passing criterion of 8 correct responses in a row, versus something easier like 2 in a row, was chosen so that it would be very unlikely that a student would pass a level by chance alone.

For an overview of the general testing sequence, see Figure 2.

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┌─────────────────────────────────────┐
│                                     │
│   For Level 1, Give a Demonstration,│
│   a Guided Trial, and an Opportunity│
│   for an Independent Response.      │
│                                     │
└─────────────────────────────────────┘

      ┌─────────────────────────────────────┐
      │                                     │
      │   When the student makes a correct  │
      │   independent response, conduct a test trial │
      │                                     │
      └─────────────────────────────────────┘

┌─────────────────────────────┐      ┌─────────────────────────────┐
│                             │      │                             │
│ Following a correct response, provide │      │ Following an error, provide error │
│ praise and repeat test trials at that │      │ correction.                 │
│ level until passing criterion is met │      │                             │
│                             │      │                             │
└─────────────────────────────┘      └─────────────────────────────┘

 ┌─────────────────────────┐          ┌─────────────────────────┐
 │                         │          │                         │
 │ If passing criterion is met, │          │                         │
 │ repeat the testing sequence for │          │ If failure criterion is met, │
 │ the next level.         │          │ stop testing.           │
 │                         │          │                         │
 └─────────────────────────┘          └─────────────────────────┘
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Figure 2. An overview of the testing sequence of the ABLA.

Study Exercise #4

Before reading further, study the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is located on page 16 for your reference.

1. Prior to assessment of an ABLA level, provide a _____, a _____

    _____, and an opportunity for an _____ _____.

2. If an individual is unable to complete a single independent response at a particular level then you should <u>regard the assessment as invalid / classify the student at the preceding level</u>.

3. If a student is experiencing difficulty paying attention following the testing of several levels, you should <u>classify the student at the last successful level / conduct the testing over several sessions.</u>

4. If at any point during the testing the student appears distressed you should <u>state the student's name and encourage him or her / terminate that session of testing</u>.

5. To obtain the student's attention before each trial, you should <u>offer the student some fruit / state the student's name.</u>

6. Passing criterion for a level of the ABLA is 8 correct responses, and they must be 8 right <u>in a row / in total.</u>

7. A student fails a level if she or he responds incorrectly 8 times, and they must be 8 errors <u>in a row / in total.</u>

8. The error correction procedure consists of a _____, a _____ _____, and an opportunity for an _____ _____.

9. An error on the independent response part of error correction <u>does / does not</u> count towards the failure criterion.

10. A correct response on the independent response part of error correction <u>does / does not</u> count towards the passing criterion.

GUIDELINES FOR TESTING SPECIFIC ABLA LEVELS

Level 1 - Imitation.

During the testing of Level 1 (Imitation), place the red box on the table directly in front of the student. Following a greeting and brief explanation of the task, state the student's name and demonstrate the correct response of placing the foam in the box while, at the same time, stating, "When I say, 'Where does it go?'... It goes in here."

Next, provide a guided trial. To provide guidance: 1) say to the student, "Let's try it together;" 2) provide the verbal cue "Where does it go?"; 3) place the foam into the student's hand; 4) guide the student's hand (while it is grasping the foam) up to the opening of the box; and 5) guide the student to drop the foam into the container.

Following physical guidance, provide an opportunity for an independent response. To do so, model the correct response while repeating the request, "Where does it go?", then give the foam to the student.

Once the student completes one independent response, **the scoring of the first trial begins.**

Stop!!

Before proceeding further, you should do some practicing. If you are studying with a partner, ask your partner to role play a client. The *best way to learn* this assessment is to actually *try the steps in real life with a partner* (e.g., co-worker, friend, family member). People who do not actually practice the assessment with a partner often find it difficult to give the first few tests to an actual client. However, if it is not possible to work with a partner, you should practise the actual movements involved in each stage of the assessment. If you are studying alone, imagine that a client is sitting opposite you at a table. Place the box in front of the client (either your partner or an imaginary client). With the foam and some edibles handy, practice administering a demonstration trial, a guided trial, and an opportunity for an independent response for the imitation level. Use the verbal instructions provided in Table 2 (page 11). When you get to the independent response part of your practice, pretend that the client makes an error. Then repeat the demonstration, guided trial, and an opportunity for an independent response, and pretend that the client responds correctly. Pretend to administer reinforcement as described previously. Continue practicing until you can complete the initial three-step sequence correctly without looking at the manual, or for a maximum of 10 minutes. Then continue studying the rest of the manual.

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┌─────────────────────────────────────────────────┐
│  ANSWER KEY                                       │
│                                                   │
│  Study Exercise #4                                │
│                                                   │
│  1. DEMONSTRATION; GUIDED TRIAL; INDEPENDENT RESPONSE. │
│  2. CLASSIFY THE STUDENT AT THE PRECEDING LEVEL. 3. CONDUCT │
│  THE TESTING OVER SEVERAL SESSIONS.  4. TERMINATE THAT │
│  SESSION OF TESTING.  5. STATE THE STUDENT'S NAME.  6. IN A ROW. │
│  7. IN TOTAL.  8. DEMONSTRATION; GUIDED TRIAL; INDEPENDENT │
│  RESPONSE.  10. DOES.  11. DOES NOT.             │
└─────────────────────────────────────────────────┘
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Now let's assume that a client has completed the demonstration, guided trial, and independent response correctly, and that you are ready to begin scoring. On each scoring trial, you should model the correct response and repeat the question, "Where does it go?" However, you should not provide additional physical guidance once the scoring has begun, with the exception of the error correction procedure.

Once the student completes 4 correct responses in a row with the foam and the box, then replace the box with the can, model the response with the foam, and continue scoring. (Throughout the testing, if the student places his or her hand into the container up to the wrist, you may prompt the student to release the foam.)

Sometimes during a trial, the student will just hold the object and stare off into the distance. If this happens wait for about ten seconds then repeat the student's name and repeat the verbal cue. You should not provide any additional physical guidance in this situation. An *incorrect response* at this level is defined as the student placing/dropping the object anywhere other than in the container.

Study Exercise #5

Before reading further, study the preceding material until you can answer the
following questions correctly. Complete the exercise by filling in the blanks with the
correct words or circling the correct answer where appropriate. The answer key is
located on page 18 for your reference.

1.   During the testing of Level 1, you should place <u>one / both</u> container/s in front
      of the student at a time.

2.   The verbal prompt for Level 1 is "_____ _____ _____ _____?"

3.   The object presented to the student throughout Level 1 is the piece of _____.

4.   Before switching to the can, the student should have performed ____ correct
      responses in a row with the box.

5.   During Level 1, the initial prompting sequence (a demonstration, guided trial,
      and opportunity for an independent response) should be given to the student
      <u>each time you present a new object or container / only at the beginning of the
      level.</u>

6.   An incorrect response for Level 1 is defined as placement of the object
      anywhere other than in the container. <u>True / False</u>

7.   If the student attempts to eat the foam during the testing of Level 1 then you
      should <u>score this response as an incorrect response / don't score that trial</u>.

8.   The error correction sequence with the foam and box is the same as the initial
      prompting sequence. <u>True / False</u>

9.   In the initial prompting sequence, the demonstration is provided after the
      guided trial. <u>True / False</u>

ANSWER KEY
Study Exercise #5

1. ONE. 2. WHERE DOES IT GO? 3. FOAM.
4. FOUR. 5. ONLY AT THE BEGINNING OF THE LEVEL.
6. TRUE. 7. AN INCORRECT RESPONSE. 8. TRUE. 9. FALSE

Now let's consider the scoring for Level 1. The data recording form for Level 1 is shown on the next page. On the first trial, if the student places the foam in the box, circle the number 1 on the data recording form (see example on the level 1 score form), and then begin the next trial. Let's suppose that, on trial #2, the student places the foam somewhere else, for example, on the floor. Then you should place an "X" over the number 2 (see example on the level 1 score form) and provide the error correction procedure consisting of a demonstration, a guided trial, and an opportunity for an independent response. Let's suppose that, on the opportunity for an independent response, the student makes another error. You should then place an X on the line below the number 2 (see the level 1 score form), and repeat the error correction procedure. Keep placing Xs for errors on the lines below and keep doing the error correction procedure until the student responds correctly on the opportunity for an independent response. After such a correct response, place a checkmark on the next line below (see example on the level 1 score form), and then move on to the next trial.

Remember, a correct response on the opportunity for an independent response part of error correction does not count towards the passing criterion. It simply allows you to begin the next scoring trial. That is why a correct response after an error is not scored by placing a circle around a trial number, it is scored by placing a check on the line below the number with an X on it, and that allows you to begin a new scoring trial. The example student who was scored on the next page responded on Level 1 as follows: one correct scoring trial; one incorrect scoring trial; two mistakes following error correction; a correct response on an error correction; an incorrect response on the next scoring trial; another error during error correction, a correct response during error correction, and then eight correct scoring trials in a row, to achieve a pass.

Level 1 (Imitation)   Ask, "Where does it go?"

Passing criterion includes 8 correct trials in a row as follow:
- 4 trials with foam + box
- 4 trials with foam + can

1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

If the student does not make a response then you may repeat the verbal cues until a response is made, or discontinue the testing in the event of many "no responses". This scoring procedure, involving a circled number for a correct response on a trial, an "X" on a number for an incorrect scoring trial, an "X" on the lines below a number for errors during the independent response part of error correction, and a ✓ on a line below a number for a correct independent response during error correction, is the same for all five levels.

Once the student completes four correct scoring trials in a row with the box, you should replace the box with the can, model the response with the foam and continue scoring. When you switch from the box to the can the testing continues without interruption (that is, do not provide additional demonstrations or physical guidance with the new items, just model it).

However, if the student makes an error on a scoring trial with the foam and the can, record an X over the trial number, give error correction with the foam and the can, **then** you need to start all over with the foam and the box. Level 1 is therefore passed if the student can perform 4 correct scoring trials in a row with the red box and immediately followed by 4 correct scoring trials in a row with the yellow can.

Level 1 is different from any other level in two ways:

First, it is the only level that presents only one container at a time;

Second, it is the only level for which you model the correct response immediately before each trial, hence the name imitation.

Study Exercise #6

Before reading further, study the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is provided on page 24 for your reference.

1. Level 1 is the only level for which you _____ the correct response immediately before each trial.

2. Level 1 is mastered if the student can perform _____ correct scoring trials with the red box and _____ correct scoring trials with the yellow can.

3. If a student makes an error on a scoring trial, you should place a(n) ___ over the trial number and perform the _____ _____ procedure.

4. If the student in the example above makes another error, you should place a(n) ___ on the line _____ that trial number, and repeat the error correction procedure.

5. The student above now performs the task correctly. You should <u>place a ✓ on the next empty line below that trial / move to the next trial without marking the data form</u>.

6. If a tester looks at a data recording form and sees an 'X' over trial #1, a ✓ on the line under trial #1, an 'X' over trial #2, a ✓ on the line under trial #2, and a circle around trial #3, the performance by the student when given an opportunity to respond independently was <u>one wrong, one right, one wrong, one right / one wrong, one right, one wrong, two right</u>.

7. If a tester looks at a data recording form and sees a circle around trial #1, an 'X' over trial #2, a ✓ on the line under trial #2, an 'X' over trial #3, and two Xs on the lines under trial #3, the performance by the student when given an opportunity to respond independently was <u>one right, four wrong, one right / one right, one wrong, one right, three wrong</u>.

Stop!!

Spend up to 30 minutes memorizing and practicing how to administer Level 1. Use the Summary of Steps for Level 1 (see next page) as a guide. If you are studying with a partner, take turns role playing a tester and a student. If you are studying alone, imagine that you are seated across from a developmentally disabled individual to whom you are about to administer the ABLA test. You should have your edible reinforcers nearby. Obtain a copy of the data sheet for level 1 (see Appendix A), and place it on the table in front of you. Practice what you will say to the person seated across from you before you begin the test. You should place only the box in front of the person and the foam should be in your hand. Place the Can, cube, and cylinder so that they will be out of the way, but within arm's reach. Practice the demonstration, guided trial, and opportunity for independent response (see the Summary on the next page). Rehearse what you will be saying during this time. Once your partner or imaginary client has made one correct independent response, you are ready to begin scoring. Practice (with a partner or an imaginary client) who performs as follows:

- 2 correct scoring trials in a row
- 1 wrong during a scoring trial
- 2 wrong on the independent response part of error correction
- 1 right on the independent response part of error correction
- 4 correct scoring trials in a row
- 1 wrong on a scoring trial
- 1 right on the independent response part of error correction
- 8 correct scoring trials in a row

If your partner or imaginary client responded as indicated above, then your data sheet should have been scored as indicated on page 24.

Level 1 is a difficult level to test as the materials change and you must remember to model **before every trial**. Review the summary on the next page if you forget what to do or say. Do not continue reading the next part of the manual until you are able to administer Level 1 correctly in your practice session with only a few glances at the Summary, or for a maximum of 30 minutes. Use the data recording form during your practice.

<u>Summary of Steps for Level 1 - Imitation Testing</u>

Initial Prompting Sequence - Don't Record Responses

1. Place the box in front of the student.

2. <u>Demonstrate</u>. Say, "When I say, 'Where does it go?' it goes in here," while demonstrating putting the foam in the box.

3. <u>Guided trial</u>. Say, "Let's try together." Take the student's hand while it grasps the foam, say, "Where does it go?" and help the student to drop the foam into the box. Give praise.

4. <u>Opportunity for Independent Response</u>. Say, "Now you try. Where does it go?" If the student places the foam in the box, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

If the Student Responds Correctly on Step 4, you are Ready to Begin Scoring

5. <u>Model every time</u>. On each trial, say, "Where does it go?" Then model placing the foam into the box. Then say, "Where does it go?" and give the foam to the student.

6. If the student responds correctly on a trial:
   - Give praise.
   - Circle the trial number on the data sheet.
   - Repeat steps 5 & 6 until the student gets 4 correct in a row with the box, and 4 correct in a row with the can. (Do not provide the prompting sequence when you switch to the can. Just model the response with the can as you did with the box.)
   - Reinforce approximately every third correct response with an edible.

7. If the student places the foam anywhere but in the container:
   - Say, "No. That's not where it goes."
   - Record an X on the trial number.
   - Do the error correction.
       * demonstration
       * guided trial
       * opportunity for independent response

   - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
   - Continue error correction until a correct response occurs on an opportunity for an independent response, then return to step 5.

8. Continue until:
   - A pass occurs (8 numbers circled in a row)
   - A fail occurs (8 total Xs)

ANSWER KEY

Study Exercise #6

1. MODEL.   2. FOUR; FOUR.   3. X; ERROR CORRECTION.   4. X; BELOW.
5. PLACE A CHECK ON THE NEXT EMPTY LINE BELOW THAT TRIAL.
6. ONE WRONG, ONE RIGHT, ONE WRONG, TWO RIGHT.
7. ONE RIGHT, ONE WRONG, ONE RIGHT, THREE WRONG.

Completed Practice Session Data Sheet (as described on p. 22)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

After your imaginary subject completed 4 scoring trials correctly in a row with the foam and the box, you should have switched to the foam and the can for scoring trial #8. Because the subject responded incorrectly, you should have provided an error correction trial with the foam and the can. You then returned to the foam and the box, for which the subject responded correctly on 4 scoring trials, and you then conducted scoring trials with the foam and the can, for which the subject responded correctly 4 times in a row. Passing criterion was therefore met by the 16th scoring trial. Remember, error correction trials are not scoring trials for reaching the passing criterion.

Common Guidelines for Levels 2 Through 6

Some guidelines for testing Levels 2 through to Level 6 are summarized in Table 4 below.

For each level the containers are placed before the student, approximately 20 cm apart. When the position of the containers are to be alternated, following each trial you should remove the containers from the student's vision, 'mix them up,' and place them in front of the student again. The containers are replaced in either the same or opposite positions on the table. The data recording forms (as described later) indicate the correct position of the containers for each trial.

For the testing of Levels 2 through to Level 6, an error is defined as placement of the object into the incorrect container. The student must place the object into a container for the trial to be scored as either correct or incorrect. For example, if the student does not release the foam, throws the foam away, or places it anywhere other than in a container, no response is recorded.

Table 4
Some Summary Guidelines for Testing Levels 2 Through 6

Levels	2	3	4	6
Containers & Positions	Box, Can Stable	Box, Can Randomly Alternate	Box, Can Randomly Alternate	Box, Can Randomly Alternate
Test Object Presented	Foam	Foam	Cube and Cylinder Randomly Alternate	Foam
Verbal Prompt or Question	"Where does it go?"			"Red Box" or "Yellow Can"
Correct Response	Place foam in can on right	Place foam in can independ. of position	Place cube in box, or cylinder in can	Place foam in the requested container

Level 2 - Position Discrimination

For a position discrimination, both containers, the box and can, are placed in front of the student and the object used is the foam. The recording form and scoring for Level 2 is similar to Level 1 (see below). The data recording form reminds you that the containers are to remain stable, that you should ask, "Where does it go?", and that the correct response is to place the foam into the can.

Level 2 (Position)   Can and Box remain stable
Ask, "Where does it go?"
Correct container is **yellow can**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

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Study Exercise #7

Before reading further, study Table 4 (p. 25) and the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is located on page 28 for your reference.

1. The test object for levels 1, 2, 3, and 6 is the foam. True / False

2. The containers involved in the testing of Level 6, Auditory-Visual, are the _____ and the _____.

3. The verbal prompt or question for Levels 2, 3, and 4 is: "_____ _____ _____ _____?"

4. The position of the containers during the testing of Level 2, Position discrimination, are stable / alternate from one trial to the next.

5. The position of the containers during the testing of Level 3, Visual discrimination, are stable / alternate from one trial to the next.

6. The test objects involved in the testing of Level 4, Visual Match-to-Sample, are the _____ and the _____.

7. The position of the containers during the testing of Level 6, Auditory-Visual discrimination are stable / alternate from one trial to the next.

8. During the testing of Levels 2 through 6, the teacher records an incorrect response if the student places the foam anywhere other than in the correct container / in the incorrect container.

</div>

Level 3 - Visual Discrimination

Level 3 involves the presentation of both containers simultaneously. The positions of the containers randomly alternate. As indicated on the data recording form for Level 3 shown on page 28, the correct position of the can, on either the right side or the left side, is indicated by the letters "L" for left and "R" for right.

ANSWER KEY
Study Exercise #7

1. TRUE. 2. BOX; CAN. 3. WHERE DOES IT GO? 4. ARE STABLE.
5. ALTERNATE. 6. CUBE; CYLINDER. 7. ALTERNATE. 8. IN THE INCORRECT CONTAINER.

Level 3 (Visual)   "L" and "R" indicate correct placement of can

Ask, "Where does it go?"
Correct response is **foam in can**

L	R	L	L	R	L	R	R	R	L	L	R	L	R
1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	R	R	L	R	R	R	L	R	L	L
15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	R	R	L	R	L	L	R	L	R	R	L
29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, <u>not</u> counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers <u>and</u> X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

Level 4 - Visual Match-to-Sample Discrimination

Level 4 involves: the yellow can; the red box; the yellow cylinder; and the red cube, which we'll call a little red box. Once again the correct placement of the can is indicated by the letters 'L' or 'R' above the trial numbers (as shown on the data recording form).

Notice that above the trial numbers, there are also the letters 'c' or 'b'. These letters tell you which test object to provide, the small cylinder (c), or the little box (b).

Before testing for Level 4, the demonstration, guided trial and opportunity for an independent response should be provided to the student with each of the objects, that is, the cylinder (matched to the can) and the little box (matched to the big box).

Level 4 (Match-to-Sample) 'L' and 'R' indicate correct placement of can
'b' indicates to present little red box
'c' indicates to present small yellow cylinder
Ask, "Where does it go?"

R	R	L	R	L	L	R	L	L	L	R	R	R	L
c	b	b	c	c	b	b	c	b	c	b	c	b	b
1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	R	R	L	R	L	R	L	L	R	R
b	c	c	c	b	c	b	b	b	b	c	c	c	b
15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	R	L	L	R	R	L	L	L	R	L	L
b	b	c	c	c	b	b	c	c	b	b	c
29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

Study Exercise #8

Before reading further, study the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is provided on page 32 for your reference.

1. On the data recording form, the letters 'c' and 'b' above the trial numbers for Level ____ indicate to you the object that you should present to the student, that is, the small _____('c') or the small _____ ('b').

2. The verbal prompt or question in the testing of Level 2, Position discrimination is, "_____ _____ ____ ____?"

3. The position of the containers during the testing of Level 3, Visual discrimination, <u>are stable / alternate</u> from one trial to the next.

4. The position of the containers during the testing of Level 2, Position discrimination, <u>are stable / alternate</u> from one trial to the next.

5. On the data recording form, the letters 'L' and 'R' above the trial numbers for Level 3, Visual discrimination, indicate to the teacher the correct position of the _____, either on the _____ ('L') or _____ ('R') side of the _____.

6. When testing Level 4 of the ABLA, the teacher provides a demonstration, guided trial, and opportunity for independent response with <u>both the small box (cube) and the cylinder / only the first object presented</u>.

7. During the testing of Level 4, Visual-Match-to-Sample, the teacher presents the test objects <u>simultaneously / one per trial</u>.

Stop!!

It is important that you do some additional practicing before reading further. Testing Level 4 is a little more complicated than the preceding levels because there is more for you to do in between test trials. First, obtain a copy of the data sheet for Level 4 (see Appendix A). Next, with your testing materials, edibles, and pencil and data sheet in front of you, and with your imaginary client (or partner role playing a client) sitting opposite you, follow the summary steps for testing level 4 that are on the next page. Let's assume that your client responds correctly on all of the initial prompting sequence, so that you are now ready to begin scoring. Assume that your client responds as follows, follow the testing summary on the next page, and score the data sheet appropriately: 1 correct, 1 wrong, 3 correct, 3 wrong, 9 correct. This should require a maximum of 20 minutes. Your data sheet should have been scored as indicated on p. 32.

<u>Summary of Testing for Level 4 - Visual Match-to-Sample</u>

Initial Prompting Sequence - Don't Record Responses

1.   Place the box and the can in front of the student.

2.   <u>Demonstrate</u>. Start with the cylinder. Say, "When I say, 'Where does it go?' it goes in here," while demonstrating placing the cylinder into the can.

3.   <u>Guided trial</u>. Say, "Let's try together." Take the student's hand while it grasps the cylinder, say, "Where does it go?" and guide the student to place the cylinder into the can. Give praise.

4.   <u>Opportunity for independent response</u>. Say, "Now you try. Where does it go?" Give the cylinder to the student. If the student places the cylinder into the can, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

5.   Repeat steps 2, 3, and 4 with the little red box (or cube) and the big box.

If the Student Responds Correctly on the Above Steps, you are Ready to Begin Scoring

6.   Look at the data sheet for two things: (a) is the can placed on the left side or the right side?   Place the can on the proper side. (b) Do you give the student the little red <u>b</u>ox or the <u>c</u>ylinder?

7.   Give the object (the cylinder or the little red box) to the student and say, "Where does it go?"

8.   If the student places the object into the correct container:
      - Give praise.
      - Circle the trial number on the data sheet.
      - Repeat steps 6, 7, & 8 until the student gets 8 correct in a row.
      - Reinforce approximately every third correct response with an edible.

9.   If the student places the object in the wrong container:
      - Say, "No. That's not where it goes."
      - Record an X on the trial number.
      - Do the three steps of the error correction procedure.
      - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
      - Continue error correction until a correct response occurs on an opportunity for an independent response.
      - Return to step 6.

10.   Continue until:
      - A pass occurs (8 numbers circled in a row)
      - A fail occurs (8 total Xs)

```
                          ANSWER KEY
                        Study Exercise #8


1. 4; CYLINDER; BOX.  2. WHERE DOES IT GO?  3. ALTERNATE.
4. ARE STABLE.   5. CAN; LEFT; RIGHT; BOX.   6. BOTH THE CUBE
AND THE CYLINDER.  7. ONE PER TRIAL.
```

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            Completed Level 4 Practice Session Data Sheet

   R    R    L    R    L    L    R    L    L    L    R    R    R    L
   c    b    b    c    c    b    b    c    b    c    b    c    b    b
   1    2    3    4    5    6    7    8    9   10   11   12   13   14

   —    —    —    —    —    —    —    —    —    —    —    —    —    —
   —    —    —    —    —    —    —    —    —    —    —    —    —    —
   —    —    —    —    —    —    —    —    —    —    —    —    —    —
```

Level 6 - Auditory-Visual Discrimination

With Level 6, instead of asking, "Where does it go?", you say either "yellow can" or "red box". The demonstration, guided trial and opportunity for an independent response should be provided to the student at the beginning of Level 6 with the verbal prompt "Yellow can." If the client responds correctly on the opportunity for an independent response, then the entire prompting sequence should be repeated with the verbal prompt "Red box". "Y-e-l-l-o-w...c-a-n" should be stated in a low-pitched voice and in a slow fashion, and "Red box" should be stated in a high-pitched voice and in a quick manner. You should attempt to make the verbal prompts sound as different as possible as the purpose of this level is to determine if the student can discriminate between two different sounds. It is not necessary for the student to understand the meaning of the words. Sometimes a student may attempt to place the foam in a container before you have completed the verbal prompts. If this happens, do not count the response. Simply take the foam out of the container and hold onto it while you state the entire verbal prompt. Once you have finished the prompt, give the foam to the student.

During the administration of level 6 the containers randomly alternate. As shown on the recording form on the next page, the letters on the top row indicate the correct left-right position of the yellow can, similar to the testing of level 3. Also, as shown on the score form, the letters above a trial number indicate which auditory prompt you should present to the student i.e. "Red Box" if there is an 'RB' above the trial number, and "Yellow Can" if there is a 'YC' above the trial number.

Level 6 (Auditory-Visual)   "L" and "R" indicate correct placement of can

Say, "Red Box" (RB) or "Yellow Can" (YC)

R	R	L	L	R	R	L	L	L	L	R	R	L	L
RB	YC	YC	RB	YC	RB	YC	RB	YC	YC	RB	YC	RB	RB
1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	R	R	L	L	R	L	R	R	L	L
YC	YC	RB	YC	RB	YC	YC	RB	RB	YC	RB	RB	YC	YC
15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	L	R	R	R	L	R	R	L
YC	RB	RB	YC	YC	RB	RB	RB	YC	YC	YC	RB
29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

Study Exercise #9

Before reading further, study the preceding material until you can answer the following questions correctly. Complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate. The answer key is provided on page 36 for your reference.

1. The spoken prompt "Yellow Can" in the testing of Level 6 should be presented in a _____ pitch and in a _____ fashion.

2. The spoken prompt "Red Box" in the testing of Level 6 should be presented in a _____ pitch and in a _____ manner.

3. On the data recording form, the letters 'L' and 'R' above the trial numbers for Levels 3, 4, and 6 indicate to the tester the _____ / _____ positioning of the _____ _____.

4. On the data recording form, the letters 'RB' and 'YC' above the trial numbers for Level 6 indicate to the tester the verbal prompt that the tester should say, that is, say, "_____ _____" if 'RB', or "_____ _____" if 'YC'.

5. If you look at a data recording form and see a circle around trial #1, an 'X' over trial #2, a ✓ on the line under trial #2, and a circle around trial #3, the performance by the student when given an opportunity to respond independently was one right, one wrong, two right / one right, one wrong, one right.

6. If you look at a data recording form and see a circle around trial #1, an 'X' over trial #2, two Xs and then a ✓ on the lines under trial #2, and another 'X' over trial #3, the performance by the student when given an opportunity to respond independently was one right, four wrong / one right, three wrong, one right, one wrong.

Frequent Errors that Testers Make

There are several common errors frequently made by beginning testers as they learn about the ABLA test. Before doing additional practicing, read through the following list of frequent errors. Try to avoid making them.

♦ **For Level 1, Imitation, Don't forget to Model for each trial.** You must follow through the introductory prompting sequence (Demonstration, Guided Trial, and Opportunity for Independent Response) as you normally would. You then Model on every trial immediately before you ask the student to do the task. Remember, Level 1 is like the game Simon-Says, they are imitating what you do on each trial.

♦ **For Level 1, following an error with the foam and can, Don't go back to the beginning until you have made the Error Correction for their mistake.** If you begin with the foam and box and the person places the foam into the box four times, then you switch to the foam and the can and the person places the foam into the can once and then makes an error, you must do the Error Correction with the foam and the can before you return to the beginning of the level with the foam and the box.

♦ **For Level 1, Don't add in extra Demonstrations, Guided Trials and Independent Responses.** Some people mistakenly add in a Demonstration, Guided Trial and an Independent Response when they switch from the box to the can. However, for Level 1 there is only one initial prompting sequence at the beginning, and it should be with the foam, demonstrating putting it into the box.

♦ **For Levels 4 and 6, Don't split up the Demonstration, Guided Trial and Opportunity for an Independent Response.** That is, don't give a demonstration for both containers, then a guided trial for both, and then an independent response for both.

To properly do the introductory sequence with level 6, you must do the Demonstration, Guided Trial and Independent Response with the y-e-l-l-o-w...c-a-n. Then do the Demonstration, Guided Trial and Independent Response with the REDBOX! Don't go back and forth between the two.

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┌─────────────────────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────────────────────┐ │
│ │                      ANSWER KEY                         │ │
│ │                   Study Exercise #9                     │ │
│ │                                                         │ │
│ │ 1. LOW; SLOW.  2. HIGH; QUICK.  3. LEFT / RIGHT;  YELLOW CAN. │ │
│ │ 4. RED BOX; YELLOW CAN.   5. ONE RIGHT, ONE WRONG, TWO RIGHT. │ │
│ │ 6. ONE RIGHT, THREE WRONG, ONE RIGHT, ONE WRONG.        │ │
│ └─────────────────────────────────────────────────────────┘ │
└─────────────────────────────────────────────────────────────┘
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◆   For all levels, **Don't** mark the data sheet during the 3-step prompting sequence (Demonstration, Guided Trial and Independent Response) at the beginning of a level. If they do make a mistake during the introductory sequence, you should follow the Error Correction Procedure until they successfully put the object into the correct container. But, DO NOT mark these steps on the data sheet.

After a student has successfully completed the introductory sequence, then scoring can begin. Thereafter, all independent response trials are marked on the data sheet, including such trials as part of the error correction procedure.

There is no set rule of how many mistakes an individual must make during the introductory sequence at the beginning of each level before she or he is failed on that level. However, we suggest that if the individual cannot perform all the steps of the introductory sequence properly after many attempts (8 or more) then she or he should be classified at the previous level. For example, if an individual fails to complete the introductory sequence at Level 6 after 8 attempts with either the yellow can or the red box, then nothing should be scored on the data sheet for Level 6. The individual should be classified as <u>Level 4</u>, the last level that she or he passed.

◆   <u>Don't say more than you have to</u>.

    For Levels 1, 2, 3 and 4 say only,   "Where does it go?"

    For Level 6 say only either,   "REDBOX!" or "y-e-l-l-o-w...c-a-n."

PRACTICE ADMINISTERING THE TEST

The following summary of testing steps will help you to administer the Assessment of Basic Learning Abilities properly. This summary is like a recipe for making a cake, that is, if you follow it step-by-step you will produce the desired result.

Stop!!

Make copies of the scoring forms in Appendix A. Then spend at least 30 minutes practicing administering all 5 of the ABLA levels, at least 5 or 6 minutes per level. During your practicing, have the objects, containers, edibles, data forms, and a pencil in front of you. The more you rehearse the testing procedures in your mind or with a partner, the easier the testing situation will be when you actually test someone.

Remember to make your rehearsal as real as possible. Actually practice saying and doing each step of the testing procedures. Practice administering reinforcement for correct responses, and the error correction procedure after errors. Practice recording following both correct responses and errors. Continue until you have practiced all aspects of testing for each level.

SUMMARY OF STEPS TO FOLLOW WHEN TESTING

Summary of Level 1 - Imitation

Initial Prompting Sequence - Don't Record Responses

1. Place the box in front of the student.

2. <u>Demonstrate</u>. Say, "When I say, 'Where does it go?' it goes in here," while demonstrating putting the foam in the box.

3. <u>Guided trial</u>. Say, "Let's try together." Take the student's hand while it grasps the foam, say, "Where does it go?" and help the student to drop the foam into the box. Give praise.

4. <u>Opportunity for Independent Response</u>. Say, "Now you try. Where does it go?" If the student places the foam in the box, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

If the Student Responds Correctly on Step 4, you are Ready to Begin Scoring

5. <u>Model every time</u>. On each trial, say, "Where does it go?" Then model placing the foam into the box. Then say, "Where does it go?" and give the foam to the student.

6. If the student responds correctly on a trial:
    - Give praise.
    - Circle the trial number on the data sheet.
    - Repeat steps 5 & 6 until the student gets 4 correct in a row with the box, and 4 correct in a row with the can. (Do not provide the prompting sequence when you switch to the can. Just model the response with the can as you did with the box.)
    - Reinforce approximately every third correct response with an edible.

7. If the student places the foam anywhere but in the container:
    - Say, "No. That's not where it goes."
    - Record an X on the trial number.
    - Do the error correction.
        * demonstration
        * guided trial
        * opportunity for independent response

    - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
    - Continue error correction until a correct response occurs on an opportunity for an independent response, then return to step 5.

8. Continue until:
    - A pass occurs (8 numbers circled in a row)
    - A fail occurs (8 total Xs)

Summary of Level 2 - Position Discrimination

Initial Prompting Sequence - Don't Record Responses

1. Place the can and box in front of the student.

2. Demonstrate. Say, "When I say, 'Where does it go?' it goes in here," while demonstrating placing the foam into the can.

3. Guided trial. Say, "Let's try together." Take the student's hand while it grasps the foam, say, "Where does it go?" and help the student to place the foam into the can. Give praise.

4. Opportunity for independent response. Say, "Now you try. Where does it go?" Give the foam to the student. If the student places the foam into the can, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

If the Student Responds Correctly on Step 4, you are Ready to Begin Scoring

5. Say, "Where does it go?" and give the foam to the student.

6. If the student places the foam into the can:
    - Give praise.
    - Circle the trial number on the data sheet.
    - Repeat steps 5 & 6 until the student gets 8 correct in a row.
    - Reinforce approximately every third correct response with an edible.

7. If the student places the foam into the box:
    - Say, "No. That's not where it goes."
    - Record an X on the trial number.
    - Do the three steps of the error correction procedure.
    - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
    - Continue error correction until a correct response occurs on an opportunity for an independent response.
    - Return to step 5.

8. Continue until:
    - A pass occurs (8 numbers circled in a row)
    - A fail occurs (8 total Xs)

Summary of Level 3 - Visual Discrimination

Initial Prompting Sequence - Don't Record Responses

1. Place the can and box in front of the student.

2. Demonstrate. Say, "When I say, 'Where does it go?' it goes in here," while demonstrating placing the foam into the can.

3. Guided trial. Say, "Let's try together." Take the student's hand while it grasps the foam, say, "Where does it go?" and help the student to place the foam into the can. Give praise.

4. Opportunity for independent response. Say, "Now you try. Where does it go?" Give the foam to the student. If the student places the foam into the can, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

If the Student Responds Correctly on Step 4, you are Ready to Begin Scoring

5. Now look at the data sheet to see if the can is to be placed on the left or the right side of the box. Place the can on the proper side. (It does not matter if you place the can to your left or to the student's left, as long as you are consistent with who you use as your guide throughout testing.)

6. Give the foam to the student and say, "Where does it go?"

7. If the student places the foam into the can:
   - Give praise.
   - Circle the trial number on the data sheet.
   - Repeat steps 5, 6, & 7 until the student gets 8 correct in a row.
   - Reinforce approximately every third correct response with an edible.

8. If the student places the foam into the box:
   - Say, "No. That's not where it goes."
   - Record an X on the trial number.
   - Do the three steps of the error correction procedure.
   - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
   - Continue error correction until a correct response occurs on an opportunity for an independent response.
   - Return to step 5.

9. Continue until:
   - A pass occurs (8 numbers circled in a row)
   - A fail occurs (8 total Xs)

Summary of Level 4 - Visual Match-to-Sample

Initial Prompting Sequence - Don't Record Responses

1. Place the box and the can in front of the student.

2. Demonstrate. Start with the cylinder. Say, "When I say, 'Where does it go?' it goes in here," while demonstrating placing the cylinder into the can.

3. Guided trial. Say, "Let's try together." Take the student's hand while it grasps the cylinder, say, "Where does it go?" and guide the student to place the cylinder into the can. Give praise.

4. Opportunity for independent response. Say, "Now you try. Where does it go?" Give the cylinder to the student. If the student places the cylinder into the can, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

5. Repeat steps 2, 3, and 4 with the little red box and the big box.

If the Student Responds Correctly on the Above Steps, you are Ready to Begin Scoring

6. Look at the data sheet for two things: (a) is the can placed on the left side or the right side? Place the can on the proper side. (b) Do you give the student the little red box or the cylinder?

7. Give the object (the cylinder or the little red box) to the student and say, "Where does it go?"

8. If the student places the object into the correct container:
   - Give praise.
   - Circle the trial number on the data sheet.
   - Repeat steps 6, 7, & 8 until the student gets 8 correct in a row.
   - Reinforce approximately every third correct response with an edible.

9. If the student places the object into the wrong container:
   - Say, "No. That's not where it goes."
   - Record an X on the trial number.
   - Do the three steps of the error correction procedure.
   - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
   - Continue error correction until a correct response occurs on an opportunity for an independent response.
   - Return to step 6.

10. Continue until:
    - A pass occurs (8 numbers circled in a row)
    - A fail occurs (8 total Xs)

Summary of Level 6 - Auditory-Visual Discrimination

Initial Prompting Sequence - Don't Record Responses

1. Place the can and the box in front of the student.

2. Demonstrate. Say, "When I say, 'y-e-l-l-o-w...c-a-n,' it goes in here," while demonstrating putting the foam into the yellow can. Remember to say, "y-e-l-l-o-w...c-a-n" slowly and in a low tone.

3. Guided trial. Say, "Let's try together." Take the student's hand while it grasps the foam, say, "y-e-l-l-o-w...c-a-n," and guide the student to place the foam into the yellow can. Give praise.

4. Opportunity for independent response. Say, "Now you try. y-e-l-l-o-w...c-a-n." Give the foam to the student. If the student places the foam into the yellow can, give praise. If the student makes an error, repeat the prompting sequence. Do not mark the data sheet.

5. Repeat steps 2, 3, & 4 with the foam and the red box. Remember to say, "REDBOX" rapidly and in a high tone.

If the Student Responds Correctly on the Above Steps, you are Ready to Begin Scoring

6. Look at the data sheet for two things:
    (a) Should the can be on the right side or the left side?
    (b) Do you say, "REDBOX" or "y-e-l-l-o-w...c-a-n"?

7. Give the foam to the student, and say the correct verbal cue (either "REDBOX" or "y-e-l-l-o-w...c-a-n").

8. If the student places the foam into the correct container:
    - Give praise.
    - Circle the trial number on the data sheet.
    - Repeat steps 6, 7 & 8 until the student gets 8 correct in a row.
    - Reinforce approximately every third correct response with an edible.

9. If the student places the foam into the wrong container:
    - Say, "No. That's not where it goes."
    - Record an X on the trial number.
    - Do the three steps of the error correction procedure.
    - On the opportunity for an independent response, record either an X or a ✓ on a line below the number.
    - Continue error correction until a correct response occurs on an opportunity for an independent response.
    - Return to step 6.

10. Continue until:
    - A pass occurs (8 numbers circled in a row)
    - A fail occurs (8 total Xs)

PART II

Using the ABLA to

Classify Training Tasks

CLASSIFYING TRAINING TASKS ACCORDING TO
THE HIGHEST ABLA LEVEL NEEDED TO PERFORM THEM

You now know how to test clients on the ABLA test. How is such information useful? Research indicates that a client can readily learn to perform a task that is at a level of the ABLA test that the client has passed, however a client will experience extreme difficulty learning a task that is more difficult than a level that the client has passed. For example, suppose that a client has passed level 3 (visual discrimination), but failed level 4 (match-to-sample) on the ABLA test. If you try to teach that client to perform a level 3 task, such as locating their own printed name when it is written on the blackboard in different positions and with other names, the client will readily learn that task, usually within 20 or 30 training trials. But if you attempt to teach a level 4 task to that client, such as replenishing a partially depleted salad bar at a fast-food restaurant, then that client will have extreme difficulty learning that level 4 task, even after hundreds of training trials, using standard prompting and reinforcement procedures. Research also indicates that when staff attempt to teach to clients training tasks that are at the highest ABLA level that they have passed, the clients show few problem behaviors. But when staff attempt to teach to clients tasks that are above or below their highest ABLA level, they exhibit a higher frequency of problem behaviors. These results suggest that if you use standard prompting and reinforcement procedures when teaching clinets, then you will obtain best results if you: (a) use the ABLA test to assess clients; (b) examine various training tasks that might be used for those clients in order to identify the highest ABLA level necessary to readily learn those tasks; and (c) then match the ABLA test level of clients to the ABLA difficulty level of training tasks to be provided for those clients.

Let's suppose that you have ABLA test results for several developmentally disabled individuals. In order to match the ABLA test level of the clients to the training demands of the various tasks, you must classify the potential training tasks according to the highest ABLA level needed by a student to readily learn those tasks. This section provides guidelines to help you to classify tasks at a particular level of the ABLA.

Classifying Tasks as Level 1 - Imitation

As the name suggests, Level 1 of the ABLA involves an imitative response. The most clear distinction between an imitative response and a discrimination of a higher level is the presence of a model to imitate. A task should be classified as Level 1 (Imitation) if, and only if, the student is provided with a demonstration of the response immediately before the request to perform that task.

For example, Donna frequently helps the dietary staff in the kitchen of the group home where she lives. One of the tasks she likes to perform is stirring the gravy. When large dinners are being prepared, the staff typically request that Donna take a turn stirring the gravy so that they may attend to other aspects of the food preparation. Because Donna initially watches the staff stir the gravy, the response required of Donna would be classified as Level 1 -imitation.

Classifying Tasks as Level 2 - Position Discrimination

A position discrimination is involved when the correct choice may be made by paying attention to the stable position of various objects. In other words, if the correct position was within easy reach, an individual could be deaf and blind and, after learning the correct positions, could successfully complete a position discrimination on every trial. Hearing and sight would not be required. To determine if a task should be classified as a Position discrimination, you must determine if the materials involved in the task remain in a stable position, or if their positions' alternate. If the location of an object you are requesting the student to retrieve changes from request to request, then the student would need to rely on sight or sound to locate the object on every attempt.

Cynthia was looking at photographs at her desk as the sun went down and the room became dim. On her desk immediately in front of her was a desk lamp. On the base of the lamp there were two switches. Cynthia pressed the switch on the right to turn on the lamp. The response of pressing the switch on the right is an example of a position discrimination. Cynthia did not need to be able to 'see' the difference between the two switches. The switch to turn on that lamp is always located on the right side.

Classifying Tasks as Level 3 - Visual Discrimination

For a task to be classified as Level 3, the materials involved in the task must change locations from one request to the next, and performing the task correctly does not require discriminating between two or more sounds.

Marion and Estelle often have coffee at the kitchen table in their group home. Sometimes the cream is located on the left side of the sugar, and at other times it is located on the right side of the sugar. Marion only takes cream for her coffee. The response of Marion picking up the cream is an example of a visual discrimination.

Classifying Tasks as Level 2 vs. Level 3. Usually, a task is classified at ABLA Level 2 if the positions of task materials remain stable. And with Level 2, after a visually impaired person experienced the position of the containers on several trials, that person would be able to immediately and correctly place the foam in the can on the right without having to feel around for its location. But suppose that the task is to place a rubber band around the middle of a rolled-up newspaper. A visually impaired person could learn to perform this task correctly, but on each trial that person would have to repeatedly feel and adjust the position of the rubber band in order to adjust it to the correct position. A person with vision, on the other hand, could learn to perform that task correctly on each trial without the repeated "feeling for the correct spot" activity that would occur with a visually impaired person. We therefore recommend that such a task be classified as Level 3.

Consider another example. Suppose that many individual shoe laces are each hanging on individual hooks in front of a client in a workshop. The task is to take 2 laces off the hooks and encase them in a band, and to repeat this task many times. Although the shoe laces hang in a stable position, this would be classified as Level 3 because the client must reach to a different location to get shoe laces on each trial, due to their removal on previous trials.

Classifying Tasks as Level 4 - Visual Match-to-Sample Discrimination

For a task to be classified at Level 4 of the ABLA, the task must involve the student looking at an object and comparing that object with two or more comparison objects to determine which of the comparisons is the correct match. Further, for a teacher to classify a task as Level 4, the sample stimulus (object) must match with the comparison stimulus on some dimension, for example, shape or color.

Michelle was choosing earrings to wear for the day. She found one of the earrings that she had decided to wear, a small seashell. As she looked through her jewellery box she found three other earrings. One was a gold cross, one was a silver heart, and the other was a small seashell. The response of selecting the other seashell would be an example of a visual match-to-sample discrimination.

Classifying Tasks as Level 6 - Auditory-Visual Discrimination

To determine if a task should be classified as an auditory-visual discrimination, the ability to hear and recognize the difference between two different sounds is essential in successful task completion. Usually the sounds to be discriminated are specific teacher instructions (versus alternative instructions). You need not assume that the student can understand the meaning of words, simply that the student can 'hear' that two verbal prompts are different, and then respond correctly. A task to be classified at this level usually involves the teacher verbally requesting one response at one time, and another response the next time. The only way that the student knows which response is correct is by discriminating between two or more auditory prompts that the teacher presents.

Sometimes an auditory discrimination does not require vision. For example, if a fork was always located on the left side of a plate, and a spoon on the right side, a blind person could learn to reliably pick up the correct utensil when the trainer requested "fork" or "spoon." At other times, the student must listen for the sound of the prompt that the teacher provides and look to see where the appropriate item is located. Both types of tasks should be classifed as Level 6.

Bill enjoys participating in the basketball program sponsored by Special Olympics. Every Thursday evening, Bill's coach begins the practice with passing drills. These drills involve the coach randomly calling out the players' names. The player with the ball must pass the ball to the player whose name has been called. During these drills the players randomly move around the court. Therefore, the player with the ball must both listen to the name that the coach calls and look to see where that player is on the court. The task of passing the ball to the correct player would be classified as a Level 6 - Auditory-Visual Combined discrimination.

Tips for Task Classification
According to the Levels of The ABLA

Before you attempt to classify a group of tasks, it may be helpful to remind yourself of the following tips.

1.   Unless stated otherwise, imagine that, on repeated trials, that the very same task is requested. For example, if the student is seated at a table and there are several different fruits on the table and the task request is "pick up the orange", then you should rate the task as though the trainer **ALWAYS** requests the orange unless **SPECIFICALLY** stated that sometimes the trainer asks for an orange and sometimes the trainer asks for an apple (or some other fruit).

2.   Some tasks may be completed in more than one way. Try to think about the task in a variety of ways and determine the level based upon the minimum skills necessary. For instance, if you believe the task is a Level 4 task, before making your final rating ask yourself "Is there any method of doing this task using Level 3 skills?"

3.   Some tasks, such as complex instruction following and reading, may require higher intellectual functioning than Level 6. Such tasks should be rated as Level 6. Here are examples of two such tasks:

◆ Task: A teacher is walking to the street corner with a student. They stop at the curb. The teacher says "Billy, check for cars and cross when it is safe." The correct response is for Billy to turn his head one way and then turn his head the other way, and then to cross the street when there are no cars in sight.

◆ Task: A teacher presents a card to a student with the equation $2 + 2 = ?$ The student is required to write the number 4. Each time a card is presented a different equation appears.

For both tasks, a classification of Level 6 would be appropriate.

Now you are ready to attempt to classify some tasks according to the highest ABLA level necessary to complete that task with relative ease. Consider the tasks beginning on the next page that have been presented to developmentally disabled individuals. Beneath each task is the ABLA classification as rated by three "Experts" on the ABLA and the reason they chose that classification. Try to classify the task on your own before reading about the answer from the "experts". To help you to classify tasks correctly, review the questions on the next page.

***IMPORTANT QUESTIONS TO ASK
IF YOU WANT TO CLASSIFY TASKS CORRECTLY !!!!***

Level 1 -   Is there a model?

Level 2 -   Is there no model involved? Do objects in the example remain in the same place? Are there no verbal cues that need to be understood?

Level 3 -   Does the example state that the objects change places? Are there any verbal cues that need to be understood?

Level 4 -   Does the task involve visually matching something to something else in the environment? (for example, one sock matching another; one marble being placed in a bucket of marbles; one sunflower seed shell being spit into a bucket of sunflower seed shells, etc.)

Level 6 -   Does the client have to be able to hear the difference between two different instructions?

Sample Tasks (with one or two steps) to be Classified

1. A client is with the staff in a change room. On a table in the same room is a basket filled with many items, including a brush. The client is asked to get the hair brush. This is a Level _____ task.

> **Answer:** This task is classified as a Level 3, a visual task. First we assume that only the brush is asked for each time. Second, the brush is likely to be in a different place in the basket (with other items) on successive trials, so it is not a position discrimination.

2. A client is seated in front of a plate. On the plate are several items typically eaten with one's fingers (such as celery). The staff says "take some" and models the behavior of choosing an item and placing it in his/her mouth. The correct response is to take a food item with the fingers and put it in his/her mouth. This is a Level _____ task.

> **Answer:** This task is classified as a Level 1, an imitative task, because the staff member modeled the correct response.

3. Mary and two other clients are seated on chairs in the clothing room. A staff member in the next room calls out the name, "Mary." The correct response is for Mary to stand up and walk through the open doorway when her name is called. Sometimes the staff calls Mary's name, and at other times the staff calls the names of other clients. This is a Level ____ task.

> **Answer:** This task is classified as a Level 6, an auditory discrimination. The task requires hearing, as Mary must be able to recognize her name being called as different from the other names.

4. A client is seated in a chair. The physiotherapist places an index card in the hand of the client and asks him to work on his knee extension exercises. On the card there is a picture of an individual doing the exercise as well as instructions about the length of time the extension should be held and the number of repetitions. The correct responses involve:

   i) The client reading the card and performing the exercise correctly,
      This is a Level ____ task.

   ii) The client straightening the weak leg in response to the picture.
      This part is a Level ____ task.

> **Answers:** The initial part of this task is classified as a Level 6. To perform the exercise correctly with respect to repetitions etc. the individual must be able to read the card. The second part of this task would require Level 4 - Visual Match-to-Sample. This part of the task involves matching the position of the resident's own leg to the leg in the picture.

5. On the desk is a "math machine," which is a form of a calculator. Every time a key labelled "game" is pressed, a different mathematical problem appears. The staff instructs the client to work with the calculator. The correct responses include:

   i) Reading the mathematical problem.
      This is a Level ____ task.

   ii) Pressing the appropriate keys to enter the answer.
      This is a Level ____ task.

> **Answers:** The first part of this task is classified as a Level 6 because the individual must be able to read the problem. The second part of the task is also classified as a Level 6 because it requires higher intellectual functioning (that is, the individual must have some mathematical skills in order to answer the problem).

6. A client is sitting in a wheelchair. A staff approaches the resident and places a spoon immediately before the resident's lips. On the spoon is some apple sauce with one or more pills placed in the sauce. The staff instructs the client to open her mouth. The correct response involves the client opening her mouth so that the staff may place the spoon inside. The staff member models the correct response of opening her mouth. This is a Level ____ task.

Answer: This task is classified as a Level 1, an imitative task, because the staff modeled the correct response.

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7. There are many clients, and one staff member in a room. Bill wants to play hide-and-seek.

    i)   The first correct response is for Bill to approach the staff member and hide his eyes.

        This is a Level ____ task.

    ii)   When the staff member went and hid, the second correct response is for Bill to go and find the staff.

        This is a Level ____ task.

Answers: The first part of this task is classified as a Level 3, or a visual task. Bill must be able to see in order to be able to approach the staff member and not another client. The second part was also classified as a Level 3 because Bill requires the use of sight to find the staff member.

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8. A client is seated in the dining room at a table. There is a plate containing meat and other foods on it, in addition to a knife, fork, and spoon. The position of the utensils changes from time to time. The correct response involves picking up the knife and fork and cutting the meat.

This is a Level ____ task.

Answer: This task is classified as a Level 3, a visual task. Because the position of the utensils changes, the client would need to be able to see in order to pick up the knife and fork and cut the meat.

Sample Tasks (with several steps) to be Classified

Sometimes tasks require more than one or two steps. For example, brushing your teeth involves several steps such as getting the toothpaste, turning the water on, and brushing your teeth. The toothbrushing task may require different levels of ability to do each step. When analyzing such tasks into their ABLA levels, you must first break them down into the steps that a client would follow when performing them. The following tasks involve several steps. Each step of a task should be classified according to the levels of the ABLA.

9. A client is standing in the washroom with a staff member. There are several puddles of water on the floor from a toilet which has overflowed. There is a clothing room down the hallway in addition to several other rooms. There is a wet-dry vacuum cleaner always stored in the same place in the clothing room. On the wet-dry vacuum there is a single switch which turns on the vacuum cleaner. The staff asks the client to get the vacuum and clean up the water. The correct responses include:

   i)   Go to the clothing room.
        This is a Level ____ task.

> **Answer:** The first part of this task is classified as a Level 2 because the clothing room is always located in the same place.

   ii) Locate the vacuum cleaner.
        This is a Level ____ task.

> **Answer:** The second part of the task is classified as Level 2 because the vacuum cleaner is always stored in one place in the clothing room.

   iii) Go back to the washroom with the vacuum.
        This is a Level ____ task.

> **Answer:** The third part of the task is classified as a Level 2 because the washroom remains in the same place.

iv)   Vacuum only the area of the floor which has water on it.
        This is a Level _____ task.

Answer: The fourth part was classified as a Level 3 because the individual has to use sight to determine which areas of the floor have water on them.

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10. A client is seated at a desk. There are approximately 25 ropes hanging over the wall facing the client. There are two buckets in front of the client which always stay in the same place. One of the buckets is filled with small elastic bands and the other bucket is partly filled with the finished work (folded ropes) (see picture). The staff asks the client to fold ropes. The correct responses involve the client picking up a rope, wrapping the rope around his or her hand until it is completely wrapped, removing the wrapped rope from his or her hand, placing an elastic band around the now bundled rope, and placing the finished work in the bucket.

Ropes ⟶

Elastic Bands

Folded Ropes
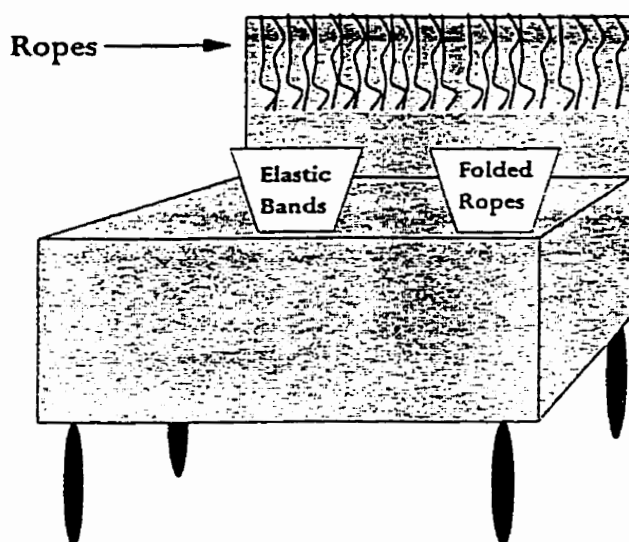
The correct responses include:
i)   Pick up one of the ropes.
        This is a Level _____ task.

Answer: The first part of this task is classified as a Level 3 (Visual Discrimination), because, although the positions of the rope stays the same, the person must reach to a different location to get a new rope from trial to trial as the ropes are removed from their original hanging positions.

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ii) Completely wrap rope around hand.
     This is a Level ____ task.

Answer: The second part is classified as a Level 2 because the position of the rope around the hand would be approximately the same from trial to trial, and a visually impaired prson could easily perform this task as rapidly as a person with vision.

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iii) Remove wrapped rope from hand.
      This is a Level ____ task.

Answer: The third part of the task is classified as a Level 2 because there is no model, and the client always removes the rope with the same hand in about the same position.

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iv) Pick up one elastic band from the bucket and put it around the bundled rope at the middle of the bundle.
     This is a Level ____ task.

Answer: The fourth part is classified as a Level 3 because, although the location of the elastic bands stays the same, the client needs to see that the elastic is put around the middle of the bundle, rather than at either end.

---

v) Place the bundled rope into the bucket containing the other bundles.
    This is a Level ____ task.

Answer: The fifth part is classified as a Level 2 because the location of the bucket containing the other bundles (the finished work) stays in the same place.

11. A client is seated at his desk. Left of the desk on the floor are several empty cardboard boxes (see picture). On the desk are bags of "Bio Blue", a product used to deodorize toilets. To the right of the desk is the finished work. A staff asks the client to put 6 bags of Bio Blue into each cardboard box and to place the full boxes at the right of the desk. The correct responses include:

Bags of "Bio Blue"
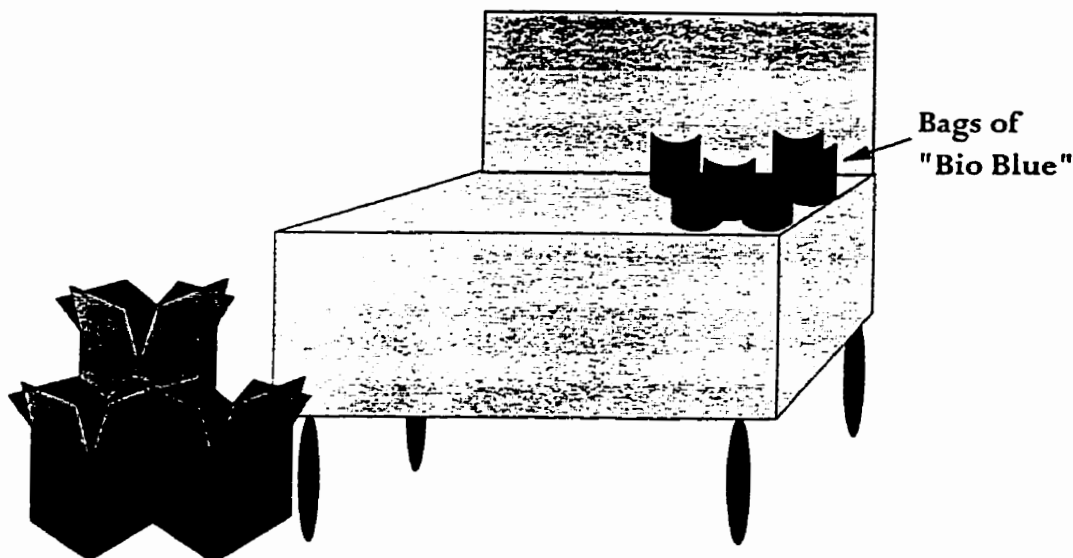
i)   Pick up an empty cardboard box and place it on the table.
       This is a Level _____ task.

Answers: The first part of this task is classified as a Level 2 because the empty cardboard boxes stay in the same place, and are placed in the same place on the table.

ii)   Place 6 bags of Bio Blue in the box.
       This is a Level _____ task.

Answer: The second part of the task is classified as a Level 6 because the client would need to be able to count (requiring higher intellectual functioning).

iii)   Place the full cardboard box at the right of the desk.
       This is a Level _____ task.

12. A client is seated at a desk. There are three boxes in front of the client (see picture). In one of the boxes there are bottle caps. In another box there are bottles. In the third box there are bottles with caps on them. Several feet away there are two large metal bins. One contains bottle caps and the other contains bottles. All of the boxes and bins stay in the same place. The correct responses include:
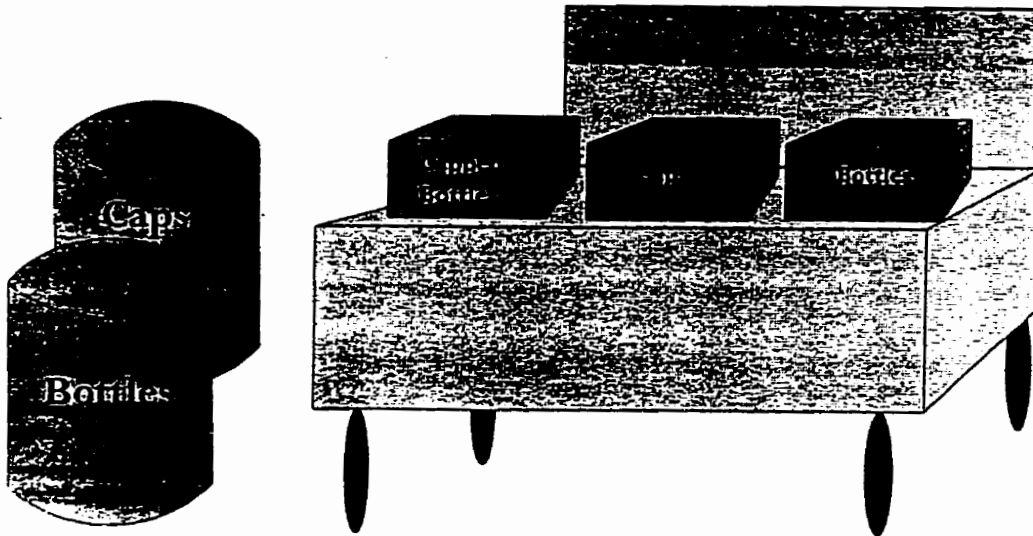
   i)   Pick up a bottle without a cap from the box on the right.
        This is a Level ____ task.

   ii) Pick up a bottle cap from the box in the middle.
        This is a Level ____ task.

iii)   Once the cap is on the bottle, place it in the box of capped bottles.
This is a Level _____ task.

Answer: The third part is classified as a Level 2 because the location of the box with capped bottles is always in the same place.

(iv)   When one of the boxes of either bottles or caps is almost empty, take the box over to the large metal bin of either boxes or caps and fill the box up with the matching item. This is a Level _____ task.

Answer: The fourth part of this task is classified as a Level 4 because it involves matching the material in the large metal bins to the material in the boxes.

---

v)   When the other box is empty, repeat step (iv) with this box.
This is a Level _____ task.

Answer: The fifth part is classified as a Level 4 (Visual Match-to-Sample) for the same reason as above. The client is required to match the material in the large metal bins to the material in the box.

Note: You can now use the ABLA test to match the learning ability of clients to the difficulty of training tasks. But what if you want to attempt to teach to a client an ABLA level that the client has failed? Although this is extremely difficulty to do using standard prompting and reinforcement procedures, some success has been achieved teaching failed ABLA levels using specialized training strategies. These strategies are described in the papers listed in the Bibliography by Hazen, Szendrei, & Martin (1989), McDonald & Martin (1991), Walker Martin, & Graham, (1991), Witt & Wacker (1981), and Yu & Martin (1986).

Bibliography of Studies on the ABLA Test

DeWiele, L.A., & Martin, G.L. (1996). Can the ABLA test help staff match training tasks to the abilities of developmentally disabled persons? *International Journal of Practical Approaches to Disability, 20,* 7-11.

Harapiak, S. M., Martin, G. L., & Yu, D. (1997). Hierarchical ordering of auditory discriminations and the Assessment of Basic Learning Abilities test. Paper submitted for publication.

Hazen, A., Szendrei, V., & Martin, G.L. (1989). The AVC discrimination test: A valuable tool for teachers of developmentally disabled persons. *Journal of Practical Approaches to Developmental Handicap, 13(1),* 7-13.

Kerr, N., Meyerson, L. (1977). Further evidence on ordering, generalization, and prediction from the AVC scales: AVC skills in deaf retarded adults. *Rehabilitation Psychology,* 24, [Monograph], 127-131.

Kerr, N., Meyerson, L., & Flora, J.A. (1977). The measurement of motor, visual and auditory discrimination skills. *Rehabilitation Psychology,* 24, [Monograph], 95-112.

Kerr, N., Meyerson, L., Flora, J.A., Tharinger, D., Schallert, D., Casey, L., & Fehr, M. (1977). The measurement of motor, visual, and auditory discrimination skills in mentally retarded children and adults and in young normal children. *Rehabilitation Psychology, 24,* [Monograph], 95-206.

Lin, Y. H., Martin, G. L., & Collo, S. (1995). Prediction of auditory matching performance of developmentally handicapped individuals. *Developmental Disabilities Bulletin, 23,* 1-15.

Martin, G., Yu, D., Quinn, G., & Patterson, S. (1983). Measurement and training of AVC discrimination skills: Independent confirmation and extension. *Rehabilitation Psychology, 28,* 231-237.

McDonald, L., & Martin, G.L. (1991). The ABLA test: A practical approach for assessing and teaching two-choice discriminations. *Exceptionality Education Canada,* 1, 95-114.

McDonald, L., & Martin, G.L. (1993). Facilitating discrimination learning for persons with developmental disabilities. *International Journal of Rehabilitation Research, 16,* 160-164.

Meyerson, L., (1977). AVC behavior and attempts to modify it. *Rehabilitation Psychology, 24(3),* 119-122.

Stubbings, V., & Martin, G.L. (1995). The ABLA test for predicting performance of developmentally handicapped persons on prevocational training tasks. *International Journal of Approaches to Disability*, 10, 12-17.

Stubbings, V., & Martin, G. L. (in press). Matching training tasks to the abilities of people with developmental disability: ABLA test vs. experienced staff. *American Journal on Mental Retardation*.

Tharinger, D., Schallert, D., & Kerr, N. (1977). Use of AVC test tasks to predict classroom learning in mentally retarded children [Monograph]. *Rehabilitation Psychology*, 24, 113-118.

Vause, T., Martin, G. L., & Yu, D. (1997). Aberrant behavior of developmentally disabled clients in relation to the ABLA characteristics of training tasks. Paper submitted for publication.

Wacker, D.P. (1981). Applicability of a discrimination assessment procedure with hearing impaired/mentally handicapped clients. *Journal of the Association for the Severely Handicapped*, 6, 51-58.

Wacker, D.P., Kerr, N.J., & Carroll, J.L. (1983). Discrimination skill as a predictor of prevocational performance of institutionalized mentally retarded clients. *Rehabilitation Psychology*, 28, 45-59.

Wacker, D.P., Steil, D.A., & Greenebaum, F.T. (1983). Assessment of discrimination skills of multiply-handicapped preschoolers and prediction of classroom task performance. *Journal of the Association for the Severely Handicapped*, 8, 65-78.

Walker, J., Lin, Y.,H., & Martin, G.L. (1994). Auditory matching skills and the Assessment of Basic Learning Abilities test: Where do they fit? *Developmental Disabilities Bulletin*, 22(1), 1-15.

Walker, J., Martin, G.L. (1994). Teaching an auditory matching task to persons with developmental disabilities. *Developmental Disabilities Bulletin*, 22(1), 16-26.

Walker, J., Martin, G.L., & Graham, M. (1991). Rapid teaching of an auditory two-choice discrimination to severely mentally handicapped persons. *Journal of Practical Approaches to Developmental Handicapped*, 15(2), 8-11.

Ward, R. (1995). Bridging the gap between visual and auditory discrimination learning in children with severe developmental disabilities. Unpublished Ph.D. thesis, University of Toronto.

Witt, J.C., & Wacker, D.P. (1981). Teaching children to respond to auditory directives: An evaluation of two procedures. *Behavior Research of Severe Developmental Disabilities, 2,* 175-189.

Yu, D., & Martin, G.L. (1986). A comparison of two procedures to teach visual discriminations to severely mentally handicapped persons. *Journal of Practical Approaches to Developmental Handicapped, 10,* 7-12.

Yu, D., Martin, G.L., & Williams, L. (1989). Expanded assessment for discrimination learning with mentally retarded persons: A practical strategy for research and training. *American Journal on Mental Retardation, 94,* 161-169.

APPENDIX A-1

Score Forms

Data Sheet For ABLA Test

Subject_____ **Tester**_____ **Observer**_____ **Date** _____

Instructions: If response is correct, circle trial number. If response is incorrect, place X on trial number. Continue to place Xs for incorrect responses on the lines below until the student corrects the error. Upon correction, place a check mark on the next line below, and then move on to the next trial.

Level 1 (Imitation)   **Ask, "Where does it go?"**
Passing criterion includes 8 correct trials in a row as follows:
- 4 trials with foam + box
- 4 trials with foam + can

1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, **not** counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers **and** X's on lines)? FAIL!!! STOP THE WHOLE TEST.

Data Sheet For ABLA Test

Subject_____ **Tester**_____ **Observer**_____ **Date** _____

Instructions: If response is correct, circle trial number. If response is incorrect, place X on trial number. Continue to place Xs for incorrect responses on the lines below until the student corrects the error. Upon correction, place a check mark on the next line below, and then move on to the next trial.

Level 2 (Position)

Can and Box remain stable
Ask, "Where does it go?"
Correct container is **yellow can**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)?
That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

Data Sheet For ABLA Test

Subject_____ **Tester**_____ **Observer**_____ **Date**_____

Instructions: If response is correct, circle trial number. If response is incorrect, place X on trial number. Continue to place Xs for incorrect responses on the lines below until the student corrects the error. Upon correction, place a check mark on the next line below, and then move on to the next trial.

Level 3 (Visual)   *'L' and 'R' indicate correct placement of can*
Ask, "Where does it go?"
Correct response is **foam in can**

L	R	L	L	R	L	R	R	R	L	L	R	L	R
1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	R	R	L	R	R	R	L	R	L	L
15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	R	R	L	R	L	L	R	L	R	R	L
29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)?
That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

Data Sheet For ABLA Test

Subject_____ **Tester**_____ **Observer**_____ **Date** _____

Instructions: If response is correct, circle trial number. If response is incorrect, place X on trial number. Continue to place Xs for incorrect responses on the lines below until the student corrects the error. Upon correction, place a checkmark on the next line below, and then move on to the next trial.

Level 4 (Match-to-Sample)   'L' and 'R' indicate correct placement of can
'b' indicates to present little red box.
'c' indicates to present small cylinder.
Ask, "Where does it go?"

R	R	L	R	L	L	R	L	L	L	R	R	R	L
c	b	b	c	c	b	b	c	b	c	b	c	b	b
1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	R	R	L	R	L	R	L	L	R	R
b	c	c	c	b	c	b	b	b	b	c	c	c	b
15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	R	L	L	R	R	L	L	L	R	L	L
b	b	c	c	c	b	b	c	c	b	b	c
29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, **not** counting checks during error correction)? That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers **and** X's on lines)? FAIL!!! STOP THE WHOLE TEST.

Data Sheet For ABLA Test

Subject_____ **Tester**_____ **Observer**_____ **Date** _____

Instructions: If response is correct, circle trial number. If response is incorrect, place X on trial number. Continue to place Xs for incorrect responses on the lines below until the student corrects the error. Upon correction, place a checkmark on the next line below, and then move on to the next trial.

Level 6 (Auditory-Visual) "L" and "R" indicate correct placement of can
Say, "Red Box" (RB) or "Yellow Can" (YC)

R	R	L	L	R	R	L	L	L	L	R	R	L	L
RB	YC	YC	RB	YC	RB	YC	RB	YC	YC	RB	YC	RB	RB
1	2	3	4	5	6	7	8	9	10	11	12	13	14
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	R	R	L	L	R	L	R	R	L	L
YC	YC	RB	YC	RB	YC	YC	RB	RB	YC	RB	RB	YC	YC
15	16	17	18	19	20	21	22	23	24	25	26	27	28
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—

L	L	R	L	L	R	R	R	L	R	R	L
YC	RB	RB	YC	YC	RB	RB	RB	YC	YC	YC	RB
29	30	31	32	33	34	35	36	37	38	39	40
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

8 right in a row (counting circled numbers, not counting checks during error correction)?
That's a PASS. Go to next level.

8 wrong altogether (counting X's on numbers and X's on lines)?
FAIL!!! STOP THE WHOLE TEST.

Appendix B

The Kerr-Meyerson

AVC Test

Lorraine DeWiele & Garry Martin

University of Manitoba

Introduction

A major difficulty in teaching basic skills to severely developmentally disabled persons is to decide what should be taught to whom. Why are some severely developmentally disabled individuals capable of performing a certain task while other individuals of the same developmental level are unable to perform the task even after hundreds of attempts? Why are certain individuals successful at mastering some training tasks, yet unable to perform seemingly similar tasks even after hundreds of trials? How can teachers know which types of tasks an individual can perform? When preparing daily activity schedules for these students, are there certain characteristics in tasks that a teacher should become aware of to maximize the student's chance for successful performance?

Psychologists Nancy Kerr and Lee Meyerson devoted considerable time to the study of how developmentally disabled individuals learn to perform everyday self-care, educational and work related tasks. They noted that successful performance of many daily tasks requires the ability to recognize the difference between the positions of objects (a position discrimination), between the appearance of objects (a visual discrimination), and between various sounds (an auditory discrimination). For example, for a person to be capable of a visual discrimination they must be able to recognize the difference between two sights, e.g., a picture of a bat versus a picture of a ball. For a person to be capable of an auditory discrimination they must be able to recognize the difference between two sounds, e.g., the spoken words "bat" and "ball". If a person does not have the ability to make these discriminations, then tasks which require these abilities will be very difficult for that person to perform.

Kerr and Meyerson suggested that individuals who are unsuccessful at certain daily tasks may be deficient in their ability to make relatively simple position, visual, and auditory discriminations which are prerequisites for these tasks. They developed practical, easy to construct, and easy to use instrument called the Assessment of Basic Learning Abilities (ABLA; Kerr, Meyerson, & Flora, 1977). The ABLA (formerly called the AVC test) measure the ease or difficulty with which a student can learn to reliably perform the prerequisite skills involved in most daily tasks. The following pages (copied from an article written by Kerr, Meyerson and Flora) describe the six levels of the AVC.

PART I
MENTALLY RETARDED CHILDREN AND ADULTS

1
THE MEASUREMENT OF MOTOR, VISUAL AND AUDITORY DISCRIMINATION SKILLS

NANCY KERR, LEE MEYERSON, and JUNE A. FLORA

In several schools for retarded persons, over the years, one persistent puzzle for the authors has been the inexplicable failure of some children to learn a new discrimination under the same system of reinforcement of successive approximations, and with the same teacher, that previously had resulted in rapid learning of other discriminations. For example, a severely retarded child learned to recognize his own printed name after 15 training trials but still performed at chance levels on color, size, or shape discrimination after hundreds of training trials. Because it is impossible to ascribe this kind of failure to new or unskilled teachers, an untested program, weak reinforcers or similar sources of experimental error, we were impelled to examine more closely the nature of the discrimination skills required to master the learning tasks commonly presented to retarded persons.[1]

BASIC DISCRIMINATION SKILLS REQUIRED BY CURRICULA FOR THE MENTALLY RETARDED

Our examination of curricula for retardates in many programmed and traditional training settings revealed that, regardless of the specific tasks that were taught in different settings to different age groups, the following kinds of behavior frequently were required.

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[1] We were aided in this search by Harlow's (1949) research on learning-to-learn skills in lower organisms; and by Meyerson's (1956) observation that retarded children, who had normal hearing for pure tones, performed less well than normally intelligent children on a measure of hearing for speech.

Kerr, Meyerson, and Flora

Imitation

The beginning steps of many teaching programs assume that the learner will follow a demonstration performed by the teacher. For example, she may put an object into a container and ask the child to do likewise.

Position Discrimination

Many early learnings require that children respond appropriately to locations of objects that remain in relatively fixed positions. A child may learn to put toys in a box; to go to his own bed rather than someone else's; to place a towel in the clothes hamper rather than in the commode; to proceed from the classroom door to the bus outside. A child who starts from the same place each time, and engages in motor behavior that leads in an appropriate direction, is making a position response. Although vision may be used, a correct response does not necessarily depend on looking at what is being done. A child who consistently places an object in a container on the left, when two containers are presented in a fixed position, is making a simple position discrimination.

Visual Discrimination

A child demonstrates that an object has become a visual, discriminative stimulus (Sd) when s/he follows the object as it moves around in relation to other stimuli. A child's printed name is a controlling Sd when s/he can single it out correctly no matter where it appears in relation to the names of other children. A child's mother is a visual Sd for approach behavior if s/he runs to her, no matter where she appears in relation to other people. A visual discrimination is present also if a child consistently places an object in one container regardless of its position relative to a different looking container.

Match-to-Sample

Many classroom tasks that are precursors to concept learning require skill in matching-to-sample. Children may sort objects according to color or size; and/or match figures to the cut-out recesses of puzzle boards. Students learn to draw lines similar to those shown on a sample sheet of paper, or to place toys on shelves that are labeled with pictures. Although children may not be under the verbal control of the words "same" or "different," some are able to pair two stimuli that are identical in one respect, such as color. A child demonstrates matching-to-sample behavior if, when allowed to view yellow and red receptacles and then presented sequentially with a yellow cylinder and a red cube, s/he places the yellow cylinder in the yellow can and the red cube in the red box.

Auditory Discrimination

Much training is facilitated if the learner responds appropriately to a word spoken by the teacher. A child

is under the control of verbal *Sds* if s/he consistently puts a neutral, non-matching object in the appropriate container when the examiner says, "Put it in the red box" or "Put it in the yellow can." In this task, correct responding to an auditory discrimination does not require vision if the two containers remain the same position.

Auditory-Visual Combined Discrimination (AVC)

Programs designed to teach simple concepts such as color, shape, size, or identification of objects or pictures, generally require that the child come under the simultaneous control of visual and auditory *Sds*. Only a learner who has AVC discrimination skills can identify one of two randomly designated objects requested vocally when the spatial position of the correct object changes randomly from right to left on trial to trial.[2] A child demonstrates AVC skill if s/he puts a object into a yellow can or a red box, when the position of the containers and the teacher's request

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[2]In the specialized training of the blind, many concepts are taught by combining auditory *Sds* with tactual and/or kinesthetic *Sds* (ATC or AKC). The deaf may learn concepts by way of multiple visual discriminations (VVC) and/or visual *Sds* combined with tactual and/or kinesthetic *Sds* (VTC or VKC). However, mentally retarded youngsters who have no known visual or auditory impairment, are generally exposed to training programs that require AVC discrimination for success.

for one or the other are alternated randomly.

BASELINE MEASURES OF DISCRIMINATION SKILLS

Most baseline measures designed for retardates are checklists of relatively global, learned behaviors. Assessments are made of eating skills, dressing competence, toileting independence, or skill with numbers or colors. These assessments measure outcomes. They do not identify the discriminations that are required for successful performance. Global measures have limited utility both in specifying the component discriminative skills that a child has in his repertoire and in identifying what discriminations need to be developed for further learning to occur.

Baseline measures of imitation and the five kinds of discriminations described, which are more basic than complex checklists of performance, may be more useful measures. If it were known, for example, that particular children learn some kinds of discriminations more quickly than others, programs teaching a variety of behaviors could be used that require only the easily made discriminations. At the same time, the children could be given intensive, sequential, training programs designed to produce mastery of more difficult discriminations. The end result would be a procedure that would facilitate teaching and reduce frustration in learning.

Facts about the AVC

♦   The AVC discrimination tasks are arranged from Level 1, least difficult, to Level 6, the most difficult. This is referred to as a difficulty hierarchy. Therefore, an individual who has passed a particular level will be successful when taking the lower levels. Further, an individual who has failed a particular level will not be successful when attempting higher levels.

♦   Another finding about the AVC is that when an individual fails a level on the AVC, teaching that individual how to pass that level is very difficult. For example, if a person fails Level 4, s/he often continues to fail that level even after hundreds of trials.

♦   One of the most significant merits of the AVC is that the student's test performance can be used to predict the type of daily tasks that a student will be able to successfully master with relative ease. This ability to predict the student's performance on other tasks is called *predictive validity*. If an individual passed Level 4, visual match-to-sample, for example, you could predict that s/he would readily learn everyday, visual match-to-sample tasks, such as sorting silverware at a restaurant. If that person passed Level 3 but failed Level 5, you would know that s/he could complete everyday Level 3 (visual discrimination) tasks, such as washing vegetables until they are free from dirt, but that person would experience great difficulty mastering a Level 5 task (auditory discrimination), such as being able to discriminate between the spoken words "cream" vs. "sugar" spoken by a customer in

the cafeteria on the job site.

To learn how to test someone on the AVC, the following appendices have been copied from the same article written by Kerr, Meyerson and Flora as above. Appendix A is the Data Recording Form that you will be completing while you test the student; Appendix B describes what the student must do to pass a level of the AVC; and Appendix C provides general instructions for giving the test. Please take this time to review pages 9-19.

APPENDIX A

DATA RECORDING FORM

Learning To Learn

Name _____   Time Start _____

Teacher _____   Finish _____

Date _____

Instructions: If response is correct, circle trial number. If response is incorrect, place X on trial number. The task is complete when eight (8) consecutive correct trials are made. Discontinue when eight (8) errors have accumulated. Errors that occur as part of correction trial (see procedures) should be underlined, X. If a child corrects an error during a correction trial do *not* record a correct trial.

Task #1 (Demonstration)
    Present one container at a time
Trials: *Red Box*
      1 2 3 4 5 6 7 8
      9 10 11 12 13 14 15 16

   Yellow Can
      1 2 3 4 5 6 7. 8
      9·10 11 12 13 14 15 16

Notes:

Task #2 (Position)
    Correct stimulus is yellow can (Can & Box remain stable)
Trials:
      1 2 3 4 5 6 7 8
      9 10 11 12 13 14 15 16
     17 18 19 20 21 22 23 24
     25 26 27 28 29 30 31 32

Notes:

Task #3 (Visual)
    Correct stimulus is yellow can (or same as Task #2) positioned as indicated below.
Trials:

    L R L L R L R R
    1 2 3 4 5 6 7 8

    R L L R L R R L
    9 10 11 12 13 14 15 16

    L L R L R R L R
   17 18 19 20 21 22 23 24

    R R L R L L R L
   25 26 27 28 29 30 31 32

    L R R L R L L R
   33 34 35 36 37 38 39 40

Notes:

APPENDIX A

Task #4 (Matching-to-Sample)
Red Box and Yellow Can alternate as indicated. Present Red Cube (box) or Yellow Cylinder (can) as indicated below.

Trials:

```
R  R  L  R  L  L  R  L
C  B  B  C  C  B  B  C
1  2  3  4  5  6  7  8

L  L  R  R  R  L  L  R
B  C  B  C  B  B  C  B
9  10 11 12 13 14 15 16

L  L  R  L  R  R  L  R
B  C  C  C  B  C  B  B
17 18 19 20 21 22 23 24

L  R  L  L  R  R  L  L
B  B  C  C  C  B  B  C
25 26 27 28 29 30 31 32

L  R  L  L  R  R  L  L
B  B  C  C  C  B  B  C
33 34 35 36 37 38 39 40
```

Notes:

Task #6 (AVC)
Correct stimulus is what you ask for as indicated below. Containers alternate as indicated below.

Trials:

```
R  R  L  L  R  R  L  L
B  C  C  B  C  B  C  B
1  2  3  4  5  6  7  8

L  L  R  R  L  L  R  R
C  C  B  C  B  B  B  C
9  10 11 12 13 14 15 16

L  L  R  L  R  R  L  L
C  C  B  C  B  C  C  B
17 18 19 20 21 22 23 24

R  L  R  R  L  L  R  R
B  C  B  B  C  C  B  C
25 26 27 28 29 30 31 32

L  L  R  L  L  R  R  L
C  B  B  C  C  B  B  C
33 34 35 36 37 38 39 40
```

Notes:

Task #5 (Auditory)
Correct stimulus is the one you ask for as indicated below. (Containers remain stable.)

Trials:

```
B  B  C  B  C  C  B  C
1  2  3  4  5  6  7  8

C  B  C  C  B  C  B  B
9  10 11 12 13 14 15 16

C  B  B  C  B  C  C  B
17 18 19 20 21 22 23 24

B  C  B  B  C  B  C  C
25 26 27 28 29 30 31 32

B  C  C  B  C  B  B  C
33 34 35 36 37 38 39 40
```

Notes:

APPENDIX B

Necessary and Sufficient Conditions For Passing Each Task

Two early decisions, namely, to use meaningful words as auditory stimuli and to allow the appropriate visual and auditory stimuli to be present during all the tasks, may make the sorting out of the necessary and/or sufficient conditions for success on each task somewhat confusing

The first decision, the choice to use the words *Yellow can* and *Red box* as stimuli, did not imply that the student had to understand the concepts of can, box or color to succeed. Nor were the participants necessarily learning those concepts as they learned the discrimination tasks. The words were simply two auditory stimuli; success was possible if the person perceived them as two different sounds and associated each with the proper container. The tasks could have been administered just as effectively with nonsense syllables. Our only reason for using real words was that it seemed almost immoral to spend a lot of time teaching retarded children nonsense; and we wished to avoid the possiblity that a child might go home and start calling boxes "wugs."

The second decision, to allow all visual and verbal stimuli to be present rather than to test for each skill in isolation, was made because we were trying to simulate the conditions under which training would ordinarily occur in school and to make the tasks as easy as possible. Therefore, the child, when making the position discrimination, for example, could both see the stimuli and hear the auditory cues. He was free to utilize these cues if he could, but they were not necessary for success.

Following is a detailed description of the effects of these two decisions on the degree to which each task provided the necessary and/or sufficient conditions for making the discrimination named in that task.

Imitation. The necessary and sufficient conditions for passing the imitation task were as follows: (a) the ability to imitate the demonstration of a model, (b) enough motor coordination to grasp a piece of foam and put it in the container, and (c) enough cooperation to complete the task. Therefore, failure on the first task could *not* be interpreted to mean that the child was unable to imitate. Some cerebral palsied children could not be tested with the materials employed; and, despite the fact that most children with extreme behavior problems were tested successfully, an occasional child could not be induced to cooperate—even by testers with outstanding behavior modification skills.

Position Discrimination. Responding to the discriminative stimuli produced by the child's own motor movements provided only a sufficient condition for success on this task. A person could be lacking kinesthetic or proprioceptive feedback and pass by responding to the visual *Sd.* To make the motor cues both the necessary and sufficient condition for success, the child would be tested while he was blindfolded, but only in rare instances would there by any reason for needing such information.

Visual Discrimination. Perception of the visual *Sds* (can and box) provided both the necessary and sufficient cues for passing the task. If the child visually tracked and responded to the same object, no matter what position in was it, s/he succeeded. Conversely, no matter how well the student understood what s/he was supposed to do, or what auditory *Sds* were present, s/he could not pass the test with eyes closed.

Match-to-sample. The visual *similarity* between the cube and box and between the cylinder and can constituted a sufficient condition for passing the task. However, because the auditory *Sds* were present, a child could succeed by employing AVC skills.

More recently, in work with normal infants, it was of interest to determine with certainty whether the matching-to-sample behavior was solely under the control of visual stimuli. Therefore, the auditory cues, "Put it in the red box" (or yellow can), were eliminated and became "Where does this go?" Also, the instructions given prior to each new task eliminated any naming of the objects. (See Appendix C for details.) This small procedural change created a situation in which the visual similarities between the manipulanda and containers were the necessary and sufficient *Sds* for success. The results from a new group of 20 normal youngsters between 2 and 3 years of age who had AVC skills indicated that, regardless what was said, they used the visual cues to match-to-sample (Texidor, 1976). They were tested first with the new instructions and then with the old. No child made an error with either procedure; under both sets of instructions, their eyes darted back and forth from the containers on the table to the cube or cylinder in hand as they decided where to place it.

Subsequent work (Chapters 4, 5, 7, and 8) with both normal and retarded children confirmed the belief that children respond to the visual simularity in the Match-to-sample task. Their behavior on matching-to-sample with the new instructions was identical to that of children who received the old instructions.

Auditory Discrimination. The Auditory *Sds* constitute a necessary, but not sufficient condition for success on this task. Because the can and box remain in the same position, vision is not necessary . One could learn to go to the right when hearing *Red box* and to the left when hearing *Yellow can*. Or, without a position discrimination, AVC skills could be employed. There is no way to test for this type of auditory discrimination without combining it with some other discrimination. An observer cannot tell whether two sounds have been perceived as different unless the subject produces different responses in the presence of each.

Auditory-Visual Combined Discrimination (AVC). Visual discrimination, auditory discrimination, and the appropriate pairing of sound and object provide the necessary and sufficient conditions for success. A person could fail if he lacked either visual or auditory discrimination, or, having both, failed to pair the visual and auditory stimuli appropriately.

APPENDIX C

Instructions for Administering Learning-to-Learn Tasks

1. Please read all materials carefully. If a procedure is described fully in an earlier task, the full description is not repeated in later tasks.
2. Gather together all necessary materials and be sure you understand how to use them in each task.
3. Be sure you understand how to correct errors and how to score the independent responses at the end of a correction trial.
4. Be sure you understand the difference between no response and incorrect response.
5. Be sure you understand how to read the single and double codes on the data sheets.
   a. I and II aren't coded.
   b. III and V have a single code (III to tell you if the correct can should be on the right or the left, and V to tell you whether to ask for the "yellow can" or "red box.")
   c. IV and VI are double coded. Use one line of the code to tell you whether red box should be on right or left. In IV use the second code line to tell you whether to give the child the cylinder or cube; and in VI whether to ask for the "yellow can" or "red box."
6. Having done all this, work through these tests with someone who already knows what he's doing!

Materials for Learning-to-Learn Skills

1. Big, yellow, plain, round can
2. Little, red, striped, square, box
3. Neutral color or white wad of rubber foam
4. One small, yellow cylinder
5. One small, red cube
6. Data sheet and pen
7. An assortment of reinforcers   candy, chips, juice, water

Tasks

   I. Demonstration (Imitation)
   II. Position
   III. Visual Discrimination
   IV. Match-to-sample
   V. Auditory Discrimination
   VI. AVC (Audio-visual combined discrimination)

APPENDIX C

SUMMARY OF LEARNING TO LEARN TASKS[1]

Task	Visual Sds (Containers)	Position of Containers	Correct Response	Auditory Sds	Manipulanda
I. Imitation	1 at a time	1 in front of child	a) Put foam in can (2 trials) b) Put foam in box (2 trials) c) Put cube in box (2 trials) d) Put cylinder in can (2 trials)	"Put it in"	rubber foam, cylinder, cube
II. Position Discrimination	2	2 containers in front of child-*stable* position	Yellow can	"Where does it go?"	neutral (rubber foam)
III. Visual Discrimination	2	*alternate* position *randomly*	Yellow can	"Where does it go?"	neutral (rubber foam)
IV. Match-to-Sample	2	*alternate* position *randomly*	a) Yellow can b) Red box	"Where does it go?"	a) Yellow cylinder b) Red cube (presented *randomly*)
V. Auditory Discrimination	2	*stable* position	a) Yellow can b) Red box	a) "Put it in the yellow can." b) "Put it in the red box." (presented *randomly*)	neutral (rubber foam)
VI. AVC Auditory-Visual Combined Discrimination	2	*alternate* position randomly	a) Yellow can b) Red box	a) "Put it in the yellow can." b) "Put it in the red box." (Presented *randomly*)	neutral (rubber foam)

[1]This table shows the stimuli that are being employed in research currently in progress. Note that the auditory Sds for Tasks II, III, and IV are different from those shown in Table 1 of the text. See Appendix B for explanation of change.

Appendix C

I. DEMONSTRATION

Goal: (1) To see if child can and will follow a demonstration of "putting it in the can"; (2) To insure that he can use the materials needed in the other tasks.

Materials: Can, box, rubber foam, cube, cylinder, reinforcers, data sheet, and pen.

Setting: Place *one* can on table in front of child. (When s/he has four correct responses with one container, repeat whole procedure with other container)

Demonstration and Instruction: Demonstrate putting a piece of foam in the container: help child do it; let child do it alone. When s/he does so, you are ready to start scoring. Use whatever verbal explanation seems comfortable. (S/he's probably not listening anyway.)

Procedure: Give child another piece of foam and say, *put it in.* You may repeat the instruction, *Put it in* and gesture, but don't physically guide the response.

    Correct Response: If s/he does put it in, praise child, hand child another piece and say, *Put it in.* After *four* consecutive responses, switch containers, demonstrate again and repeat procedure. (Circle number of data sheet.) Offer food intermittently (whatever it takes to keep child responding). Use foam twice with each container; cube twice with box; cylinder twice with can.

    Incorrect Response: If foam lands anywhere but in container, response is wrong (place x over number of data sheet), start over, and correct the response, saying, *No—it goes in here,* demonstrate, help do it and ask child to do it "all by yourself." (If s/he corrects at this point, *do not mark on data sheet.* If s/he makes another incorrect response at this point, *score another error on the data sheet, with notation that it was made on a correction trial,* and repeat demonstration, help, and request for independent response).

    No Response: Do not score any response until the child lets go of the foam. A trial begins when s/he has the foam in hand and you say, *Put it in,* and ends with a score of correct or incorrect when s/he lets go of it.

Criterion for Failure: On the 8th incorrect response—give up! Don't try to go on with other tasks. S/he may be a bright child who simply can't grasp or coordinate enough to use the materials, in which case we need to find another response s/he can make, or s/he may not understand what's going on, in which case s/he needs to go into an imitation program.

Criterion for Success: 4 *consecutive* correct responses using *each* container.

II. Position Discrimination

Goal: To see if the child can and will put the foam in the same container each time, when given a choice of two, when containers are left in the same position.

Materials: Same as I.

Setting: Can and box placed in front of child.

Correct Response: Placing foam in yellow can.

Demonstration and Instruction: Show child each container and identify it. Say *Now I'll put it in here,* demonstrate, help do it, ask child to do it alone. When s/he does, you are ready to start.

> *Procedure:* Give child another piece of foam and say, *Where does it go?* Leave cans in the same position through this task, and the yellow can is always correct. Just leave the red box sitting there ignored. You may repeat the instruction, but give no additional verbal or physical clues.

> *Correct Response:* Drops foam in yellow can, or if child's hand goes into can up to wrist say, *good,* and get child to drop it. Praise child for every correct response and offer food intermittently.

> *Incorrect Response:* Drops foam in red box. Remove foam and say, *No—here's where it goes,* demonstrate, help, etc. Scoring the same as in Demonstration—i.e., if s/he makes another error on correction trial count another error. If s/he corrects, don't mark anything.

> *No Response:* Don't score any response until the child has put it in one container or the other. If s/he throws it or eats it or otherwise disposes of the foam, s/he is simply not doing the task, s/he's not doing it wrong. (This is different from the instructions for I, but will remain true for all subsequent tests). An incorrect response is scored only if foam is put in the wrong container.

Criterion for Failure: On 8th error, stop. Continue with III.

Criterion for Pass: 8 *consecutive* correct responses.

III. Visual Discrimination

Goal: To see if child can and will follow the same "correct" container when its position changes.

Materials: Same as I.

Appendix C

Setting: Can and box in front of child. *Remove containers after each trial and replace in same position or switch positions according to code on data sheet.* (Random alternation).

Correct Response: Yellow can. Say, *Where does it go?* Use *same* correct response as you did for II. All that's different now is that the yellow can starts to move!

Demonstration and Instruction: Same as II.

Procedure: Same as II except for alternating position of containers randomly.

  Correct Response: Same as II.

  Incorrect Response: Same as II.

  No Response: Same as II.

Criterion for Failure: Same as II. Continue through V anyway, and if no more are passed, stop.

Criterion for Success: Same as II.

  If child has gotten this far successfully in five minutes or so, continue with IV, V, and VI. Otherwise, terminate session.

IV. MATCH-TO-SAMPLE

Goal: To see if child can and will compare two similar visual stimuli and place appropriate object in its "matching" container.

Materials: Can, box, *small replicas of can and box*, data sheet and pen.

Setting: Can and box in front of child. Remove containers after each trial and alternate randomly as in III. Also, present small replica (cylinder or cube) according to code on data sheet. Data sheet is double coded here.

Correct Response: If the child puts the yellow cylinder in the yellow can or the red cube in the red box, s/he is correct.

Demonstration and Instruction: Show child each container and the object to be put in each. Compare yellow cylinder with yellow can, demonstrate, help, and let child do it. Compare red cube with red box, and go through it all again. When s/he has successfully placed each object in its appropriate container, you're ready to start.

Procedure: Same as II except for following double code on data sheet to determine how to switch containers and whether to hand child red cube or yellow cylinder. Give appropriate verbal instruction: *Where does it go?*

  Correct Response: Procedure same as II.

Incorrect Response: Procedure same as II (correction, etc.).

No Response: Same as II.

Criterion for Failure: Same as II.

Criterion for Pass: Same as II. (s/he will put appropriate object in appropriate can regardless of position of can or whether s/he is dealing with cube or cylinder.)

V. AUDITORY DISCRIMINATION

Goal: To see if the child can and will respond correctly to two different speech sounds, *Yellow can* and *Red box.*

Materials: Same as I.

Setting: Can and box in front of child. *Leave them in same position throughout this task.*

Demonstration and Instruction: Give instructions, *Put it in the* **red box,** or *Put it in the* yellow can, demonstrating, helping, and letting child do it. Speak clearly and draw out "y-e-l-l-o-w c-a-n" raising voice slightly at end. Say "red box" slowly but in stacatto fashion in lower voice, (This will give the greatest chance of having the two requests sound as different as possible.) Continue to make them different throughout task.

Procedure: Give another piece of foam and say, *Put it in the* yellow can or *Put it in the* red box depending on code on data sheet. (Single code on data sheet.)

Correct Response: Procedure same as II.

Incorrect Response: Procedure same as II except that the words "yellow can" and "red box" can be used during correction trials.

No Response: Same as II.

Criterion for Fail: Same as II.

Criterion for Pass: Same as II.

VI. AVC (AUDITORY AND VISUAL COMBINED DISCRIMINATION)

Goal: To see if the child will associate a particular auditory stimulus with a particular visual stimulus, when visual stimulus changes position and order

Appendix C

of auditory stimulus is randomized. (This skill is necessary for identifying pictures in a book, learning simple concepts like shape, color, size, learning numbers, etc.)

Materials: Same as I.

Setting: Same as before, except that containers are removed after each trial and replaced according to code on data sheet (randomly alternating) and requests for "red box" and "yellow can" are randomized according to code on data sheet. (Double coded data sheet.)

Demonstration and Instruction: Same as V.

Procedure: Same as V except that positions of containers change randomly.

    Correct Response: Same as V.

    Incorrect Response: Same as V.

    No Response: Same as V.

    Criterion for Fail: Same as V.

    Criterion for Pass: Same as V.

References

Kerr, N., Meyerson, L., & Flora, J. A. (1977). The measurement of motor, visual, and

auditory discrimination skills. Rehabilitation Psychology, 24, 95-112.

Appendix C

Administration of the Kerr-Meyerson

ABLA Test

Comprehension Exam
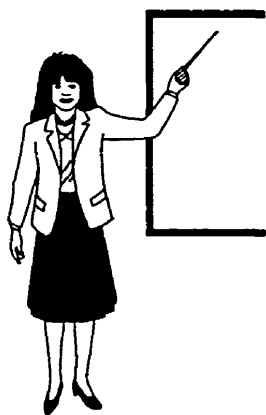
The following questions are based upon information about the ABLA which you have read and reviewed in the first portion of A Self Instructional Manual for the Kerr-Meyerson ABLA Test, by Lorraine DeWiele and Garry Martin. Please complete the exercise by filling in the blanks with the correct words or circling the correct answer where appropriate.

1. If an individual is unable to complete a single response at a particular level then the teacher should regard the assessment as invalid / classify the student at the preceding level.

2. Prior to presentation of the can during testing of Level 1, the student should have demonstrated _____ _____ correct responses with the foam and the box.

3. Level 3 is a two-choice _____ discrimination.

4. If a student passes Level 3 of the ABLA, the student is likely / not likely to pass Level 2.

5. The three objects (not the containers) presented to the student during testing of various ABLA levels are a _____, a _____, and a piece of _____.

6. Other rewards such as _____ may be provided after approximately every three correct responses.

7. To obtain the student's attention prior to each trial, the teacher should offer the student some fruit / state the student's name.

8. The error correction procedure consists of a _____, a _____, and an opportunity for an _____.

9. During the testing of Level 1, you should place _____ container(s) in front of the student at a time.

10. The ABLA involves a simple _____ task and 5 ___-___discrimination tasks which are presented to the student in a specific order.

11. If a tester looks at a data recording form and sees a circle around trial #1, an 'X' over trial #2, two lines under trial #2 and another 'X' over trial #3, the performance by the student when given an opportunity to respond independently was one right, four wrong /

one right, three wrong, one right, one wrong.

12. If a student has performed two correct responses on a particular level and then makes an error, following the two correct trials, the teacher should place an _____ over the next trial number and perform the _____ _____ procedure.

13. Level 6 is an _____ plus _____ combined discrimination.

14. If a teacher looks at a data recording form and sees an 'X' over trial #1, an 'X' over trial #2, and a circle around trial #3, the performance by the student when given an opportunity to respond independently was three wrong, one right / one wrong, one right, one wrong, two right.

15. The containers involved in the testing of Level 6 - Auditory-Visual are the ____ and the ____.

16. During the testing of Levels 2 through 6 the teacher records an incorrect response if the student places the foam anywhere other than in the correct container / in the incorrect container.

17. The position of the containers during the testing of Level 3 - Visual discrimination are stable / alternated from one trial to the next.

18. When testing Level 4 of the ABLA, the teacher provides a demonstration, guided trial, and opportunity for independent response with both the cube and the cylinder / only the first object presented.

19. The spoken prompt "Red Box" in the testing of Levels 5 and 6 should be presented in a _____, _____ manner.

20. If a teacher looks at a data recording form and sees a circle around trial #1, an 'X' over trial #2 and a circle around trial #3, the performance by the student when given an opportunity to respond independently was one right, one wrong, two right / one right, one wrong, one right.

21. If the student attempts to eat the foam during the testing of Level 1 then you should

score this response as <u>no response / an incorrect response.</u>

The End!

ANSWER KEY
<u>Administration of the Kerr-Meyerson ABLA Test</u>

1. classify the student at the preceding level 2. four; consecutive 3. visual 4. likely 5. cube; cylinder; foam 6. edibles 7. state the student's name 8. demonstration; guided trial; independent response 9. one 10. imitation; two-choice 11. one right, three wrong, one right, one wrong 12. X; error correction 13. auditory; visual 14. one wrong, one right, one wrong, two right 15. can; box 16. in the incorrect container 17. alternate 18. both the cube and the cylinder 19. short; quick 20. one right, one wrong, two right 21. an incorrect response

Appendix D

Speed Exam for ABLA Administration

The purpose of the following exam is to test your ability to quickly and accurately administer the ABLA. This is a timed exam and therefore you will be required to move through the exam quickly in order to finish within the specified time restrictions. You have 20 minutes to complete the exam. Some of the questions require you simply to circle the correct answer, while others require written answers. In some cases questions may have more than one correct answer. A data sheet is provided for your reference. When you have completed the exam please turn your sheet over.

Please answer questions 1-6 based on the following information.

Sam, a developmentally disabled boy whom you have just met for the first time, is seated across a table from you. You wish to assess Sam's basic learning abilities using the ABLA test.

1.   First you should _____ yourself, and ask Sam if he would like to participate.

2.   For Level 1, although you use both containers, you will present the _____ _____ before the yellow can.

3.   You are now conducting the demonstration. The box is placed in front of the student and the foam is in your hand. You say "Sam,_____."

Now, you begin testing on **Level 1 - Imitation** and let's assume that he does not make any mistakes.

4. You are now beginning trial #3. What container are you going to present?

_____

5. You're now at trial #5 and the container on the table is the _____.

6. What object would you present for trial # 6? _____.

Please answer questions 7-11 with respect to the following information.

You have now finished recording the 8th consecutive correct response for Level 1 - Imitation, and want to start **Level 2 - Position Discrimination.**

7. What might you say to Sam to let him know you are going to begin a new task?

_____

8. The verbal prompt provided in Level 2 is "_____ ____

___ ___?"

9. You are now offering Sam an opportunity for an independent response. You state "Where does it go?" and give him the foam. Sam just stares at the foam in his hand. After about 10 seconds you should repeat his _____ and the ____ ____.

10. You are now beginning trial #3. You provide the verbal prompt and Sam places the foam on the table. What should you mark on the recording form?_____

11. Sam places the foam in the red box. The first thing the experimenter might say before marking the recording form is "__._____".

Please answer question 12-16 with respect to the following information.

You have just begun **Level 3 - Visual Discrimination** testing with Sam.

12. If Sam places the foam in the yellow can, what might you say?

_____

13. After giving Sam 30 seconds to respond to the verbal prompt, he gets up and starts to cry and pushes you away. What should you do?

_____

14. You have just finished marking the data sheet and know that the can is to be placed on the left, what do you do next? ____ and ____the containers.

15. You are beginning trial #2, the correct placement of the red box is on which side?_____

16. Sam has just responded incorrectly to trial #8 and you have marked an 'X' on the data sheet. In the opportunity for independent response, Sam once again responds incorrectly. What should you mark on the data sheet? _____

Please answer questions 17-20 with reference to the testing of Level 4.

You have just finished circling trial #1 of **Level 4 - Visual Match-to-Sample Discrimination.**

17. You then look at the data sheet for the position of the

_____ and for the _____ to provide to the student.

18. You are ready to 'mix up' the containers for the next trial. How should this be done?

_____

19. Once you are ready to begin the trial, you provide the object and say "_____ _____

_____ _____?"

20. You're now handing Sam the object for trial #6, what is it? _____, which side

is the box on? _____

Please answer questions 21-25 will reference to the following information.

You begin giving the verbal prompt for **Level 5 Auditory Discrimination**. Suddenly

before you can finish the prompt, Sam takes the foam and places it into the yellow can.

21. You should count the trial as <u>an error/take the foam out of the container and hold</u>

<u>onto it while you state the prompt.</u>

22. On the first attempt of a later trial, Sam responds correctly and is praised. The next

thing you should do is _____.

23. You see a 'B' on the data sheet for the trial, the correct verbal prompt for the trial is

_____ _____.

24. In Level 5, you <u>do/do not</u> have to look at the data sheet for container position.

Please answer questions 25-29 based on the following information.

You are now testing Level 6 and have just circled trial #3.

25. You now check the data recording form for 1) _____, 2)

_____.

26. Trial #12 would require Sam to place the foam in the container on the _____

side.

27. Trial #21 would require Sam to place the foam in the container on the _____ side.

28. For trial #21 Sam places the foam in the container on the left side. What would you mark on the data sheet? _____

29. For trial #23 Sam places the foam in the container on the right side. What would you mark on the data sheet? _____

<center>***</center>

30. What can you do to prevent Sam from placing the foam in the container before you finish the prompt? _____

31. In order to help remember what the 'R' and 'L' represent what might you do?

ANSWER KEY
Speed Exam

1. INTRODUCE. 2. RED BOX.
3. "PUT IT IN."
4. RED BOX. 5. YELLOW CAN. 6. FOAM.
7. "WE HAVE NOW COMPLETED THIS TASK,
   NOW LET'S TRY SOMETHING NEW".
8. "WHERE DOES IT GO?". 9. NAME; VERBAL PROMPT.
10. NO RESPONSE IS RECORDED.
11. "NO, THAT'S NOT WHERE IT GOES."
12. "VERY GOOD SAM". 13. STOP TESTING,
    ATTEMPT AT LATER DATE.
14. MIX; POSITION. 15. LEFT.
16. A LINE UNDER TRIAL 8. 17. CONTAINER; OBJECT.
18. REMOVE THE CONTAINER'S FROM THE STUDENT'S VISION, 'MIX
THEM UP', AND PLACE THEM IN FRONT OF THE STUDENT AGAIN.
19. "WHERE DOES IT GO". 20. CUBE; RIGHT.
21. TAKE THE FOAM OUT OF THE CONTAINER AND HOLD ONTO IT
WHILE YOU STATE THE ENTIRE PROMPT. (DON'T COUNT THE
RESPONSE.) 22. MARK A CIRCLE AROUND THE TRIAL. 23. RED BOX.
24. DO NOT.
25. POSITION OF THE CONTAINER; VERBAL PROMPT.
26. RIGHT. 27. LEFT. 28. CIRCLE AROUND TRIAL #21.
29. 'X' OVER TRIAL #23.
30. HOLD ONTO THE FOAM UNTIL THE PROMPT IS FINISHED.
31. WRITE PERSONAL REMINDERS ON THE DATA RECORDING FORM.

Appendix E

Task Classification Exam

The following examples were selected from daily tasks of residents at a residential

training centre for developmentally disabled persons. It is assumed that the client must

perform the task repeatedly.

Please classify these tasks according to the highest ABLA level that you feel is

necessary for the resident to complete the task. You may write your ABLA classification in

the margin to the left of each task. Tasks with more than one step will need a rating for

each step. ** Use Table 1 (p.4) and "Important Questions To Ask if You Want to get your

Task Classification Right" (p.58) to help you.

1.   A resident is standing beside a staff member. The staff member asks the resident,

       "What is the weather like outside?" The correct response would involve the resident

       telling the staff what the weather outside is like.

This is a Level _____ task.

2.   A resident is at an ice rink with his skates on. He is standing on the ice with a staff

       member physically supporting him. The staff physically guides the resident to a

       railing located around the outside of the ice. The staff member says "try to skate,"

       and points to a young girl who is holding the railing with one hand and slowly

       moving her feet in order to glide forward. The correct response involves the resident

       moving along the ice the same way as the young girl.

This is a Level _____ task.

3. On the desk in front of a client is a long, narrow, rectangular piece of wood with several holes on the top (see picture #3). Masking tape is placed around the holes and is colored one of several colors. The location of each color is changed by the staff from time to time. There are golf tees of a variety of colors on the desk in front of the resident. The colors of the golf tees match the colors of the masking tape. The golf tees stay in the same place. There are also many plastic bags in the centre of the desk. The staff asks the client to package the golf tees. The correct responses involved are:

3

Golf Tees   **Plastic Bags**
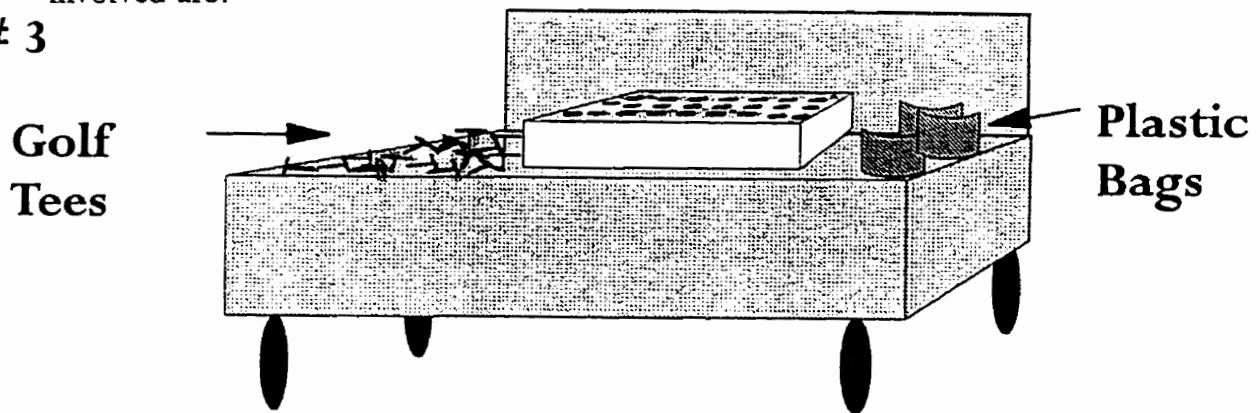
i)   Pick up a golf tee

This is a Level _____ task.

ii)   Place the tee in the correct spot in the wood by matching the color of the tee to the color of the tape around the hole, and repeat until the all the holes are full

This is a Level _____ task.

iii) Remove all the tees and place them in a plastic bag in the centre of the desk.

This is a Level _____ task.

4.   A resident has just put on ice skates in the dressing room at an ice skating rink. There is a concrete floor. Some areas of the floor are covered with matting that moves around from time to time. The resident is asked to walk on the mat to prevent possible damage to their skates. The correct response involves the resident walking only on the area with the matting.

This is a Level _____ task.

5.   A resident is seated in a bath tub filled with water. A staff member places a wet, soapy, face cloth in the hand of the resident and instructs him to wash a part of his body. The specific body part requested changes from time to time (e.g., sometimes he is asked to wash his hands, sometimes he is asked to wash his feet). The correct response involves the resident washing the part of his body that he was asked.

This is a Level _____ task.

6.   On a desk is pile of bingo chips (see picture #6). There are four different colored chips in the pile. There is also a long plastic container with four individual spaces. Each space contains one color of bingo chip. The location of each color of bingo chip stays the same. A staff member asks the resident to sort the bingo chips. The correct response is to pick up each bingo chip and place it in the space with bingo chips of the matching color.

6

Bingo Chips→

Plastic Container with
Bingo Chips Inside
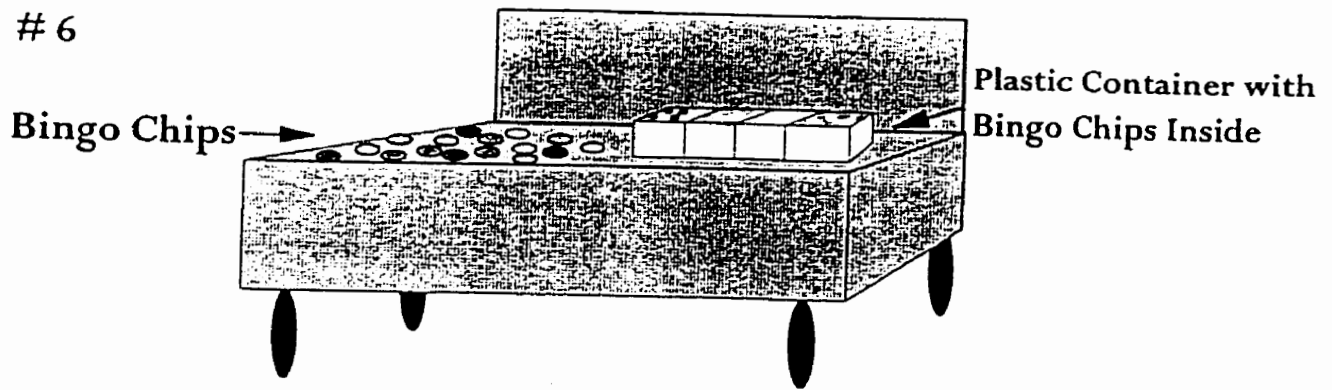
This is a Level _____ task.

7.   The client is seated at a desk. There are three buckets in front of the client which

always stay in the same place (see picture #7). One bucket contains plastic caps.

The other bucket contains plastic faucets. The third bucket contains the finished

work. The staff ask the client to put the faucets into the caps. The correct responses

include:

7

Capped
Faucets

Caps
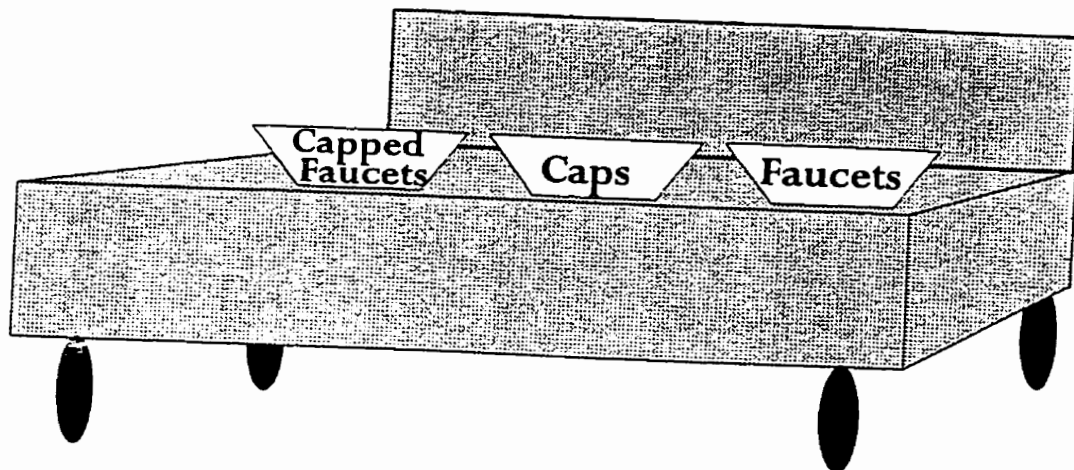
Faucets

7. (i) Pick up a cap.

This is a Level ____ task.

(ii) Pick up a faucet.

This is a Level ____ task.

(iii) Screw the faucet into the cap.

This is a Level ____ task.

(iv) Place the finished work into the bucket with the other capped faucets.

This is a Level ____ task.

8. The client is seated at a desk. There are two buckets in front of the client (see picture #8). The location of these buckets stays the same. One bucket contains a stack of rectangular cardboard labels (which when folded are attached to a bag of tent pegs to form the title). These cardboard labels have a dotted line down the centre. The other bucket contains the finished work. The staff asks the client to fold labels. The correct responses include:

 # 8

Folded Labels   Labels
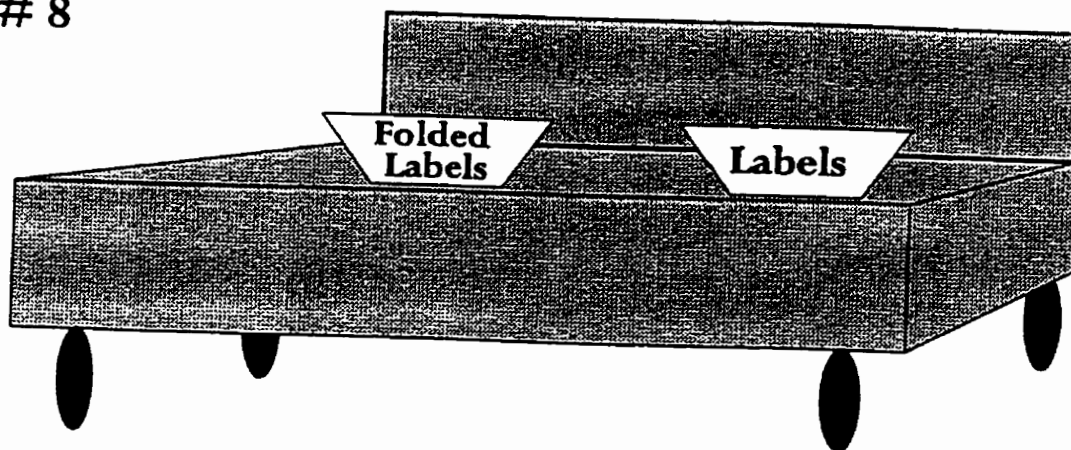
8.   (i)   Pick up the label.

This is a Level ____ task.

    (ii)   Fold the label along the dotted line.

This is a Level ____ task.

    (iii)   Place the folded label into the bucket with the other folded labels.

This is a Level ____ task.

9.   The client is seated at the desk. There are four buckets on the desk in front of him

    (see picture #9). Each bucket contains one of the following: plastic knives in bundles

    of ten; elastic bands; twist ties; or the finished work. There is also a stack of plastic

    bags on the desk beside one of the buckets. There is a drawing on the table of ten

    knives. The location of all the materials stays the same. The staff ask the client to

    bag cutlery. The correct responses include:

#9 Plastic Bags — Bags of Knives / Twist Ties / Elastics / Bundled Knives — Picture of Knives
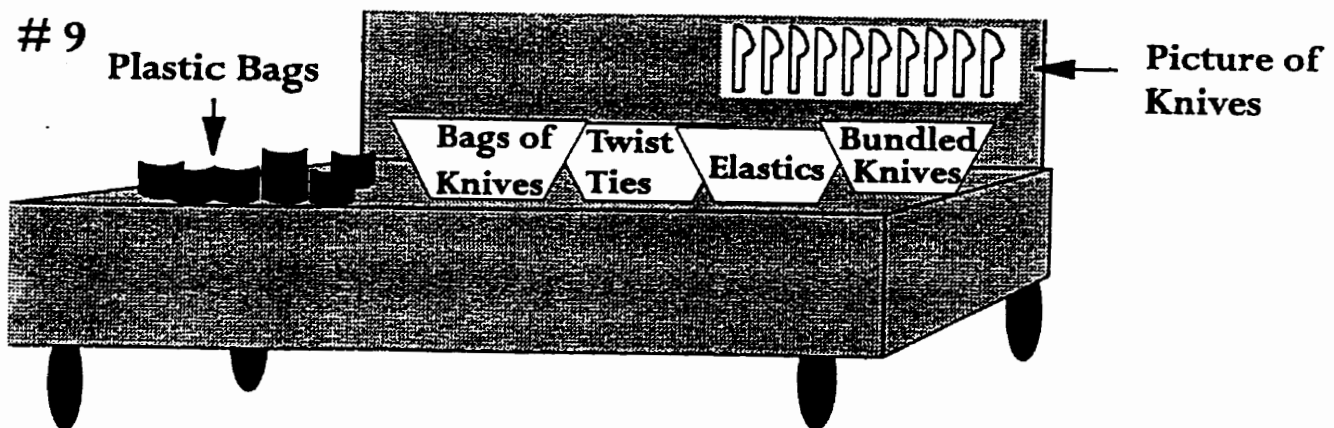
9.   (i)   Pick up a bundle of knives and match it to one of the knives on the drawing.

This is a Level ____ task.

    (ii)   Repeat step (i) until all of the knives on the drawing have a bundle which matches them.

This is a Level ____ task.

    (iii)   Once there is a bundle on each drawing of a knife, pick up one of the bundles and remove the elastic band.

This is a Level ____ task.

    (iv)   Pick up a plastic bag.

This is a Level ____ task.

    (v)   Place the 10 knives (with the elastic removed) into the plastic bag with the handle end first.

This is a Level ____ task.

    (vi)   Repeat steps (iii), (iv), and (v) with each bundle of knives until you have taken the elastic off all of the bundles and placed all of the knives (total of 100) into the plastic bag. **Hint: It is not necessary to know that 100 knives are in the bag.**

This is a Level ____ task.

    (vii)   Pick up a twist tie.

This is a Level ____ task.

    (viii)   Place it around the top of the bag and close the bag by   twisting the tie.

This is a Level ____ task.

    (ix)   Place the closed bag into the bucket with the other finished work.

This is a Level ____ task.

10. On the desk is a picture of five zoo animals. The client has a highlighter marker. The staff asks the client to search for and mark an elephant. The correct response involves finding each elephant and marking it with the highlighter. Each time the staff instructs the client to mark a different animal, that is, sometimes they may say mark an elephant and other times they may say mark a bear. The position of the animals is always the same.

This is a Level ____ task.

11. The client is seated at a desk. There are two buckets in front of the client which always stay in the same place (see picture #11). One bucket contains empty plastic bags and the other bucket contains tent pegs. On the desk in front of the client there is a picture of 12 tent pegs. The staff asks the client to place the pegs into the bag. The correct responses include:

11

Plastic Bags

Tent Pegs

Picture of Tent Pegs
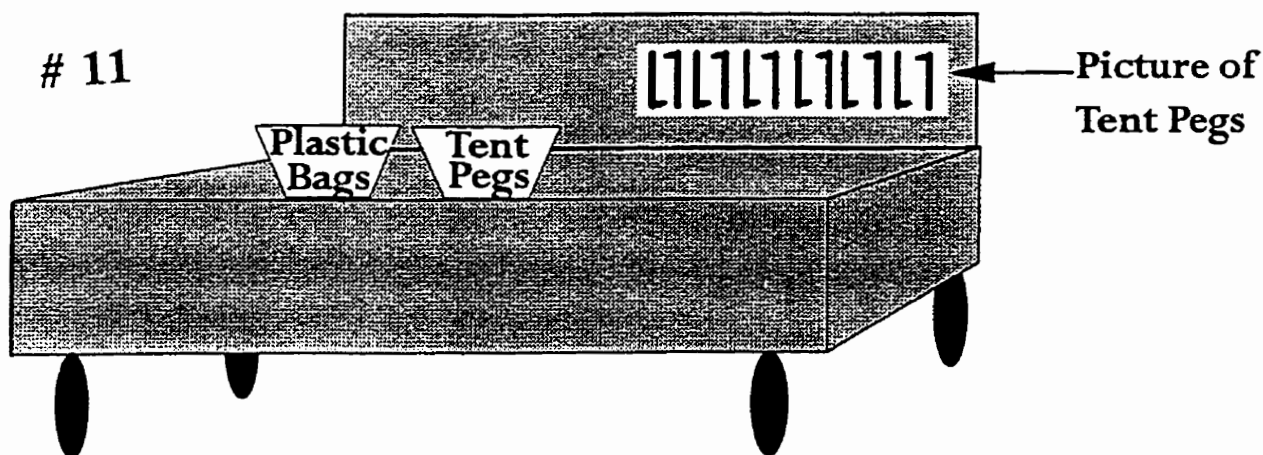
(i)   Pick up a tent peg.

This is a Level ____ task.

(ii)   Place the tent peg on one of the tent pegs in the picture until all the pictures

have a matching peg on them.

This is a Level ____ task.

(iii)   Gather up all the pegs.

This is a Level ____ task.

(iv)   Take a plastic bag from the bucket.

This is a Level ____ task.

12.   On the desk is a shape puzzle. This puzzle has 4 wooden pieces shaped like pieces of

fruit which fit into 4 spots of the same shape on the puzzle. The wooden pieces have

been removed from the puzzle and are on the table. The location of the pieces

changes each time the client makes the puzzle. The staff asks the client to make the

puzzle. The correct responses involve placing the shape of the banana in the space

for the banana, etc.

This is a Level ____ task.

ANSWER KEY

Exam on Task Classification

1. **Level 6** - involves thinking about and describing the actual weather.

2. **Level 1** - presence of a model.

3. i) **Level 2** - tees are always in the same position;
   ii) **Level 4** - must match the color of the tee to the color of the masking tape around the hole which changes from time to time;
   iii) **Level 2** - tees in hole remain in the same position and bags are in the resident's hand with the top open.

4. **Level 3** - involves using sight to determine where the mat is to walk on, and the instructions are always to "walk on the mat". It's Level 3 (and not Level 2) because the mat moves around.

5. **Level 5** - the resident must *hear* the difference between the request to wash various body parts in order to wash the correct spot, and over trials, those body parts are in the same position.

6. **Level 4** - the resident must match the bingo chip to the correct compartment of sample bingo chips.

7. (i) **Level 2** - Location of the caps always remains stable;
   (ii) **Level 2** - same reason as above;
   (iii) **Level 2** - there is no model, and the position of the faucet and cap is always in the client's hands;
   (iv) **Level 2** - Location of the bucket with the capped faucets remains stable;

8. (i) **Level 2** - Location of the headers remains stable;
   (ii) **Level 3** - involves using sight to fold along the dotted line;
   (iii) **Level 2** - Location of the folded labels stays the same.

ANSWER KEY CON'T
Exam on Task Classification

9. (i) **Level 4** - must match the bundle of knives to one of the knives on the drawing;

    (ii) **Level 4** - same reason as above;

    (iii) **Level 3** - involves use of sight to determine where the elastic is on the bundle;

    (iv) **Level 2** - location of the plastic bags stays the same;

    (v) **Level 3** - involves use of sight to determine that the knives are placed in the bag with the handle end down;

    (vi) **Level 3** - same reason as above;

    (vii) **Level 2** - location of the twist ties stays the same;

    (viii) **Level 3** - involves the use of sight to twist the tie around the top (rather than the end) of the bag.

    (ix) **Level 2** - Location of the finished work stays the same.

10. **Level 5** - must be able to hear the difference between the different animals that the staff instructs to mark.

11. (i) **Level 2** - tent pegs always in the same place;

    (ii) **Level 4** - must match the tent peg to one of the tent pegs

    pegs in the picture;

    (iii) **Level 2** - pegs stay in the same position;

    (iv) **Level 2** - bags stay in the same position.

12. **Level 4** - must match the shape of each puzzle piece to the space for each piece.

Appendix F

Session Instructions

General Instructions

Good-morning and thank-you for coming to this supervised field study project. On the desk in front of you is a manual that contains information on how to administer an assessment measuring an individual's ability to perform simple auditory and visual discriminations. During the three hour session today you will be asked to read the manual and take two quizzes. During the next session you will be asked to review the manual and take two quizzes. During the third session you will be required to actually assess an individual, who will be role-playing somebody with a developmental disability. Finally, in the fourth session you will review the manual again and write a quiz on how to classify tasks.

While you are reading today remember that you will eventually be requested to actually administer this test to somebody. Please use the manual to prepare yourself the best that you can.

Please do not make any marks in the book. There is scrap paper available to make notes, and answer questions if applicable. You may also mark on the data recording forms that you have been provided if you wish. We are unable to answer any questions regarding the manual and testing procedures. Just try your best based upon the information in the book. The results of the exams will be monitored by Dr. Martin and performance of individual students may provide one source of information for him, for selecting students for future research projects.

Please spend the next hour and a half reading the manual. We will then take a 15 minute break, and continue after the break for an hour and 15 minutes. If you finish reading early, please review and study the manual or sit quietly. You may begin.

Appendix G
Procedural Reliability Checklist

Participant: _____
Tester: _____
IOR: _____
IOR & P _____

Procedural Reliability
Level 1

Level 1	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up (4 box, 4 can)										
Demonstration										
Guided Trial										
Independent Response										
"Put it in," Model task										
"Put it in"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Level 1	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up (4 box, 4 can)										
Demonstration										
Guided Trial										
Independent Response										
"Put it in," Model task										
"Put it in"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Procedural Reliability
Level 2

Level 2	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Where Does it Go?"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Level 2	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Where Does it Go?"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Procedural Reliability
Level 3

Level 3	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Where Does it Go?"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Level 3	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Where Does it Go?"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Procedural Reliability
Level 4

Level 4	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Where Does it Go?"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Level 4	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Where Does it Go?"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Procedural Reliability
Level 5

Level 5	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Red Box / Yellow Can"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Level 5	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Red Box / Yellow Can"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Procedural Reliability
Level 6

Level 6	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Red Box / Yellow Can"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Level 6	Y	N	Y	N	Y	N	Y	N	Y	N
Set Up										
Demonstration										
Guided Trial										
Independent Response										
"Red Box / Yellow Can"										
If Correct .... Praise										
If Incorrect ... "No ...", Then go back to Demo.										

Appendix H

Consumer Satisfaction Questionnaire

Please answer the following questions on the usefulness of the manual by indicating a number between 1 and 5 (i.e., 1 = not at all, 3 = somewhat, 5 = very good).

1. How easy was the manual for you to read and understand? _____

2. How well did the manual prepare you for taking the quizzes on the manual? _____

3. How well did the manual prepare you for the actual testing of individuals? _____

4. How useful do you feel the manual is for testing developmentally disabled individuals? _____

5. How interesting did you find this experience? _____

Thank-you for participating !!!!

Appendix I

Survey on a Clinically-Significant Difference

Background Information:

1. Approximately how many times have you administered the ABLA? (Please check one.)

    ____ 0 - 15 times

    ____ 16 - 50 times

    ____ 51 - 100 times

    ____ 101 + times

2. Approximately how many hours experience do you have with the ABLA (i.e., administering, teaching others, scoring, reviewing the literature)? (Please check one.)

    ____ 0 - 50 hours

    ____ 51 - 100 hours

    ____ 101 - 300 hours

    ____ 301 - 500 hours

    ____ 501 + hours

3. Approximately how many years have you worked in the field of developmental disabilities? (Please check one.)

_____ 0 - 4 years

_____ 5 - 10 years

_____ 11 - 20 years

_____ 21+ years

Introduction

In view of your expertise on the ABLA test, we are requesting your help in socially validating a research project that we recently completed. The project compared two strategies for teaching university students and direct-care service providers about the ABLA test. One strategy involved an experimental group who studied a self-instructional (SI) manual on the ABLA. The second strategy involved an equal or greater amount of time, with a control group of participants, who studied selected parts of the original Kerr-Meyerson monograph on the ABLA. After the SI-M group and the Control group had completed a comparable amount of studying, they were compared on six measures:

Comprehension Exam. A general comprehension exam was administered to each of the participants to assess their knowledge of ABLA testing procedures. The exam was comprised of 21 short-answer and multiple-choice questions. There were no time constraints placed on the participants with respect to exam completion.

Speed Exam. This exam attempted to assess how quickly and accurately the

participants could respond to questions about the ABLA. The purpose of this exam was to approximate the time restrictions present when testing individuals with developmental disabilities. The exam consisted of a variety of short-answer questions as well as a number of multiple-choice questions. There were 31 questions in total and the participants were required to complete them within 20 minutes.

Procedural Reliability (P) in Administering the ABLA. To determine whether the participant followed the correct procedure, two individuals, independent of the participant, completed a procedural reliability checklist during the first ten trials of each level of the ABLA assessment. To calculate the P, both observers recorded whether the participant followed the necessary steps in the procedure. Following administration of the test, the total number of steps upon which the observers agreed that the participant followed the procedure was divided by the total number of steps and multiplied by 100.

Reliability on Scoring Trial by Trial Performance of a Client/Roleplayer. IOR regarding the testee's score on the ABLA was determined by comparison of the score assessed by the participant with the score independently assessed by at least one other observer of that testee's performance during an ABLA assessment. To calculate the IOR both the participant and an additional observer recorded each trial that the testee completed as either correct or incorrect on the data recording form. Following administration of the test, the total number of trials upon which the observers agreed was divided by the total number of trials and multiplied by 100.

Reliability of the ABLA Classification of Client/Roleplayer. This was also determined by comparing the ABLA classification determined by the participant, to the ABLA level of the client as assessed by an observer in that session or to the ABLA level that

the testee role-played.

Task Classification Exam. This exam consisted of a description of 12 tasks that are

commonly presented to developmentally disabled persons. Several of the tasks had

subcomponents, resulting in ABLA classification of 30 task-steps in total. These tasks were

previously compiled from programming and residential areas within MDC and were reliably

classified by experts (as defined by DeWiele & Martin, 1995) on the ABLA with respect to

highest level of the ABLA necessary to complete the task successfully with relative ease.

Results

After two training sessions, each approximately 3 hours in length, the individuals

assigned to the SI condition yielded means of 98% on the Comprehension Exam and 96% on

the Speed Exam, in comparison to means of 66% and 59% yielded by the individuals in the

Control condition on the respective exams. With respect to the applied skills of the ABLA

administration, specifically the procedural reliability of the test procedures, the reliability of

trial-by-trial scoring, and classification of clients/roleplayers according to the levels of the

ABLA that they can perform, the SI condition produced means of 83%, 86%, 100%

respectively. On the same measures of accuracy, the Control condition produced means of

68%, 86%, and 86%.

With respect to classification of tasks according to the levels of the ABLA necessary

to perform those tasks with relative ease, the individuals assigned to the SI condition yielded

a mean of 96% in comparison to that of 48% produced by the individuals in the Control

condition. For overall comparisons of the SI and Control conditions please see the tables on

the next page.

Table 1 - Knowledge of the ABLA Test

Exams on Knowledge	SI condition	Control condition
Comprehension	98%	66%
Speed	96%	59%
Task Classification	96%	48%

Table 2 - ABLA Administration

Applied Measures	SI condition	Control condition
Followed Test Procedures	83%	68%
Trial by Trial Scoring Accuracy	86%	86%
Correct ABLA Classification	100%	86%

Ratings

Considering the above results, please answer the following questions with a rating from 1 to 7, where: **1 = definitely no, 4 = to some extent, 7 = definitely yes.**

1.   Does the difference between the two groups on the comprehension test represent an important, clinically significant difference?

    1   2   3   4   5   6   7

2.   Does the difference between the speed test represent an important, clinically significant difference?

    1   2   3   4   5   6   7

3.   Does the difference between the two groups in reliably classifying tasks according to their ABLA levels represent an important, clinically significant difference?

    1   2   3   4   5   6   7

4.   Considering the combined results of the applied measures of the ABLA administration in Table 2, does the difference between the two groups represent an important, clinically significant difference?

    1   2   3   4   5   6   7

5.   Considering the results described previously, and considering that the mean study time for the SI condition was 4 hours 27 minutes, and the mean study time for the Control condition was 5 hours 35 minutes, would you recommend the SI-M for instructing direct-care service providers about the ABLA?

    1   2   3   4   5   6   7