

## THE BEHAVIORAL DEVELOPMENT-BASED LEARNING METHOD

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### ABSTRACT

**B**ehavioral development-based learning is a new educational method that aims to arouse interest in learning, to internalize and actualize knowledge, to observe behavioral factors learnt, and to maintain these behaviors in students. The implementation processes of the method are: defining and describing the behavior, making feel the need, becoming a model, supplying the behavior, using repetition and reinforcement, parental education/participation, social projects, and recording and giving feedback. Although the educational programs in which the methods are implemented have been intended for pre-school, the method is suitable for all educational stages.

**Keywords:** Learning, education, behavioral development.

## 1.Introduction

Behavioral development-based learning is a new educational method that aims to arouse interest in learning, to internalize and actualize knowledge, to observe behavioral factors learnt, and to maintain these behaviors in students. This method has been improved in accordance with Turkish culture and social structure. Behavioral Development-Based Education aims to provide effective education in accordance with Turkish culture, and to sustain the behavior permanently in children.

In the behavioral development-based learning method, the educational program is built on actualizing the change from educational knowledge into behavior (e.g. theme: responsibility – sub-heading: my personal responsibilities – behavior: I should tidy up my toys). The children are educated through their own learning channels (play, drama, finger games, stories, art activities, and science activities) as they act upon the principle of pleasure and have a limited attention span; in addition, behavioral patterns become routine with the reinforcement of conditioning and repetitive projects. Including the family in the education is among the method's principles.

## 2.Reasons/Motives for Practicing Behavioral Development-Based Learning Method

- Learning not transforming into behavior, and occupying the memory as knowledge accumulation only
- Students acquiring knowledge without processing it in their minds (away from experiential richness) and staying in a carrier position
- The instructors losing their professional enthusiasm
- Learning not being enjoyable, leading to the emergence of learning lethargy
- Not monitoring as to whether the learning has turned into behavior
- The instructors not paying sufficient attention to the learning process and methods due to the concern of obtaining immediate feedback
- Limiting learning within the school's boundaries
- Absence of top-to-bottom education through identification and side-by-side education through peer education
- Basing the learning on extrinsic motivation, and not including intrinsic motivators in the curriculum (evoking needs and arousing curiosity)
- Not including social life into learning
- Dealing with holistic gains rather than individual ones
- The family's insufficient participation in the educational process
- Conditions in which individual differences are not reflected in education

The aforementioned reasons gave rise to the development of a behavioral development-based learning method. The model was developed in consideration of the conditions in question, and the subsequent needs.

In this aspect, the behavioral development-based learning method is a learning method that:

- ✓ Creates a requirement for learning
  - ✓ Aims to develop behavior
  - ✓ Both instructors and learners would enjoy
  - ✓ Exerts reinforcements with behavioral repetitions
  - ✓ Is concerned more about the process than the outcome
  - ✓ Includes families and instructors in the educational process with vital samples
  - ✓ Is enriched with social learning experiences
  - ✓ Is concerned about peer education
  - ✓ Performs individual learning evaluations
  - ✓ Dwells on the contribution of the care shown to the process by reaching goals
  - ✓ The acquired knowledge steps out of the classroom and is brought into homes and streets
  - ✓ Expands to social life, and is attributed not only to the brain but also to the soul
  - ✓ Occurs through feeding the child's learning channels (drama, tales, stories, art, and science experiments)
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### **3. Origin of the Method**

As a result of the observations in the educational environment and the face-to-face interviews with the instructors, children have difficulty actualizing what they learn in school and in their family and social life, since they do not know where and how to use it. Based upon this observation, the Behavioral Development-Based Learning method was formed during the education of preschool students in Ankara, Sincan district, in 2003, extended by private corporations, and applied to thousands of students in Central Anatolia and throughout Turkey. Throughout the process, by monitoring the changes and developments, and the feedback from students' guardians and instructors, the method was shaped into a learning method. The basis of the method was founded by Sirin,

and countless people contributed to the formation process of the method.

During the improvement of the method, the educational approaches of Piaget, Vygotsky, Skinner, Gardner, and Bloom were used as a starting point.

#### ***3.1 Piaget's Theory of Cognitive Development:***

According to Piaget, the brain performs assimilation, accommodation, and stabilizing functions while processing data (Piaget, 1993). When the learner encounters new knowledge, he/she compares it with the existing knowledge in his/her mind and exerts its assimilation function. If there is incompatibility between the old knowledge and the new knowledge, the learner configures his/her mind according to the new knowledge to realize its accommodation function. Thus, a balance is created in the mind. In this way, learning occurs in a learner-controlled manner. According to Piaget, the age and the development level of the learner should be considered, and the educational content should be planned by considering the features of the learner's development period (Piaget, 1993; Bayhan and Artan, 2007). Evoking the child's curiosity prior to the educational content to be presented and motivating the child is crucial for effective learning (Piaget, 1993).

### ***3.2 Vygotsky's Theory of Cognitive and Language Development:***

According to Vygotsky, educators should consider the sociocultural background of the children when making educational decisions regarding the students' learning (Rose, 2003). Adults and older children guide the child in the learner position to more sophisticated notions, concepts, and skills (Vygotsky, 1985; Wink and Putney, 2002). The difference between the child's capabilities on his/her own and those under the supervision of an adult indicates the potential development area. The child executes more complicated exercises by studying with adults and other children who are more competent, and reaches his/her potential development level (Wink and Putney, 2002). It is important to support the child during the learning process (Wink and Putney, 2002). While Piaget points out to the individualist aspect of learning, Vygotsky emphasizes the sociocultural aspect, and indicates the importance of supporting the child socially (Rose, 2003; Bayhan and Artan, 2007).

### ***3.3 Skinner's Theory of Operant Conditioning:***

According to Skinner, behaviors can be shaped into a certain form by using reinforcement. The stability of adopting an act depends on how quickly it is rewarded. However, it is important that the reinforcement should be able to capture the learner's attention, and has a reinforcing quality (Skinner, 1938; Yesilyaprak, 2002).

### ***3.4 Gardner's Theory of Multiple Intelligences***

According to Gardner's Theory of Multiple Intelligences, the human brain contains the following areas of intelligence: verbal-linguistics, logical-mathematical, musical-rhythmic and harmonic, visual-spatial, intrapersonal, interpersonal, naturalistic, and bodily-kinesthetic (Gardner, 2010). Conventional education considers the first two areas, mathematical and verbal, into account (Gardner, 2006), while the remaining are neglected in our schools. Just as unidirectional feeding creates negative effects on the metabolism, unidirectional intellectual feeding potentially limits development of the mind.

### ***3.5 Bloom's Theory of Mastery Learning***

In the mastery learning model he developed, Bloom studies the reasons for individual differences in mass-learning environments, such as schools, and attempts to explain the required precautions to minimize such individual differences as student, school, and society (Ultanır, 1997). There are four factors affecting the quality of the education service. These are the clues provided to the student, the active participation of the student in the learning process, reinforcement, and feedback-correction (Ultanır, 1997).

## **4. The Principles of Behavioral Development-Based Learning Method**

**4.1 Instructor-Learner:** In the behavioral development-based learning method, the instructor and the family are presented as an identification model to the student. The fact that the instructor, who is an identification model to the students, has not only an instructor-learner relationship with students, but also has an identity that develops himself/herself, and produces projects that create a new behavior model, results in always carrying the joy of learning and being open for improvement. The instructors practicing behavioral development-based learning methods are also in a learner's position with respect to the child, family, and the social environment. The fact that the instructor makes an effort and researches new principles and decisions also motivates the learner. This model is based on the notion that learning is not only the student's duty. It is crucial that the instructor sets learning goals for himself/herself. In this way, the instructor's learning enthusiasm motivates the children.

**4.2 Process-oriented learning:** Process-orientation emphasizes the importance of the time and effort the instructor saves for the process. Different learning processes that lead to the same learning are prepared. Great attention is given to the process. It is considered that learning will become more permanent owing to the care given to the process.

As a result of experiential practice, it has been observed that being goal-oriented prompts the instructor to use shortcut learning models. These learning models cause superficial learning, and are aimed at memorization of cognitive meaning rather than observing permanent behavior in the student (Biggs, 1987). In the behavioral development-based learning model, the diversity of the processes, using a diverse set of stimuli (Puppets, drama, science experiments, and finger plays) and ensuring that the process is sufficiently long creates a basis for permanent learning.

**4.3 Including learning in social life:** While humans are social creatures, the most active place for learning is a human's communication with its social circle. The activities of education that is planned using the behavioral development-based learning method should revolve around social life (family activities, peer activities, neighborhood activities, outdoor activities, relative activities). Based on the principle that states "learning is too invaluable to be restrained between the walls of a classroom", it aims to enrich an individual's memory, as well as being reflected in behaviors, and being prominent in the entire social life by generating a role model. Producing projects that an individual can attribute his/her personal transformation to his/her social circle is among the educational principles.

## 5. The Course of the Method

**5.1 Definition:** The definition corresponds to the instructor determining the topic to be taught and the concept he/she would like the student to achieve. The learner, on the other hand, may be active in determining the topic from time to time.

**5.2 Description of the behavior:** The description of the behavior refers to the articulation of the attainment behaviors that were intended for the learner. It is recommended that these descriptions do not exceed five articles. These behaviors should be concrete and objective (e.g. During the theme "personal responsibilities", it requires stating the behavioral patterns the child will fulfill (washing hands and face before meal, taking a bath, or going to sleep on time) in the articles in the curriculum).

**5.3 Evoking needs:** Evoking needs by indicating the knowledge the instructor will present is one of the most important articles of this learning method. In this aspect, through situations such as award projects that the student would consider "it is really important for me to learn this subject", demonstrating the functionality of the subject in life, grabbing the attention of the learner, and giving the student pre-education by showing certain experiences, it is possible to address to the psychological needs of the child.

**5.4 Being a role model:** Being a role model is based on the principle that the instructor determines additional goals for himself/herself, in addition to the efforts to produce new projects that are related to the subject he/she will learn in life, given behaviors, and acquisitions. The family, instructor, and close circle of contacts, which provide an identification model for the learner, should be involved in the learning process by being role models. At this point, placing emphasis to peer education is extremely important. The child should be paired with children who can be identification models, and the in-group dynamics should be triggered. In this step, relevant historic personalities, movie heroes, and natural events are studied and presented as role models to the students.

**5.5 Feeding the movement:** Feeding the movement indicates that feeding a child's natural learning channels should be within the frame of the subject to be taught (games, stories, tales, drama, visual materials, experiments, and observations). By using educational materials, the instructor addresses individual learning methods (verbal, auditory, and sensory). Methods and materials that would improve multiple intelligences are used. It is essential that the acquired knowledge is used in daily life. These are expressed as vital richness.

**5.6 Using reinforcement with repetition:** Permanent learning is only possible by ensuring repetition for at least 21 days (Aktas, 2012; Okulweb, 2012; Gun, 2001). Reinforcements represent an indispensable prerequisite of subconscious learning. Learning that passes into the subconscious with reinforcements are adapted with others by adjusting them into their own form. The attainments appear in daily life in the form of repeated rituals (Gun, 2001). There is a need to use reinforcement for repetition. According to Skinner, if the outcome of a behavior creates a pleasant and positive condition for an organism, the probability of the given behavior reemerging increases (Senemoglu, 2001). Experiences such as collected cards, phrases of approval, the children achieving any of their desires, and recognition by peers are among the useful forms of reinforcement for repetition.

**5.7 Ensuring Family Education and Participation:** In learning, sometimes the family has greater importance compared to the school. Even when the acquired values are repeated by the family, differences between school and home may arise. In such cases, such as the student being away from school during a holiday, the acquired behavior can be easily lost. The teachings are engraved more quickly in students who are supported by their families and who are presented with an identification model (Aksoy and Turla, 2001; Gur et al., 2012) and become permanent. Encouraging the family in education, informing them about the curriculum, projects that are performed at home, and practice that includes the family in the learning process is considered to be indispensable elements to make learning permanent.

**5.8 Socializing and Social Projects in Practice:** It is crucial to support the acquired knowledge with social projects, and to include them in social life (Gur et al., 2012). Relatives, neighbors, and family friends should be included in the learning process with feasible projects.

**5.9 Recording:** Recording refers to the storing of the development evaluation records in which the students' previous and future conditions are monitored. Through these files, the stages that the learner experienced are observed and recorded.

**5.10 Calling back:** Calling back indicates the process of bringing the students, who were unable to learn the given education at the same level with others, to other students' standard by implementing additional projects.

## **6. Educational Programs That Implemented the Behavioral Development-based Education Method**

Despite the fact that the program has been implemented on preschool students, it can be adapted at all stages of education. The method has implemented in the following educational programs:

**6.1. Behavioral Development-Based Moral Education Program:** The program has been intended for children in the 5-6 year-old age group, and includes themes such as love, respect, empathy, and responsibility. It is the first program to which the program was adapted. In the 2012-2013 educational year, 204 preschool teachers coming from 25 provinces of Ankara were given education as a part of the joint project "Biz Degeriz" between Ankara National Education Directorate and Turgut Ozal University, with the aim of extending the project.

6.2. *Behavioral Development-Based Social Proficiency Education Program*: The program was developed for children between the ages of 36-48 months, and includes themes such as self-care skills, communication skills, and problem-solving skills. In the 2013-2014 educational year, as a part of the joint project between Turgut Ozal University and Ankara National Education Directorate, the operation to provide education to 120 preschool teachers coming from 25 provinces of Ankara to extend this program is still in progress.

6.3. *Behavioral Development-Based My Sweet Habits Program*: The program was developed for children between the ages of 24-36 months. It is currently in pilot practice.

6.4. *Behavioral Development-Based Mathematics Education Program*: The program is currently being developed.

## **7. Conclusion and Suggestions**

The behavioral development-based learning aims to transform what is taught into behaviors that are integrated into daily life, and developed according to the Turkish culture. While the current programs that employ this method are directed towards the preschool period, the method can be adapted to all stages of education. Despite the educational programs that implemented this method, it is believed that there is a need to diversify these programs, as well as developing educational programs directed towards every stage of education.

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**Addendum 1:****A MODEL IMPLEMENTATION OF BEHAVIORAL DEVELOPMENT-BASED EDUCATION METHOD****SUBJECT: RESPONSIBILITY****FORMULA FOR ACQUIRING BEHAVIORS****1. DEFINITION:** Personal responsibilities

**BELIEF:** I'm supposed to wash my hands.

**2. DESCRIPTION OF THE BEHAVIOR**

- Washing hands before and after the meal
- Washing hand after going to the toilet
- Using water economically
- Leaving the sink clean
- Turning off the light when leaving

**3. EVOKING NEEDS:**

The instructor instructs the students to finger paint. The finger painting is followed by a competition that involves no hand washing and no touching (such as standing still competition). The student who is able to stand still for longest without touching his/her hands to somewhere wins the competition. Then, the instructor asks the children if they want their hands to stay dirty or if they want to wash them. The instructor goes to the restroom together with the children to wash their hands. During hand washing, the instructor teaches the rules of washing hands.

**4. BEING A ROLE MODEL:**

The instructor goes to the restroom before and after the meal, and washes his/her hands along with the children according to the rules. The instructor also shows a video about how cats give great care to cleaning their paws. The instructor can also show a video showing movie heroes (e.g. Pepe) paying attention to their hygiene.

**5. FEEDING THE MOVEMENT**

Here, a story activity is practiced by supporting the students' intellectual areas and sensory organs.

**Preliminary preparation:** The stomach and esophagus-shaped cartons are cut. A transparent nylon bag is attached on the stomach and esophagus with a staple. The stomach apparatus is visibly ready. The instructor provides a cup full of chickpeas and some powdered tea.

The instructor tells the children the story entitled "Chickpea Men". **For this purpose, the instructor holds a cup of chickpeas, and starts to tell the story.**

"A child was playing in the street with mud, and then went to a dried fruits shop. There, he saw the chickpea men, waiting in a tight box. The child noticed them, and bought a cup of chickpeas. The child took the chickpea men into his hand, and started eating without washing his dirty hands (the instructor places the chickpeas into the transparent stomach). The chickpea men were really happy, and entered the child's stomach one by one (the instructor gives each children a chickpea for eating). They were so happy, and suddenly slid down the child's throat. An adventure started in the stomach. Every new chickpea man slides into the stomach, and then swam one way or another as if they were playing in a pool (the instructor moves the apparatus in hand). They

were singing, "Hooray, we got rid of the boring shop." After a while, the chickpea men saw some harmful things among them (the instructor starts adding the powdered into the apparatus). They wondered what these things were, and realized that they were the microbes coming from the child's hand. These microbes were mischievous, and mixed things up. The chickpea men became unhappy. The child's stomach was also uncomfortable because of this condition. It worked back and forth, increasing its secretions, but was unable to get rid of the microbes.

It did not know what to do as a solution. Other organs were also affected by this condition. The child's temperature started to increase."

**The instructor leaves the story unfinished at this point. Then, the instructor asks the following questions for children to develop solutions:**

- Kids, why is the stomach uncomfortable?
- What should the child do before eating chickpeas?

**Together with children, the story is practiced as a drama.**

Some of the children hold hands to form the stomach, and start to turn around. The remaining children are taken in as "chickpeas", and jump up and down and have fun when they enter the circle. An instructor represents a microorganism, and attempts to force his/her way into the stomach between the children's hands. When the instructor is about to enter, the circle contracts, and does not want to let the instructor in. The instructor tickles the children and disturbs them, and the ring is disrupted. The children start to run away, and the instructor chases them. In the end, the children agree to form a new circle, and catch the instructor. They clear the instructor out, and the stomach is recovered from the microorganism.

## **SCIENCE AND NATURE**

### **Pea Germination**

The instructor arranges cotton and a plastic cup for each child. Together, they put the cotton into the cups and wet them. Then, they put chickpeas into these cups, and let them germinate in a corner of the class. The instructor continuously adds water onto his/her chickpea, thus the chickpeas do not germinate. As a result, the instructor tells the children that "Kids, everything in excess may sometimes do harm. Adding too much water to the chickpea was not favorable. Thus, we should wash our hands as needed, and should not waste too much water."

It is also possible to watch a video that shows the contaminated condition of the hands in microscope.

**The finger play is performed. It is memorized, and practiced again during hand washing.**

The instructor places the soap into his/her palm and allows a little water to run over his/her hands. The instructor rubs his/her hands together and makes the soap bubbly. The instructor says, "Look, your hand is full of bubbles/They soaked up the microbes into their cradles/The water took them to the sink/Your hands now smell like pink/Close the tap and turn off the light/ Now you are ready for delight."

**ART ACTIVITY:****Required materials:**

- Examination gloves
- Threads with different colors

The examination gloves are inflated with air. The fingertips are tied with thread to make hair. The gloves are then painted with colored markers, and finger children are made.

**6. REPETITION****PREPARING THE PROJECT “JAR OF SURPRISES”**

**Required materials:** Jar, ribbon or thread, different types of sweets, gum, hairpins, small treats

**PRACTICE:** The instructor puts the ribbons that have hairpins or gum attached to their ends into the jar. The instructor puts the ribbons in a way that the presents stay within the jar, whereas the free ends hang outside. The instructor puts the jar to a high place where the children cannot see what is in the jar. Not every ribbon has an attachment. If the children wash their hands before and after the meal, and after using the restroom, they pull one of the ribbons, and win the attached surprise. Sometimes, the ribbon’s end might be empty. In this case, they try their chance with the next hand washing. If they win a hairpin, they give this as a gift to their girlfriends.

**7. FAMILY EDUCATION**

A letter describing the importance of hand washing is sent to the families. They are informed about the practices at school. The art activity is sent as a home project. The families are requested to put this into their bathrooms, and to mark it with a pen when their children wash their hands. At the end of one week, the project is requested to be returned, and is evaluated in the class.

**8. SOCIALIZATION**

The instructor performs a “clean hands” banner exercise. Then, the instructor requests the families to hang these banners in their workplaces, and to remind their colleagues about hand hygiene.

**9. RECORDING**

The hand washing project is stored in the portfolio. The instructor puts the photographs related to the clean hands into the folder. The instructors award the children with the “Child Who Washes His/Her Hands” certificate.

**10. CALLING BACK**

The children who could not get into the habit of handwashing, are chosen as “hygiene leaders”, and become responsible for reminding their friends to wash their hands. As they remind their friends, they also wash their hands. A child who practiced hand washing and a child who did not are matched, and sent to the restroom together.