Basics Principles of Applied Behavior Analysis (ABA) and the TeachTown®: Basics Computer-Assisted ABA Program

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TeachTown®: Basics is a comprehensive computer-assisted ABA program intended to provide learning tools and teaching strategies for children with a developmental age between 2 and 7 years. The program uses evidence-based practices from over 30 years of research in Applied Behavior Analysis (ABA), Education, Speech and Language, and Developmental Psychology. TeachTown's “off-computer” learning activities follow the developmentally sequenced curriculum and automatically coordinate with the computer lessons. For convenience, these activities can be printed out and used in a teacher-learner instructional environment that can also incorporate peer-interaction. This combination of systematic instruction on the computer and “real-life” teaching interactions are intended to optimize the child’s educational program. There is no need to be an expert to use these activities with the child – they are designed for anyone including parents and support staff. TeachTown®: Basics provides an extensive data tracking system that exceeds where can view the child’s overall progress through the entire curriculum or look at individual lessons and rates of acquisition (including data on independent responses and prompted responses).

Behavior Analysis/Behaviorism is the science that studies environmental events that change behavior (Baer, Wolf, & Risley, 1968). Behavior analysis has become the most successful approach to understanding human behavior. The Experimental Analysis of Behavior provides the method for studying behavior and the environmental variables that influence behavior. Includes continuous observation of the behavior, precise descriptions of behavior and independent variables, and automated recording whenever possible. Experiments are usually done in controlled environments and most often with animals. Applied Behavior Analysis (ABA) provides a method for studying behavior and the environmental influences. However, ABA involves humans and only behavior of social significance. Because of the individuals involved, it does not always involve continuous observation or well-controlled environments. ABA is designed to permit people to understand, prevent and remedy behavioral problems and to promote learning. ABA stems from its main attributes: performance based, analytical, technological, socially important, contextual, and accountable. (Sulzer-Azaroff, Mayer, 1991).
ABA is Performance Based which means that it focuses on behavior and the environmental factors that influence it, must be operationally defined, and must be objectively measurable. TeachTown®: Basics is performance based in regards to the student’s performance on the pre-tests, lessons, and post-tests. When used to the fullest extent (and often most effective with the guidance of an expert in ABA or child development), TeachTown®: Basics can offer an all-inclusive system to facilitate an educational treatment program for a child with ASD that is based on performance both on the computer lessons and within the suggested instructions of the off-computer activities.

ABA is Analytical and uses methods of analysis that yield in convincing, reproducible, and conceptually sensible demonstrations of how to accomplish specific behavioral changes (Baer, Wolf, Risley, 1987). The role of the behavior analyst is to investigate and analyze the relationship between the environment, individual and what maintains behavior before choosing treatment. TeachTown®: Basics is most beneficial when used with the guidance of a behavior analyst or other qualified professional so that analysis can be conducted both with the computer lessons and with the off computer lessons. However, when experts are not available or affordable, TeachTown®: Basics can provide an alternative to such services by providing the parents or teachers tools for performance measurement, off computer activities for generalization, and explanation of strategies to promote behavioral change.

ABA is Technological and replicating behavioral change to demonstrate its effectiveness is what is at the heart of the science of behavior. When the analysis of what is maintaining or changing behavior is accurate, the treatment procedures or methodology can be replicated across environments, individuals, materials, and instructors. Without a conceptual system and technologically sound description, Cooper, Heron, and Heward (2007) state that it would be otherwise just “a collection of tricks.” TeachTown®: Basics uses some of the basic principles often found in ABA. TeachTown®: Basics attempts to increase correct responses by offering contingent reinforcement, intermittent reinforcement, prompting, and fading, and uses extinction to decrease behavior.
*TeachTown®*: *Basics* attempts to maintain student motivation by providing choices throughout the program, intersperses maintenance tasks, and allows facilitators strategies to avoid satiation. This program also focuses on generalization through varying instructions, providing multiple exemplars, varying tasks, and encouraging off-computer activities for each lesson.

**ABA must be Socially Important** because ABA takes place in real world settings – classrooms, lunchrooms, bathrooms, an individual’s home, the grocery store, the park, and other community settings. Sometimes, the focus of the individual’s program is to change behaviors that have been determined undesirable. In most high quality programs, the focus of the individual’s program are in developing a communication system, increasing language development and conceptual understanding, enhancing academics and cognitive skills, and building independence in every day life routines. Most importantly, there will be plans and goals that focus on generalization of newly acquired skills. This can include using the new skill in multiple environments, with various people, recognizing the skill across a variety of exemplars and materials, and demonstrating the new skill across time. *TeachTown®*: *Basics* uses evidence-based practices from over 30 years of research in Applied Behavior Analysis (ABA), Education, Speech and Language, and Developmental Psychology. The *TeachTown®*: *Basics* curriculum includes computer lessons and off-computer activities that focus on areas such as social-emotional development, receptive language and comprehension development, academics/cognitive skills, self-help and independence, play skills, motor skills, social communication, and safety/community awareness. The student not only learns developmentally and socially appropriate skills, but there are also guidelines on how to generalize and maintain learned skills into the natural environment as well as decrease problematic behaviors.

**ABA must be Contextual** and consideration of the context in which the behavior occurs has significant importance. This would include, but is not limited to, the individuals’ physical state (hungry, tired, sick, etc.), the instructional environment (new place, familiar setting, home, classroom, etc.), relationship
with the instructor (e.g. parent, teacher, aide, behavioral consultant, etc.), and on
the school bus, preferred tasks vs. unpreferred tasks). All of these factors can
significantly alter an individual’s performance positively and/or negatively.

TeachTown®: Basics is a convenient tool in numerous contexts. For parents, often
times TeachTown®: Basics can provide a recipe for how to play with a child or it can
provide a moment of independent work time on the computer. For teachers and
clinicians, TeachTown®: Basics can provide convenient and excessive data collec-
tion, management tools for large IEP/treatment teams, it can provide alternatives
to working effectively with multiple children, and offers additional resources for
lesson/IEP/treatment goal planning. For researchers, it can provide an efficient
tool for assessing the effectiveness of various methods for learning, provide a
tool for building innovative and effective teaching tools, and provide compre-
hensive data for analysis. For children, it can expand reinforcer repertoires, pro-
vide means of generalization, and offer a tool that can foster independence and
empowerment.

ABA needs to be Accountable and ABA investigators (therapists, researchers,
teachers, parents) usually continue to address a problem until a solution has
been found (Sulzer-Azaroff, Mayer 1991). Often enough, altering behavior in a
beneficial way may not be adequate in the eyes of who is involved. Behavior ana-
lysts have started to take a look measuring the social impact of behavior in other
ways. Often times, treatment plans and IEPs are derived from a team approach,
surveys are conducted to determine social validity, a team of experts will have
equal responsibilities in accomplishing new skills in a particular individual, and
person centered planning is conducted whenever possible.

TeachTown strives to research their products, investigate what is working and not
working for their customers and students, continue to improve current products
and make them widely available to current subscribers as well as new clientele,
and focuses on providing only what is socially significant to the lives of their stu-
dents within TeachTown®: Basics. In addition, our focus on using evidence from
research studies and conducting studies of our own on our products helps to
assure customers that the practices used are evidence-based.
REFERENCES

