Research Article

The use of analogy, imagination and metaphors as an instructional tool in voice training: A case study[1]

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Article Info	Abstract
	We often see that vocal training is defined as an abstract education. As the reason for this; It can be shown that the organs and systems that make up the voice are not visible to the eye, that is, the instrument is our body itself, as well as the use of abstract tools frequently in the training process. In voice training, it is seen that analogy, imagination and metaphors are used as instructional tools in order to reach from abstract to concrete in the context of mind-image-body. In this study, it was aimed to describe the experiences of voice trainers about the use of verbal and kinesthetic analogy, imagination, metaphor (AIM) in the process of vocal education. In this study, a case study from qualitative research designs was chosen. It has been provided to reveal the use cases of analogy, imagination, metaphors as an instructional tool in the current form of voice trainers. Participants are 15 expert voice trainers who provide voice training in different countries. "Verbal-Kinesthetic Analogy, Imagination and Metaphor Usage Form in Voice Education" was used as data collection tools. With this form, oral and written opinions about the use of analogy, imagination and metaphors (verbal and kinesthetic) and their goals were taken by the voice instructors during their training. Content analysis was applied in the analysis of the data. The analogies, imaginations and metaphors used by the voice trainers in the voice training process are presented as themes. As a result of the research, 29 analogies, imaginations and metaphors used by voice trainers were determined. The suggestions they used for these analogies and metaphors (motivating sentence and speech) and for which target behavior they used were presented in tables.

To cite this article

Introduction

The singer should be aware of what the target behaviors are in the process of Voice Training and the goals of the studies for the realization of these behaviors, and their practices should be consciously fulfilled. Learning becomes permanent when the correct behavior is taught to the muscles, taken into muscle memory and performed autonomously. In order for the singer to realize himself; awareness of the physical and acoustic properties of voice, voice physiology and anatomy, voice pedagogy, physical awareness and emotional awareness.
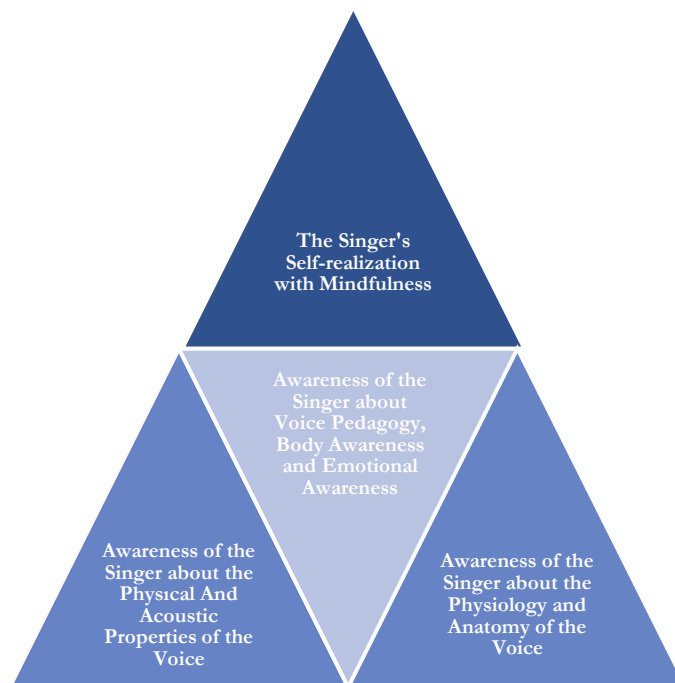
Figure 1.

The Cognitive and Emotional Development of the Singer in the Vocal Training Process

If the vocal pedagogy basis of the singer cannot be built simultaneously and in a versatile way and is based solely on imagination, his technique in general will be incomplete. Because when the voice educator uses only imagination to achieve the target behaviors the student wants to achieve, he may not always reach the desired goal. Even if the image created by the voice educator is supported by bodily motion, sometimes it may not be formed in the student's mind as it was in the educator. The other pillars of the education process mentioned above are as important as the columns of a building.

In the vocal education process, analogy (simulation-inference), imagination and metaphors are used very creatively in vocal education lessons by many vocal educators. They can be applied verbally and kinetically. Simulation and imagery are often used to reach the goal from the simple to the difficult, from the known to the unknown, that is, from the source. The main purpose is to make use of the known in order to understand the unknown and to start from familiar events while explaining difficult concepts. The concept, event, principle or fact that is generally planned to be learned in analogies is named as 'target', and if the concept, event, principle or phenomenon that is simulated in this process is called 'source'. When the literature is examined, it is seen that experts state that it is necessary to use analogical thinking skills in the process of building a bridge between source and target in order to expand the analogy example and to overcome conceptual difficulties at the same time (Clement, 1987).

When the trainer asks the singer to make an imagination in order to realize a desired behavior during the vocal training process, he establishes a verbal imagination. In kinesthetic simulations and imaginations, we see that verbal analogy, imagination or metaphor (AIM) turns into activity. This activity is a purposefully chosen movement. The bodily movements made while singing can help the mind focus on other points, and the vocal organs can be distracted from tension. This situation can provide both physical relief and emotional support. In addition, physiognomy and mimics are assumed to be supportive in the development of expression of nuances, in the process of vocal training in terms of transferring text and emotion.

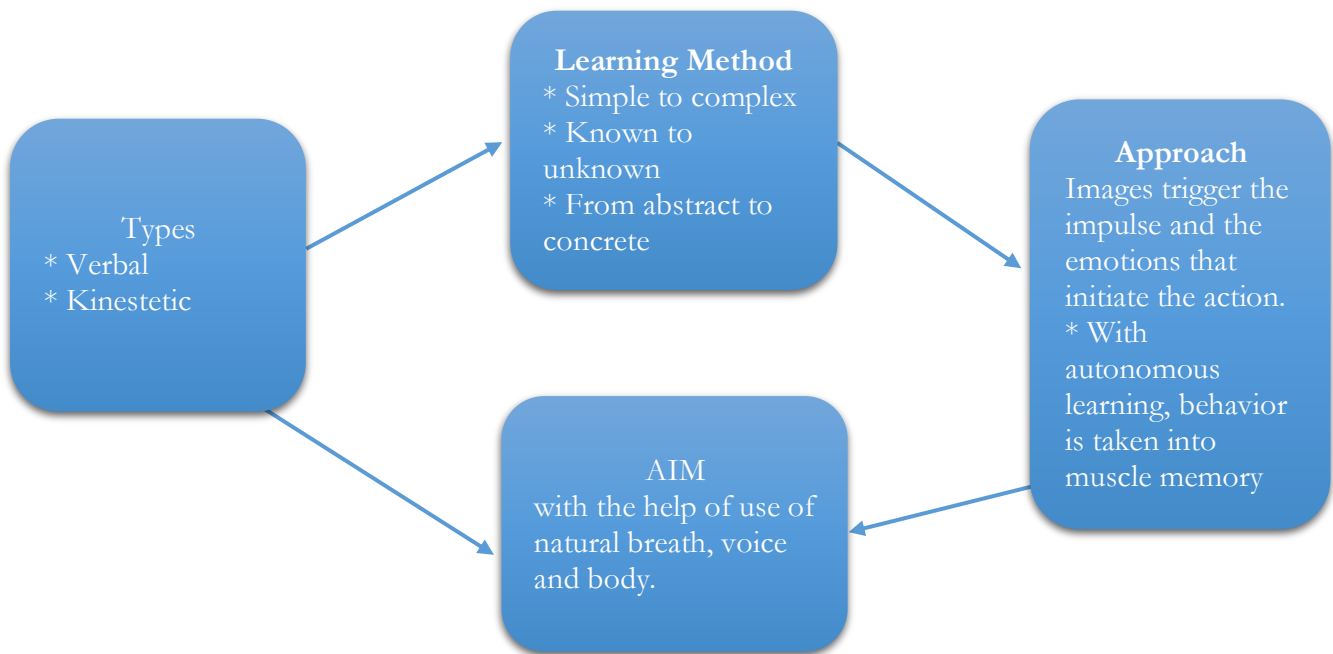Now let's model the process of AIM in Vocal Training;

Figure 2.

Voice Education Model Based on Analogy, Imagination and Metaphor Usage

Analogy is a technique in which previous knowledge and new information to be learned are synthesized, and network of relationships are revealed. Analogies are the process of defining and explaining uncertain concepts or phenomena by mentioning another situation that is similar to the situation under consideration (Bryce & MacMillan, 2005). Analogy is the explanation of an unknown phenomenon with known simple facts. Analogies are a method of reasoning that provides conceptual change in situations where it is desired to establish connections from known information to target information (Brown, 1992). Analogies should be related to the concept given as an example, should not exceed the level of knowledge of the student, should be chosen carefully in order not to cause confusion, and concepts should be kept in mind, not analogies.

Imagination, "imagination" in French. It derives from the Latin verb "imaginari", that is to dream. In the dictionary of the Turkish Language Association, "imagination" is defined as "fantasy world". Image, on the other hand, is the image and similarity of an object perceived by our sensory organs from the outside.

Metaphor means "metaphor" in the dictionary of the Turkish Language Association. Saban (2008) defined metaphors as mental models that enable people to explain a certain concept with another concept. They are also used as the equivalent of the words "metaphor" or "istiare" in Turkish. Lakoff & Johnson (2005) defines metaphor as explaining something from the point of view of something else (cited in Tortop, 2013). In this study, it was emphasized that metaphor should be known as our way of understanding the world rather than a narrative art type. Metaphoric thinking covers processes that involve coding perceived sensory accumulations, allowing these codes to be placed in a memory system, and the ability to access and reorganize them when needed (Serig, 2006). Let's give an example to better express the difference between analogy and metaphor. If you use an analogy while explaining a concept, while using the similarity of walnut and brain; If you are using metaphor, you can use the brain and capital similarity.

The visualization technique is actively used in Kristin Linklater's method of "liberating the natural voice", which is based on bodily awareness. In Linklater, breath, conscious / voluntary "breathe", "exhale" commands are not practiced. All exercises of the method are based on the principle of generating the impulse to initiate natural breathing and voice, not to the creation of breath and voice by conscious muscle use. If we make it simple; The actor prepares the environment that will create the need for breath and voice in the autonomic nervous system through the emotions triggered by the images he creates (Davutoğlu, 2015).

For example, when a natural sigh is desired to be produced, an event fiction with a possibility of negative consequences is designed and animated in the mind, but the negativity at the end is not allowed to occur. The "sigh of relief" comes after this tense situation has been overcome. This means that the sigh is not through a conscious use of muscle; it is formed as a response from the autonomic nervous system to the emotional stimulus created by the actor (Davutoğlu, 2015).

Linklater (2006: 66), "When you regularly use images while exercising to experience the voice, you establish a mind-body connection that will take your imagination out of your head and into the world of your body by establishing a mind-body connection. The images stir the feelings that initiate the impulse and action, " she says.

They conducted pioneering research on the application of gesture technique in singing education by Hibbard (1994), Liao (2002), and Wis (1993). Researchers in their studies; They stated that gestures can easily express things that cannot be expressed with words, gestures increase musical memory, kinesthetic makes learning easier, and gestures contribute to music learning. In other words, what happens in the body with a movement or movement can be stored in memory and internalized to recall physical sensations later, without having to do the movement (cited in Şahin, 2019).

Problem of Study

In the present study, an answer was sought to the question of what type of imagery and simulating activities the experts in the field use for the use of AIM (analogy, imagination and metaphors) in order to gain target behaviors in vocal education.

Accordingly, the following problem subheadings emerge;
  ➢ Which target behaviors can be developed regarding vocal education with images and similes? How often are analogy, imagination and metaphors used to gain these target behaviors?
  ➢ How do academics and artists working in the field of vocal education include physical, mental and emotional awareness activities in their individual lessons?
  ➢ Do the instructors clearly classify these frequently used activities as analogical thinking technique, metaphorical thinking and imagination in their lessons, or do they see them as analytical creative activities for the behavior change they expect in their students at that moment?

Method

Research Model

This study is designed as a phenomenology research in qualitative research approach. Individual experiences constitute the basis of the phenomenology approach. In this approach, the researcher is concerned with the participant's personal experiences, examining the individual's perceptions and the meanings they attribute to the events. Phenomenology is a descriptive study. In this context, it is important to define the facts, not to generalize (Akturan & Esen, 2008).

In the present study, data on the analogies, imaginations and metaphors used by the participants in their vocal education lessons and trainings on their personal experiences were collected, and their similarities, how they were applied and their intended use were described. In this way, it was aimed to obtain information about the techniques that are supportive and complementary to the vocal training technique in accordance with the style.

Participants

Participants in the study consist of national and international academicians and artists who are experts in the field of vocal education, working in private and state universities and art institutions, who participate in the research on a voluntary basis. The demographic characteristics of the participants are given in Table 1.

Table 1.

Demographic Characteristics of the Participants

P.No	Academic Title	Gender	Institution	Position
P1	Lecturer	F	Istanbul State Opera an Ballet /Istanbul University State Conservatory	Opera Singer – Voice Trainer
P2	Assoc. Prof.	F	Istanbul University State Conservatory	Voice Trainer
P3	Assist Prof. Dr.	M	Zonguldak University Bülent Ecevit State Conservatory	Voice Trainer
P4	Assist Prof. Dr.	F	Mersin University State Conservatory	Voice Trainer
P5	(-)	F	Viyana Volksoper ve Theater an der Wien	Opera Singer
P6	Prof. Dr.	F	Adam Mickiewicz University – Poland	Voice Trainer
P7	Prof.	F	İstanbul University State Conservatory	Voice Trainer–Voice Pedagogue
P8	Dr.	F	Adam Mickiewicz University – Poland	Voice Trainer
P9	(-)	F	Universitat für Musik und Darstellende Kunst Wien.	Voice Trainer
P10	Dr.	M	Adam Mickiewicz University – Poland	Voice Trainer
P11	Lecturer	M	Istanbul University State Conservatory	Opera Singer – Voice Trainer
P12	Assist Prof. Dr.	M	Zonguldak University Bülent Ecevit State Conservatory	Voice Trainer
P13	(-)	F	Viyana State Opera	Opera Sanatçısı – Voice Trainer
P14	Assoc. Prof. Dr.	F	İstanbul Technical University – Turkish Music State Conservatory	Voice Trainer
P15	Assist Prof. Dr.	F	Aksaray University Faculty of Education	Voice Trainer

Data Collection Tools

 "Verbal-Kinesthetic Analogy, Imagination and Metaphor Usage Form in Vocal Education"; With this form, it was created in order to determine the target behaviors used by analogy, imagination and metaphors and the sentences that motivate the student (suggestion) used by the voice instructors during their vocal training. In order to determine the validity of the data collection tool, the opinions of two voice education experts were consulted. The form was finalized by making the necessary corrections in line with the opinions of the experts. The application time of the form is 10 minutes. This form includes analogy, imagination and metaphor type, imaginary word, suggestion of the voice instructor and target behaviors (See Appendix 1).

Data Analysis

In the analysis of the data, the forms related to the various AIMs and explanations used by the participants regarding vocal education were thematically analyzed and classified. In determining the suitability in terms of AIM selection and use, the agreement of the views of the two voice instructor researchers was also examined. It has been found that there is a high level of agreement. Content analysis is a data analysis technique in qualitative research. It gives the researcher the opportunity to examine human behavior indirectly, usually through an analysis (Fraenkel, Wallen, & Hyun, 2012, p: 478). Content analysis method is generally used for the analysis of written or oral texts such as interview transcripts, diaries or documents (Patton, 2002, p: 453) and is suitable for the purpose of this study. The AIM type, the suggestion of the voice instructor, were collected under themes by selecting those compatible with the target behavior. The determined analogies, imaginations and metaphors are presented in tables.

Results

Verbal AIMs; It happens by trying to imagine the verbal expression suggested to the student by the educator while singing or exercising. Kinesthetic AIMs; It happens when the student tries to apply the analogy made by the educator while singing or exercising. In this section, the analogy, imagination and metaphors applied by the researcher and the national and international voice educators, whom the researcher consulted with the expert opinion, are shown.

Theme 1. Using the "Lego" Metaphor

It has been stated that the metaphorical usage related to singing the notes depending on the voice education was used by P1.

Table 2.
Created-Used the Lego Metaphor by P1

Imaginary Word	Lego

Methaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Verbal) To imagine **(Analogy)**	Imagine that the notes are tied up like the Lego pieces are tied behind each other. Try not to cut off the air you give during phonation.	To sing legato

Theme 2. Using the "Straight Line" Metaphor

It has been stated that the metaphorical usage related to singing the notes depending on the voice education was used by P14.

Table 2.
Created-Used the Straight Line Metaphor by P14

Imaginary Word	Straight Line

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Verbal) To imagine**(Imagination)**	Until the end of the musical sentence, until you breathe again, think as if the whole melodic sentence you say is always on the same note, stay on the same line.	Preserving the color of the voice in melodic notes and different registers (voice regions) as a range structure and maintaining the balance of breath.

Theme 3. Using the "Outer Space" Metaphor

It was stated that the metaphorical use of finding the zero point of the body in voice training was used by P14

Table 3.
Created-Used the Outer Space Metaphor by P14

Imaginary Word	Outer Space

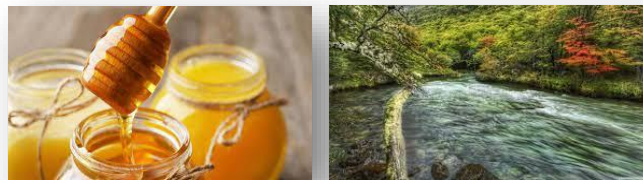| **Metaphorical Genre**	**Suggestion of the Voice Trainer**	**Target Behavior**
(Verbal) To imagine **(Imagination)**	I want you to live when you are awake, when the muscles are completely inactive during unconsciousness in sleep. Get up and think as if you are still asleep, imagining your lethargic body that has just woken up from sleep. Let your body be asleep and in outer space, away from all tension.	During the lesson, when we feel that the student is boring himself, his voice is forced while trying to give high-pitched notes, and he has turned to the pushing reflex; to relax and to allow the body to be flexible again and reach the "zero point" ie the starting point as it was at rest.

Theme 4. Using the "Honey and River" Metaphor

It was stated that the economical use of breath and metaphorical use related to connected saying in voice education was used by P2.

Table 4.

Created-Used Honey and River Metaphor by P2

Imaginary Word	Honey and River

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Verbal) To imagine **(Analogy)**	Think of a river, your control and tension with regard to your own body will decrease, as the flow of the river will remind you of the natural fluidity of the water. Now imagine that you put a spoon in and out of the honey jar, and the honey's distinctive stickiness, integrity, and naturalness will remind you of the breath control and naturalness that must be felt during voice reproduction, similar to river imagination.	To say controlled expiration and legato (depending). Ensuring the fluidity of voice like the fluidity of water.

Theme 5. Using the " Stay Away Water " Metaphor

It was stated that the metaphorical use of keeping the voice in the mask and not loading the throat in voice training was used by P12.

Table 5.

Created-Used Stay Away Water Metaphor by P12

Imaginary Word	Stay Away Water

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Verbal) To imagine **(Imagination)**	Think you're swimming in the sea. Imagine as if the water level is up to your chin Trying to keep our heads above water and struggling is not enough to keep us above water. If we use our arms and legs in a coordinated way, we can succeed in swimming with less energy. Do not load on your throat, relax as if you are letting yourself into the water, and try to produce a voice by using body support.	Keeping the voice in the mask, not burdening the throat, using body support in voice production.

Theme 6. Using the " Waving Hands Like a Bird's Wing" Metaphor

It was stated that the metaphorical use of natural and body supported vibration in voice education was used by P7.

Table 6.

Created-Used the Waving Hands Like a Bird's Wing Metaphor by P7

Imaginary Word	Waving Hands Like A Bird's Wing

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Now I want you to open both arms straight to the sides. In the last note of the long exercise, wawe your hands 5 times at the wrists and feel the body-supported natural vibration.	In general, vibration is given as 4-7 tones changes per second in the literature. The voice is expressed musically with small overtones and detones in the form of high-low-treble-low-high. Body supported vibration is completed with this dynamic motion.

Theme 7. Using the " Poplar Tree" Metaphor

It was stated that the metaphorical use of posture and balance points in the body was used by P14 in vocal training.

Table 7.

Created-Used the Poplar Tree metaphor by P14

Imaginary Word	Poplar Tree

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Spread your arms out to the sides flexibly like the branches of a poplar tree, keeping your ribs wide, your feet and your connection to the ground solid like the roots of a tree. Your upper body and arms should be flexible as well as your roots. Because if you don't yawn, you'll snap and break like a plum branch. And of course your leaves must be mobile so that they can be agitated.	To feel the balance points for the correct posture, to lengthen the spine, to keep the shoulders and arms flexible and not to tighten them.

Theme 8. Using the " Moving Fingers – Moving Leaves" Metaphor

It was stated that the metaphorical use of agile passages in voice education was used by P4.

Table 8.

Created-Used the Moving Fingers – Moving Leaves Metaphor by P4

Imaginary Word	Moving Fingers – Moving Leaves

Methaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Think about the movement of leaves in the wind as you sing a moving passage. Move ten fingers quickly, like leaves, with the palms of your hands facing your chest.	To sing the passages with agility fluently.

Theme 9. Using the " Sandglass" Metaphor

It was stated that the metaphorical use of respiratory muscle awareness in voice training was used by P14.

Table 9.

Created-Used the Sandglass Metaphor by P14

Imaginary Word	Sandglass

Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Take a calm breath, keeping your ribs wide, do not tense your stomach and do not collapse your shoulders. Think of your breath like the flowing sand of an hourglass. Pulling in or pushing out the abdomen while giving out the air in a controlled manner. Grains of sand will flow more regularly if you do not accentuate sentences and hard consonants (p, ç, t, k, f, s, ş, h).	To raise awareness about respiratory muscles (diaphragm-abdominals-inter-rib muscles), to use breathing economically.

Theme 10. Using the " Puppet" Metaphor

It was stated that the metaphorical use of not contracting the body and flexibility in vocal training was used by P14.

Table 10.

Created-Used the Puppet Metaphor by P14

Imaginary Word	Puppet

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Imagine a rope pulling you up from one point above your head. It's as if you are a puppet and control of your body is in the hands of the player above. Remember when all your muscles are at zero point while you sleep, and feel it when you just woke up. Then let the puppet player get you up and pull the rope above your head. It also has strings on its arms and waist.	To feel the muscles at the starting point and not to tense the body and to support a controlled and flexible stance.

Theme 11. Using the " Ball" Metaphor

It was stated that the metaphorical use related to removing a possible tension in the body from the larynx was used by P4 in vocal training.

Table 11.

Created-Used the Ball Metaphor by P4

Imaginary Word	Ball

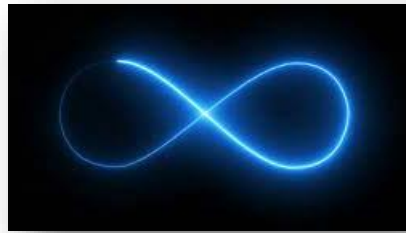| **Metaphorical Genre**	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Take a sitting position and keep your spine long. Imagine putting the imaginary soccer ball you held with both hands between your legs and holding it with the inside of your knees. While doing the exercise, your legs want to squeeze the ball inward, and your hands should give opposing force to your legs outward.	While singing, involuntarily thinking of the area where the vocal cords are, transferring the focus of thought and muscle power to another place in order not to put tension there.

Theme 12. Using the " Eight /Infinity Symbol" Metaphor

The metaphorical use of whether the voice is pushed or not flattened in voice training has been named anonymously because it is used by many participants.

Table 12.

Created-Used the Anonymous - Eight /Infinity Symbol Metaphor

Imaginary Word	Eight /Infinity Symbol

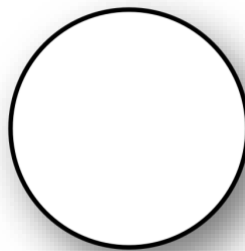| **Metaphorical Genre**	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Draw the number eight or infinity sign vertically or horizontally with your hand. It should be a beautiful eight, focus on your drawing, not your voice.	To prevent the flattening caused by pushing the voice or giving too much air and to prevent the intonation problem that will come right after it by changing the focus of the dream.

Theme 13. Using the " Circle" Metaphor

It was stated that the metaphorical usage related to singing connected and removing tension in vocal education was used by P3, P4 and P12.

Table 13.

Created-Used the Circle Metaphor by P3, P4, P12

Imaginary Word	Circle

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Draw an endless circle with your hand. Make wide circles with your arms.	Legato (affiliate) to say. To say bound in hopping passages and to prevent unintentional negative behavior.

Theme 14. Using the " Strobing - Rowing" Metaphor

It was stated that the metaphorical use of the act of activating the diaphragm and abdomen in voice training was used by P3.

Table 14.
Created-Used the Strobing - Rowing Metaphor by P3

Imaginary Word	Strobing - Rowing

Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	To the rhythm of the exercise, swim or row as if you were in the sea. Thanks to the movement, your body will be flexible and flexible. Your abdominal muscles will work naturally.	Activating the diaphragm, activating the abdomen and providing the flexibility and expansion that movement brings.

Theme 15. Using the " Jumping into the pool and out of the water" Metaphor
It was stated that the metaphorical use of eliminating tension in high-pitched voices in vocal education was used by P14.

Table 15.
Created-Used the Jumping into the Pool Metaphor by P14

Imaginary Word	Jumping into the pool

Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	While chanting the notes as arpeggio, think of the chord's 1st, 3rd, 5th, and octave voices as your four-step run to jump into the pool where the attack started. Then at the third degree of the chord, drop yourself into the water as nailing, your foot touches the bottom of the pool and push yourself up. Return depending on the arpeggio notes as if you were letting yourself into the buoyancy of the water as you exit.	By taking the initial attack in which the phonation started, that is, the voice is produced, dynamically, feeling as if you jumped into the water in a high-pitched tone and to eliminate the existing tension with a controlled freedom while pushing yourself from the bottom.

Theme 16. Using the " Clock Bell – Metronome - Bottle" Metaphor
It was stated that the metaphorical use of eliminating shoulder tension in vocal training was used by P14.

Table 16.
Created-Used the Clock Bell – Metronome - Bottle Metaphor by P14

Imaginary Word	Clock Bell – Metronome - Bottle

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Letting your right and left hands fall under their own weight, swing your arms freely in an exercise-appropriate rhythm like a clock chime or metronome. Imagine that the weight is in your hands, not your shoulders. You can also have bottles in your hands.	Balancing and relieving the unbalanced shoulders while carrying weights such as bags, books, instruments all day.

Theme 17. Using the " Sleepwalking Pose" Metaphor
It was stated that the metaphorical use of eliminating impulse in the larynx was used by P14 in vocal education.

Table 17.
Created-Used the Sleepwalking Pose Metaphor by P14

Imaginary Word	Sleepwalking Pose

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	I want you to stretch your arms straight forward like a sleepwalker. Now I'm going to hand you a light chair or encyclopedia. And I want you to focus all your focus on carrying that weight balanced. You will feel that your abdominal muscles (abdomen) are active. When doing the exercise, focus on the area where the vocal organs are, focus on the object.	Transfer of impulse to another place to relax the area where the vocal organs are located.

Theme 18. Using the " Bend over and Sniff the Flower" Metaphor
It was stated that the metaphorical use of controlled and calm breathing in voice education was used by P10.

Table 18.

Created-Used the Bend Over and Sniff the Flower Metaphor by P10

Imaginary Word	Bend over and Sniff the Flower

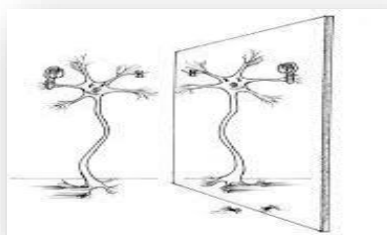| **Metaphorical Genre**	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Leaning in, smell the beautiful flower in front of you, slowly inhale its fragrance and exhale calmly. Now do the same by holding your abs and ribs and notice your movements.	Controlled and calm breathing, activating the abdominal muscles while bending down.

Theme 19. Using the " Mirror - Reflection " Metaphor
It was stated that the metaphorical use related to the problem of forcing the voice in voice training was used by P4.

Table 19.

Created-Used the Mirror - Reflection Metaphor by P4

Imaginary Word	Mirror - Reflection

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Look face to face with your friend who has the same tessitura as you, now I want you to imitate what he did. Think like his mirror, and be comfortable and flexible.	Bringing the student who has the problem with the student face to face and ensuring that good behavior is learned by observing.

Theme 20. Using the "Dancing Flying " Metaphor

It was stated that the metaphorical use of hyperintonation and intonation in voice education was used by P8.

Table 20.

Created-Used the Dancing Flying Metaphor by P8

Imaginary Word	Dancing Flying

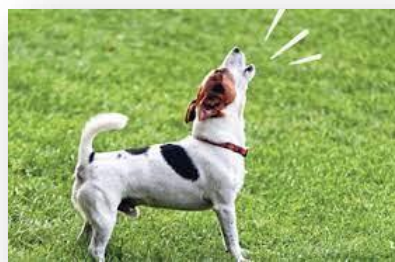| **Metaphorical Genre**	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Think like a bird is dancing, imitate it, do improvised physical movements and physical activities while singing.	To avoid hyperintonation or intonation problems and pressure in the diaphragm.

Theme 21. Using the "Dog's Barking" Metaphor

It was stated that staccato teaching and metaphorical usage related to abdominal muscles were used by P10 in vocal education.

Table 21.

Created-Used the Dog's Barking Methaphor by P10

Imaginary Word	Dog's Barking

Methaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Imitate a dog and feel the bark and breathing muscles. Feel the short, choppy breath. Thinking of breathing as athlete's breath in your chest, your abdominal muscles should be active.	Taking short, runaway breaths between sentences. Activating the diaphragm and teaching staccato.

Theme 22. Using the "Blowing the candle" Metaphor

It was stated that the metaphorical use of breath in voice training was used by P10.

Table 22.
Created-Used the Blowing the Candle Metaphor by P10

Imaginary Word	Blowing the Candle

Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	Think like you blow a candle but you don't blow it out. I want you to make the candle's light flicker for a long time, calmly and without straining your body or burdening your chest. You must always give your breath equally and economically.	Using breathing economically and in a balanced way.

Theme 23. Using the "Balloon" Metaphor
It was stated that the metaphorical use of breath control in phonation in voice training was used by P2.

Table 23.
Created-Used the Balloon Metaphor by P2

Imaginary Word	Balloon

Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Analogy)**	You have a balloon that you have inflated, but its mouth is not tied. Think of it as if you are holding the end of the balloon tightly while opening it slightly in a controlled manner to ensure a low and regular release of air from an inflated balloon. You are the balloon. Think of the tip of the balloon as the glottic opening where the vocal cords are located.	To provide breath control during phonation.

Theme 24. Using the " Draw imaginary numbers and letters with feet " Metaphor
It has been stated that the metaphorical use of focusing on distraction from physical tension in vocal education was used by P4.

Table 24.

Created-Used the Draw Imaginary Numbers and Letters with Feet Metaphor by P4

Imaginary Word	Draw imaginary numbers and letters with feet

Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	As you sing, walk around the room, lift your feet and pretend to draw the letters and numbers you want.	To transmit body pressure and weight down from the feet, to relax.

Theme 25. Using the "Circle Around Your Body " Metaphor

It was stated that the metaphorical use of enlarging the timbre area in voice training was used by P9.

Table 25.

Created-Used the Drawing of Circle Around Your Body Metaphor by P9

Imaginary Word	Circle Around Your Body

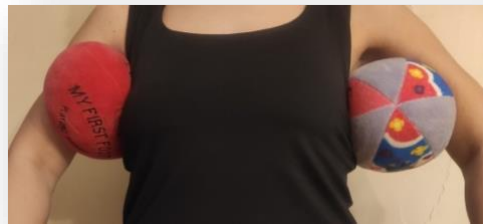| Methaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Draw a wide circle with your arms from top to bottom. Feel your body and voice wide and big enough to fill this whole circle.	To liberate your voice in a controlled manner without forcing it. Enlarging the timbre area.

Theme 26. Using the "Soft Balls Under Arms" Metaphor

It was stated that the metaphorical use related to passivating the shoulder weight and arms in vocal training was used by P13.

Table 26.
Created-Used the Balls Under Arms Metaphor by P13

Imaginary Word	Soft Balls under Arms

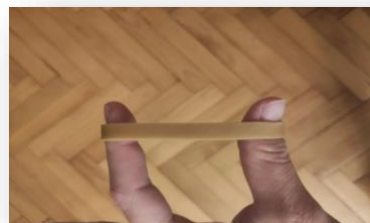| Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Now I'm putting two soft balls under your arms. So you won't have to carry your shoulders and arms. If you can't find a ball, you can also put an empty 1 liter plastic bottle.	Creating awareness of the spine and ribs, pacifying the arms and relaxing the area where the vocal organs are.

Theme 27 Using the "Tire" Metaphor

It was stated that the metaphorical usage related to vocal cord, shrill and giving up in vocal education was used by P13.

Table 27.
Created-Used the Tire Metaphor by P13

Imaginary Word	Tire

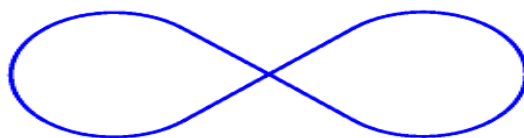| Metaphorical Genre	Suggestion of the Voice Trainer	Target Behavior
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	I want you to stretch the rubber I put in your hand while making high-pitched notes. When it comes to pessimistic voices, you can relax.	To realize that the pitching of the voice is not with force, but by stretching of the vocal cord.

Theme 28. Using the "Sitting at the Table and Drawing the Infinite Sign on the Paper" Metaphor

It has been stated that the metaphorical use of tied saying and rib breathing in voice training was used by P11.

Table 28.
Created-Used the Sitting at the Table and Drawing the Infinity Sign on the Paper Metaphor by P11

Imaginary Word	Sitting at the Table and Drawing the Infinite Sign on the Paper

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	Sitting on a chair in the ideal sitting posture, have a table in front of you below chest level and draw a large infinity sign on a piece of paper. Where the infinity sign ends, let the sentence of the exercise or the passage you are studying finish and breathe by raising your hand. Then finish the sentence by drawing another small infinity sign in the upper right corner of the infinity sign. The same exercise can be done standing on the wall.	Feeling the muscles between the right and left ribs during breathing, reducing the tension in the throat with body movement, helping to sing legato.

Theme 29. Using the "Ice Skating" Methaphor
It was stated that the metaphorical use of attack and linked saying in voice education was used by P14.

Table 29.
Created-Used the Ice Skating Metaphor by P14

Imaginary Word	Ice Skating

Metaphorical Genre	**Suggestion of the Voice Trainer**	**Target Behavior**
(Kinesthetic) Simulate physical movement by AIM **(Imagination)**	As you sing this musical phrase, imagine it as if you are skating. Think of the first momentum you get off the ground with your skate as the first attack you turn air into voice. Then think comfortably as if letting yourself skate left and right. By drawing smooth lines on the ice, you can create your phonation relaxed and fluidly as if you were sliding.	While creating the fund, to gain the attack at the starting point and the fluent legato that follows and to be able to do them in a flexible way.

Conclusion and Discussion

Similar studies were also found regarding the contribution of the metaphors used to vocal education; Wis (1993) investigated the role of gestures and body movements used in choral rehearsals in facilitating learning and musical experience in his doctoral thesis. The research also focused on the role of metaphor in choral rehearsals. Hibbard (1994), in his doctoral thesis, investigated which movements choir conductors use as teaching tools and which movements are more effective. Movements were grouped according to defined teaching objectives and analyzed using Laban Motion Analysis (LMA - the language of describing, visualizing, interpreting and documenting human movement) terminology. The purposes and reasons for using the movements of the choir conductors in rehearsals are emphasized.

Liao (2002) investigated whether gestures and movements improve children's intonation and tonal qualities in children's choirs that have just started singing. Gesture quality scores of students who received movement training were found to be significantly higher. The results showed that there is a significant relationship between movement and voice. In addition, the students sang better with gestures. As a result, gesture education had a positive effect on the development of students' intonation and tone quality (cited in Şahin, 2019).

Nafisi (2010) examined the movements in terms of teachers and chiefs in his study. It is concluded that the movements are categorized as technical gestures and musical gestures. As a result of the study, it was stated that movements play an important role as pedagogical and communication tools, and voice educators use their movements consciously for musical and vocal acquisitions (cited in Şahin, 2019).

Brunkan (2012) investigated the effect of three singer gestures consisting of low, circular arm gesture, curved hand gesture, and pointing gesture on the performance of choir singers. An increase in amplitude was observed when sung with a low, circular arm gesture, curved hand gesture, and pointing gesture. Significant differences in intonation have emerged. The scores of the experts for singing with gestures were very high. Participants made positive comments about the use of movement in choral singing (cited in Şahin, 2019).

Nafisi (2013) applied a questionnaire about whether Nafisi reinforced his expressions and teaching about singing to singing movements with movement by using the terminology of singing movements of Nafisi. Results; It confirms that singing teachers encourage students to use gestures or body movements to facilitate the understanding and learning process of physiological functions, thought concepts or music (as cited in Şahin, 2019).

Liao and Davidson (2015) examined the effects of movement training for children in order to improve the quality of gestures. The control group consisted of children who did not receive movement training, singing with gestures, and the experimental group consisted of children who were singing by receiving Dalcroze movement training (the method of teaching music through musical motion and rhythm - eurhytmics). The use of gestures in singing is emphasized. People who received movement training scored significantly higher in terms of gesture quality. It was concluded that the combination of gesture and movement training in singing can be a powerful teaching strategy.

In the studies of researchers such as Chagnon (2001), Hibbard (1994), Liao (2002), and Wis (1993); They stated that gestures can easily express things that cannot be expressed with words, gestures increase musical memory, kinesthetic makes learning easier, and gestures contribute to music learning.

Kar (2020) conducted an action research in his study and applied the "Voice Training with Dynamic Voice Exercises" program to the study group for 6 weeks. Pre and post measurements were made to the members of the study group in terms of acoustic analysis of the voice with the voice analysis program, so it was aimed to observe the data differences that emerged before and after the training. In this study, mean pitch (fundamental frequency); jitter; Four parameters of voice properties, shimmer and harmonics to noise ratio, were statistically interpreted. Shimmer and HNR to noise ratio parameters were found to be less than 0.05, thus indicating statistically significant differences in these results. Here, it was observed that there was an increase in the shimmer parameter, that is, the change in voice intensity from glottic cycle to cycle; There was a decrease in the HNR to noise ratio parameter, that is, the ratio of harmonics to noise.

The works of Wis (1993), Hibbart (1994), Liao (2002), Nafisi (2010), and Brunkan (2012) were applied on the choir and the musical effects of instinctive bodily movements and gestures used by conductors and teachers were examined. However, in this study, verbal and physical activities that educators consciously and purposefully implement in individual voice training lessons were examined and classified. This study is similar to the work of Nafisi (2013), both in terms of researching the individual practices of voice teachers and considering physical and thought functions of the students. In addition, this study tried to describe the similes that every singing educator used while teaching any technique and separated them into verbal and kinesthetic. Analogies, imaginations and methaphors used by voice trainers and opera singers are mostly created to relieve tension while singing. This can be explained by the importance of the singer's bodily awareness during singing.

The reason for this is thought to be the assumption that the concretization of the image supported by motion will be more permanent in muscle memory and the need for reinforcement with visual learning. 29 activities were examined in the findings of this research we conducted on which images, metaphors and metaphors are used in vocal education. 9 of these activities are verbal and 20 are kinesthetic AIMs. Contents of the activities shared by the majority of the participants with the researcher; It has been seen that it is designed to prevent the tension in the students' bodies from affecting their voices negatively, to raise awareness about the use of natural breathing and to increase their bodily awareness.

In addition, the following descriptions can be made in line with the literature samples examined in the study and expert opinions;

- The singer should understand with a conscious awareness what the target behaviors of his profession and the behavioral changes expected of him are.
- In order for the correct behavior to occur autonomously while singing, voice, respiratory and body muscles should be taught to correct movements in a coordinated manner. Muscle memory is extremely important in singing.
- The bodily movements made while singing can keep the mind focused on other points, and the vocal organs can be distracted from tension. This can provide both physical relief and emotional support. It is also assumed that physiognomy and mimics are supportive in the development of the expression of nuances and in the process of voice training in terms of conveying text and emotion.
- Even if the image created by the voice educator is supported by bodily motion, sometimes it may not be formed in the student's mind as it did in the educator, so a voice training based solely on imagination will be incomplete.
- From the history of the voice, to the physical and acoustic characteristics of the voice for the singer's self-realization; from the physiological and anatomical features of the human voice to vocal pedagogy; from the effects of personality traits and psychological factors on voice to physiognomy; It is clearly seen that there is a wide area that needs to be studied and researched from emotional and physical awareness to conscious awareness.

When the findings are evaluated in the context of sub-problems, when the data are analyzed in line with the contents of the expressions and activities of the participants, through images and similes; awareness of respiratory muscles and awareness of breath; ideal posture and bodily awareness; intonation; awareness of resonator zones; voice color uniformity in registers; techniques such as legato, portamento, staccato; the ability to change focus at the moment of possible bodily tension during the performance; It is assumed that some target behaviors related to vocal training, such as emotional awareness against anxiety and self-meditative abilities, can be developed. Academicians and artists working in the field of voice education frequently use analogy, imagination and metaphors as activities to raise physical, mental and emotional awareness in their individual lessons. While the instructors apply these frequently used activities in their lessons, they do not clearly classify them as analogical thinking technique, metaphorical thinking and imagination, but they include these creative and analytical activities in their lessons for the behavior change they want in their students. However, in the current study, no data was found on the development of style, interpretation, musicality, diction, articulation. It can be underlined that when technical development is achieved, these skills will also develop.

Recommendations

Recommendations for Practitioners

- This research is only aimed at determining the analogies, imaginations and metaphors used, and researches can be made on the difficulties and methods in their use in the future.
- The analogies, imaginations and metaphors determined in this research can be expanded by increasing the number of participants. Thus, more imagery, metaphor and metaphor activities can be achieved.
- In future studies, researchers can conduct research on the prevalence and reasons for the use of these techniques.
- Researchers who want to improve the research can systematically apply these techniques to the experimental groups, report the changes compared to the control groups, and develop a program in this area. Researchers can work on how the use of images, similes and metaphors develop in which target behaviors in voice training.
- It is suggested by the researcher that analogy, imagination and metaphors should not be considered as the only elements of technical background in vocal education and should be used in a way that supports the basic vocal education process.

Limitations of Study

The research was limited to 15 participants (voice trainer, opera singer). The research is aimed at describing analogies, imaginations and metaphors used as an instructional tool in voice education and is limited to case study, one of the qualitative study patterns.

Data collection tool was limited to "Verbal-Kinesthetic Analogy, Imaginations and Metaphor Usage Form in Voice Education" and extra interviews.

Biodata of Author

Assoc. Prof. Tuğçem Kar, PhD She was born in Tekirdağ in 1984. She studied piano and violin at Istanbul Avni Akyol Anatolian Fine Arts High School between 1998-2002. Between 2000-2004, she worked in Istanbul University State Conservatory - Opera / Choral Singing Department with Prof. Şebnem Ünal. In 2002, she started studying piano and viola at Marmara University Atatürk Faculty of Education - Department of Music Teaching, and graduated in 2006 with the first degree. In 2002, she played the role of "Nihal" in the opera "Aşk-ı Memnu" composed by Selman Ada and directed by Çetin İpekkaya; In 2003, she played the role of "The Boy" in the opera "Kuva-i Milliye" composed by Orhan Şallıel and directed by Murat Göksu. She completed her first master's degree in Marmara University Institute of Educational Sciences in 2008 and she completed her second master's thesis at Istanbul University State Conservatory Institute of Social Sciences in 2012. Between 2007 and 2018, she taught Voice Training at Marmara University as a contracted lecturer. In December 2019, she started to work as a lecturer in ITU-TMDK Voice Education Department. She completed her doctorate at Marmara University Institute of Educational Sciences in January 2020. She was awarded the title of Associate Professor in Performing Arts on March 10, 2021.

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Appendix 1.

Verbal-Kinesthetic Analogy, Imagination and Metaphor Usage Form in Vocal Education

Verbal-Kinesthetic Analogy, Imagination and Metaphor Usage Form in Vocal Education					
Demographic Information **Name surname:** **Date of birth:** **Gender:** **Institution of Employment:** **Position:**					
Explanation: Dear participants, this expert opinion form was created in order to make a compilation study on the diversity of use and goals among voice trainers by bringing together the verbal and kinesthetic analogies, imagination and metaphors used in the training process within the framework of voice training target behaviors. Your applications regarding the physical, mental and emotional awareness methods you have used in your lessons will be useful for our research. Thanks for your sharing…					
Question: When you look at the voice training in terms of target behaviors; Are there any bodily movements that you want your students to accompany the exercise while applying vocal exercises? Do you use any method, analogy or imagery to help your student relax his/her voice or when there is tension in his/her body?					
	Analogy	**Imagination**	**Metaphor**	**Imaginary Word**	**Target Behaviour**	**Used Suggestion**
(Verbal) To imagine						
(Kinesthetic) Simulate physical movement by AIM						