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The Dancing Imagination: How Does Imaginative Imagery Facilitate Movement Qualities in Dance Training and Performance?

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How does imaginative imagery facilitate movement qualities in dance training and performance?

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Abstract

The purpose of this case study was to explore how imagery facilitates movement quality in dance training and performance. A literature review on classifications of direct and indirect imagery and imagery in relation to neuroscience, was investigated to firstly define imagery. The confusion over defining movement quality led to a literature review on Kinesiology and Gaga methods and how these dance-training methods utilise imagery in different ways to enhance the movement quality of dance in training and performance.

Qualitative research methodology was used in this case study. The case study used a purposeful sample of eight subjects who were undergraduate and post gradate dance students in Australia. The data was gathered with the aid of a questionnaire via email whereby subjects recorded their views and returned information via email.

A questionnaire was devised to discover which imagery-based methods dance students used, in training and performance and how they might be applied.

Through content analysis, the questionnaire revealed three main areas connected to the use of imagery in facilitating movement: anatomical understanding; learning and developing technique and the quality of movement. It was found that imagery was useful in relation to the alignment of the skeletal structure in combination with tactile aid to activate and re-pattern certain muscle groups and assist with ease and efficiency of movement. Imagery was also useful as a tool for learning and developing as a dancer in developing a strong mind-body connection that is supported by recent brain research on neuroplasticity. Imagery was also viewed as a useful tool to enhance the quality of movement in aesthetic, sensory, emotive and authentic ways. Overall, imagery connected to physical alignment appeared to be the most popular using.

It was revealed the defining movement quality is almost impossible to measure because of subjectivity of interpretation not only from the dancer as a performer, but also due to how the audience views and understands the movement. Further research is recommended to further define movement quality in more specific terms and from different points of view and cultures.

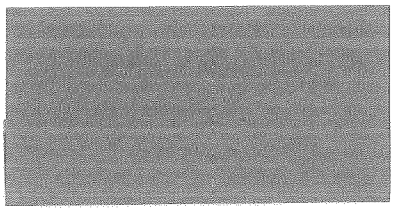
Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

I. Incorporate without acknowledgement of any material previously submitted for a degree or diploma in any institution of higher education

II. Contain any material previously published or written by another person where due reference is made to the text; or

III. Contain any defamatory material



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Contents

Rationale

My thesis will discuss how imaginative imagery facilitates movement qualities in dance training and performance. To further explore 'how' this may happen it is important to try and define imagery in relation to imagination, kinaesthetic language and neuroscience and how such approaches might be connected to movement quality in dance training and performance. This essay will firstly outline available research in the following areas:

- Defining and classifying imagery;
- The underlining function of the brain in relation to the process of imagination and the creation of images;
- Types of imagery-based training techniques professional dancers use to assist learning;
- Effectiveness of imagery based training techniques; and
- Movement qualities and how can they be facilitated by imagery when applied in the performance environment

My interest focuses on dance performances where strong connections between the body and mind bring about impulsive and ephemeral moments during performance. For example, because imagery is widely known and used in professional dance training and learning, I aim to investigate how imagery-based training techniques can be carried forward and brought into performance. I hope to unveil how the mind and body connect together to seemingly and mystically form a new creation or innovative performance and generate compelling movement qualities.

Definition & Background

Researchers in the field have their own understandings of imagery-based training dependent on their interpretation of imagery. There is a diversity of definitions of imagery in the literature that show considerable variety in meaning and classifications. This thesis will focus on the concept of mental imagery.

Franklin (1996a) points out that many people across the fields of psychology, science and dance have used and shown interest in images since the beginning of the nineteenth century. Franklin (1996a) notes that James and Lotze experimented with the interaction of the body-mind wherein physiology and neuromuscular behaviour can be altered through using images generated in the mind. Franklin (1996a) also states that Todd, Clark, Swiegard, Dowd, Bernard and Skinner contributed much to the development of imaging and how it is used today in dance. Other practitioners such as Dowd, Batson, Eddy and Bainbridge Cohen have further developed imaging's principles and practices.

Udow (2004) interprets imagery as a reproduction. She extends this definition further by explaining that information to create the imagery is stimulated by the outside environment and the focus lies in what is taken into the mind. Udow (2004) sees this as a twofold process and names it as holistic and simultaneous. Whereby a totality of an idea is experienced rather than bits of images sequenced together. Richardson (as quoted in Ehrlichman, 1983) has defined imagery in relation to three separate ideas. The first idea involves quasi-sensory experiences, the second relates to self-conscious awareness, and the third idea involves the creation of something from nothing. Kenitzer & Briddell (as quoted in Short; Afremow & Overby, 2001) have defined imagery as a process of creating and recreating images through the use of a variety of senses.

It is also very important to note that every person is unique and each individual's ability to receive and put out images is different. The image-making process is also dependent on how the brain receives, interprets and sends images. But Udow (2004) suggests that most people have the ability to imagine images through the experiences of sight, sound, smell, touch and motion, both real and invented. This also depends on how the brain receives interprets and sends images. Omstein (as quoted in Udow, 2004) identifies the dancer as an individual who possesses strong receptors but Udow (2004) argues that a dancer needs both receptive and active modes to enhance his/her potential:

> *The consistent use of imagery brings about the desired balance between the active and receptive consciousness because of its dual nature as a form of mentation. Mentation involving imagery occurs within the receptive mode of thought due to its simultaneous holistic sensory like nature. It is accessible to the active mode because it can be thought about called and acted upon to different degrees depending on individual experience. Imagery has an active consciousness as well as a receptive consciousness life (*Udow, 2004, p. 9).

Udow (2004) explains further that the distinction between an active and a receptive image is not always clear cut because the senses all interrelate with each other at the same time.

Classifications of Imagery

Many researchers have endeavoured to classify, explore and understand mental imagery. An overview of some of the classifications is important to clarify the many interpretations of mental imagery that have proven to be useful because different types of imagery will produce different results in facilitating movement qualities.

For example, Udow (2004) classifies imagery into four sections: after image; eidetic image; memory image; and the imagination image. The after image is a "visual image that refer[s] to the persistence of a sensation after the stimulus has left" (Udow, 2004, p. 13). A practical

example might include a flash of a bright light in a dark room and the subsequent seeing of the vague outline and colour of the flash after it has taken place. The eidetic image concerns photographic memory. Memory image is the most common form of mental imagery involving everyday recall and recreation of past events. It is part of a person's natural thinking processes. The imagination image is created from something that has not had an experience or stimulus beforehand which provokes the image. It is created in the mind through associations which may not have personal references.

Eric Franklin (1996b) classifies imagery into several parts that also show a clear representation of the different types of imagery which may be involved. He has categorised sensory imagery into seven areas: visual; kinaesthetic; tactile; proprioceptive; olfactory; auditory and gustatory. Franklin (1996b) points out that most people are familiar with visual imagery, like seeing your fingers float up in space. He describes kinaesthetic as the physicality and feel of the movement. This could translate into a practical example such as the rushing of the wind on your skin as your body moves fast through space. His definition of tactile is closely aligned with kinaesthetic and uses an example of recreating and repeating the feeling of how a teacher corrected the alignment of the pelvis, reinforcing the image until it becomes incorporated into the nervous system. The fourth area is the proprioceptive which incorporates sensing the body's position in space and the relationships between the different parts of the body. Franklin (1996b) argues for an olfactory image as this type of image can be powerful because the stimulation of the olfactory sense can attract or repel. Hearing the internal rhythm of a movement is associated with the auditory image category. Dancers who use auditory imagery dance with the music in their mind, while they practise routines and sequences. A realistic example of this might be that while practising a pirouette, a dancer

would hear the inner rhythm of the movement or they might hear an ascending scale for an extension of the leg into the air. Franklin (1996b) also includes gustatory imagery. This is when a person would imagine taste and provides an example of how a sauce may taste before during and after the cooking process with the addition of ingredients that shape the taste of the food.

Short, Afremow & Overby (2001) classify mental imagery into two parts: modality, and perspective or type. They observe that modality concerns the type of mental imagery that evokes and calls on the use of the senses much like in Franklin (1996b). However, they also define mental imagery under perspective or type imagery where the viewing occurs internally or externally. Internal and external perspectives are often stated as direct and indirect imagery.

Direct and Indirect Imagery

Many researchers have identified the importance and place of direct and indirect imagery (Franklin, 1997; Short, Afremow & Overby, 2001).

Overby (as quoted in Franklin, 1996b) describes direct imagery as a non verbal and literal representation of a movement. Franklin (1996b) uses the example of visualising your fingers extending into the space, which is the same example as for visual imagery but it now has the additional attribute of being direct imagery.

Indirect imagery is metaphorical and symbolic imagery where an outside event or object is put onto and used to clarify processes or movement (Franklin, 1996b). For example, the ridge of the scapula as a clock work wheel could be imagined which projects as a rotating arm elevated in space.

Other literature using the categorisation of direct and indirect imagery have expressed slightly different interpretations. Short, Afremow and Overby (2001) suggest that direct imagery uses mental practice. They exemplify this definition by stating that, during practice for an event, the person imagines and evokes a replica of a successful execution of a skill, for example a dancer executing a perfect pirouette, imagining all the actions that have to occur in sequence to perform the skill successfully.

Short, Afremow and Overby (2001) explain that indirect imagery describes metaphorical images, involving objects and ideas that have an association with a motor skill (Franklin, 1996b; Gassner, 1999). They illustrate their perspective by saying that the objective of metaphorical images is to enhance the quality of movement by relating movements to characteristics of similar entities (Short, Afremow & Overby, 2001; Franklin, 1996a; Franklin, 1996b; Gassner, 1999).

Imagery has also been classified by location. Franklin's inner and outer imagery distinguishes between imagery that can focus on events that happen inside or outside of the body. For example, inner imagery might encompass the feeling of winning a race and outer imagery might be the sound of the crowd cheering when you win the race. Short, Afremow & Overby (2001) have named this type of imagery, perspectives. They explain that internal imagery occurs when one visualises the movement as it is happening inside the body and external visualising occurs as if one watches the movement happen like a film. Short, Afremow & Overby (2001) claim that the perspective of imagery is important for training as it is used for selection and alignment with the objectives of the lesson and each perspective will result in something that is different and therefore will create new results. The imagery's effectiveness depends on what type of perspective the person is comfortable in using, therefore a

perspective should be chosen by the person as one that may be more natural to imagine for his/her point of view.

Franklin (1996b) also categorises imaging under abstract and concrete titles. Imaging that is open and allows subjects to develop the content of the image is classified as abstract. This is a psychological approach as it is dependent on the way the images are interpreted. Franklin's concrete images are fixed by a universal consciousness. For example, most people can imagine the look of a snake even though snakes can come in all different lengths colours and patterns.

The location of an image is a further categorisation used by Short, Afremow & Overby (2001). However, they maintain that kinaesthetic direct and indirect imagery are the two types that are most powerful in the acquisition and successful performance of a motor skill. Udow (2004) claims that it is the coupling together of the imagination and memory imagery that becomes most useful for the dancer in movement. Imagination and memory images "allows the dancer to remember previous movement experiences, to anticipate and prepare for the new movement experiences and to create and develop ideas about movement that wouldn't originate from any source without the aid of imagination" (Udow, 2004, p.15).

Classifications of imagery hold their importance because the various types convey different ideas and therefore facilitate movement quality for performance in different ways. The type of imagery should be chosen by the performer so they can engage with the movement through imagery in the most direct way.

The Brain in Human Consciousness

The brain plays an important role in the processing of images. Therefore, it is necessary to take a brief look at the brain and its functions in relation to visualisation and movement. There is a plethora of research on the brain in the literature (Udow, 2004; Franklin 1996b; Dryden & Vos 1997; Doidge, 2010; Wilmerding and Krasnow, 2009; National Research Council, 2000) and as science and technological improvements emerge, new learning about the brain is certain to increase. The brain is a very complex organ; its functions, capabilities, and the vast amounts of information that a person processes is different and unique for everyone. This has implications for how a person processes imagery and movement.

The brain has 100 billion or more neurons and is divided into two hemispheres. The left side of the brain specialises in the logical, rational, intellectual, deductive and analytical activities (Udow, 2004; Franklin, 1996b). The right side of the brain specialises in metaphorical, intuitive, imaginative, and spatial activities (Franklin, 1996b; Dryden & Vos, 1997; Udow, 2004). Parts of the brain divided into lobes also deal with different functions. The frontal lobes control movement, thinking, and speech (Franklin, 1996b; Dryden & Vos, 1997). The parietal lobes process data from the senses, the occipital lobes specialise in vision, the temporal lobe is the language centre of the brain including the interpretation of music and the motor cortex controls automatic body activities (Franklin, 1996b; Dryden & Vos, 1997). The cerebellum located at the base of the brain is responsible for skilled movement which goes into automatic pilot and in turn, adjusts balance and alignment (Franklin, 1996b; Dryden & Vos, 1997). The cerebellum retains the coordination of movement which is automatically ready for recall when needed.

The accumulation of sensory perceptions from the environment leads to the individual's ability to produce (or imagine) an image in the brain. Some researchers such as Rossi (as

quoted in Franklin, 1996b) have proposed that the limbic-hypothalamic system of the brain connects body and mind. Franklin (1996b) notes that the brain uses:

> *Identical pathways for seeing objects and for imagining them-only it uses these pathways in reverse. In the process of human vision, a stimulus in the outside world is passed from the retinal to the primary visual cortex and then to higher centres until an object or event is recognised. In mental imaging, a stimulus originates in a higher centre and is passed down to the primary visual cortex where it is recognised* (Franklin, 1996b, p.35)

The function of the brain is significant for a dancer because it assists to process the information from the outside environment and through the senses, to make this information available for memory, as well as imagination and imaging.

Wozny (2010) points out that recent brain studies in memory confirm that the use of imagery when learning new movement helps retain movement patterns. This has also been confirmed by recent experimental developments in neuroplasticty (Doidge 2010). Recent research on the brain discovered that the brain can enlarge its structure through perfecting circuits suited to the task (Doidge, 2010). In the past, it was the belief that the brain was compartmentalised permanently, but this new research has begun to see a changing modified or malleable brain (Doidge, 2010). Recent scientific research in neuroplasticty has proven that people can change their brain anatomy by using imagination (Doidge, 2010).

Therefore, neuroplasticity and imagination aligns with Sweigard's Ideokenesis principals, where the re-patterning of poor movement or postural alignment habits are achieved through imagery and repetition of that imagery. In view of the work of the founders of Ideokinesis, Mabel Todd and Lulu Swiegard, the use of visualisation in their methods is fundamental. Their work intuited the mirror neuron theory which holds that there are special groups of neurons in the brain that respond in a similar fashion whether an individual is watching or actually doing a movement. Emily S Cross, a dancer turned neurologist, began to devise a

neuro-imaging experiment to investigate the ways the brain and body interact to learn movement. Reck, who studied Cross's work conducts a "Neural Rehearsal" with her dancers which requires precise movement and visualisation with each step. "Neural rehearsals are great for getting a sequence into place.... working this way engages the whole self" (as quoted in Wozny, 2010, p. 26).

This recent advance in enhancing the brain and body connection when rehearsing could be the next step in teaching dance and furthering qualities in dance performances. Wozny has even suggested that because dance engages both cognitive and physical processes, it is a great way to study the brain and its ability to function alongside the body in order to perform movement that engages the whole self (Wozny, 2010).

The Nervous System

The nervous system is the brain body network. The brain which is the central processing unit, relies on neurons giving information to the brain. The three types of neurons, sensory, motor and interneurons send and receive information to the brain and body. Sensory neurons gather information and provide stimuli for reflex activity which is essential for the processing of imaging and imagination. The motor neurons carry out commands to their attached muscles which enables the dancer to embody the brain's directive. The interneurons allow sensory communications between all the senses. Therefore, having a thought or an image in the mind would automatically send a message through the nervous system because the interneurons have connections to thought (Franklin, 1996b). Franklin (1996b) and Reck (quoted in Wozney 2010) have both suggested the idea that the mind and brain are the same thing.

The Mind and the Body

> *"There is no brain/body separation.. the brain is the body . Who better to understand this than dancers" (Reck, as quoted in Wozny, 2010, p.26).*

Recently Hargendoorn (2003) has concluded that everything we hear, see, do and feel is mediated by the brain and therefore, thoughts organise themselves naturally to cohesively work together with the body. He believes that if dancers can pay specific attention to unify their thoughts, images and feelings with their dancing, their dancing will become more wholesome, present and easier to rehearse. There have been many studies conducted on motor imagery. Hargendoorn (2003) reveals that some of the studies have shown that it takes people as long to imagine walking somewhere as it would to actually walk there:

> *We engage in motor imagery whenever we prepare, intend, mentally rehearse, describe or listen to a verbal description of a movement: for instance when someone gives us directions. Mentally rehearsing movements enhances actual performance, as sports psychologists have shown. The same motor areas are activated regardless of whether you imagine or actually perform a movement* (Hargendoorn, 2003, pg.5).

The implication is that imagery practice in dance training is an effective and a crucial element to be recommended to dance performers maybe even as an option to physically rehearsing. For example, imagining oneself performing a sequence of steps before going onstage, is arguably the same and probably more beneficial than frantically going through the motions of the repertoire backstage. Engaging in movement through imagery instead of performing is highly appropriate in some scenarios, but others would require more than just imaging. As Wozny (2010) observes when you engage both cognitive and physical processes together you engage more regions of the brain, helping to learn more quickly and intensely about what you are doing. For example, take imagining oneself completing a stable, technically clean pirouette. As a pirouette is a technical step that requires strong technical abilities, using imagery at the same time as doing or before doing the action could be effective as the parts of the brain required to do and imagine the movement are activated powerfully; and your senses

would be also in a heightened state, thus enhancing the productivity. Perhaps, imagery with movement is most beneficial for technical training and imagery instead of movement for preparing for performance?

Movement Quality

Movement quality is a term used in dance that has become confused as researchers determine its definition differently. Some determine the quality by attractiveness and aesthetic attributes, however, others determine it via the different attributes and energies that make one movement different to the other (Preston, 1999; Arnold, 2000; KET, 2010). Movement quality defined by the Arts Toolkit in KET (2010) is the:

> *articulated attributes created by the release, follow-through, and termination of energy, which are pivotal in transforming movement into dance. Typical terms that are used to describe movement qualities include; sustained, swing, percussive, collapse and vibratory; effort adjectives such as float, dab, punch and glide.*

However, other researchers have delved deeper into the aesthetic ideals of dance as an artistic form and how the dancer engages in this to be perceived as a dancer that uses high quality of movement. Arnold (2000) has written that little has been described in literature about the relationship between the dance and the dancer and what is required or desirable from an aesthetic point of view. He has attempted to outline and articulate what is necessary for the dance to be successfully presented and what is required of the performer to do this (Arnold, 2000). Arnold (2000) has argued that in order for art to exist through dance, it is important that the expressive powers of the dancer becomes intricately a part of what dance is. Arnold (2000) has stated that the dancer is responsible for making the communication of the dance one to remember and savour through the dancers physical strength energy and control.

> *Dance as an art form can exist only insofar as it can be and is performed in an aesthetically interesting way. The dance lies in the dynamic qualities the dance presents through the dancer* (Arnold, 2000, p.88).

Arnold (2000) has categorised dancers under two headings: the passive dancer and the active dancer. The passive dancer is one who is like a tool or instrument that follows the direction and manipulation of the choreographer (Arnold, 2000). On the other hand, the active dancer, significant to this paper, is rational, imaginative and contributes to the processes of creative dance because she knows what is required and performs her movements with understanding and purpose which contributes to movement quality. The active dancer also reflects upon her actions before presenting them. Merce Cunningham has described his role as a choreographer to help the dancers make the movements their own and perform it in the best way that they can, rather than just imitating and replicating (as quoted in Arnold, 2000). The active dancer is the guardian and presenter of aesthetic values and standards. Arnold (2000) has also suggested that there should be a systematic initiation of the dancer into an understanding of such key aesthetic concepts as unity, balance, harmony, rhythm, line, theme, variation, development and tension so that these attributes can be perceived, analysed and evaluated. The understanding of these concepts and the appropriate use of them will give the dancer the basis to help her perform the dance with both intelligence and insight (Arnold, 2000). Arnold (2000) has written that it is highly important for the dancer to be educated in aesthetic intelligence, attentitive to the imagination, and also to be "experientially sensitive and think about what she does and why she does it". It is through these channels that Arnold (2000) believes that the embodiment of dance as an expressive form is "very much bound up with the imagination and expressive capabilities of the dancer" (Arnold, 2000, p.94).

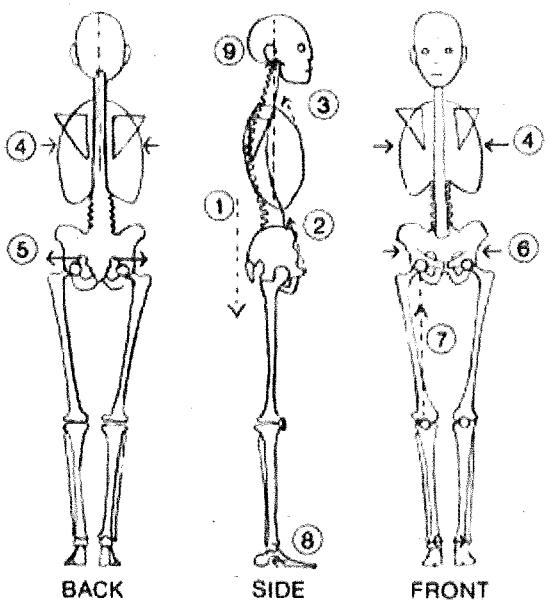
However Arnold(2000) and Preston (1999) both indicate that no matter how much the dancer is engaged with what she is doing and how connected to her imagination she may be, the audience's interpretation and personal taste ultimately defines how the quality of the movement is perceived.

Kinesiology Imagery in Training

Another technique which uses imagery without necessarily involving direct movement is called Ideokinesis. This technique mainly uses tactile and kinaesthetic imaging in order to assist re-patterning of the neuromuscular habits and thus correcting alignment. Udow (2004) describes Ideokinesis as learning more efficient posture, wherein all voluntary contribution to specific actions is kept to a minimum to lessen interference that is established by neuromuscular habits which are not efficient or appropriate. Sweigard defines kinesiology as follows:

> *Kinesis is motion, here defined as physical movement induced by stimulation of muscles.. Ideo, the idea, the sole stimulator in the process, is defined as the concept developed through empirical mental processes. The idea, the concept of movement is the voluntary act and the sole voluntary component of all movement. Any further voluntary control only interferes with the process of movement and inhibits rather than promotes efficient performance.* (Sweigard, as quoted in Matt, 2005)

Todd (as quoted in Matt, 2005) who was a pioneer in the field of Ideokinesis used knowledge of anatomy to facilitate imagined actions on the body so that students could identify poor postural habits, and explore new patterns of coordination, and thereby reduce muscular tension. Sweigard (as quoted in Matt, 2005) further explored the initial study of the area and developed Todd's method of 'thinking' rather than 'doing' hence connecting the mind to the body. Sweigard's investigation also concentrated on measuring changes in skeletal positions. Swiegard classified the changes of alignment into nine lines of movement, thus re-defining Todd's version of kinesiology. These nine lines of movement include:



The Nine Lines of Movement

1. Lengthen the spine downward
2. Shorten the distance between the mid front pelvis and the 12th thoracic vertebrae
3. From the top of the sternum to the top of the spine
4. Narrow the rib cage
5. Widen the back of the pelvis
6. Narrow the front of the pelvis

Figure 1.00 Matt, 2005

7. From the centre of knee to the centre of femoral joint
8. From big toe to heel
9. Lengthen the central axis of the trunk upward

(As illustrated in Matt, 2005).

Swiegard's research assisted the rehabilitation of many injured dancers by re-patterning past neuromuscular habits through the use of imagination and her nine lines of movement.

Swiegard's nine lines of movement were also applied through tactile aid and imaginative kinesiology. For example, Hawkins (as quoted in Matt, 2005) re-educated his neuromuscular system through using selected imagery based on kinesiological concepts. Inefficient movement habits that he had developed as a performer and which caused his injuries, were discarded by acquiring new knowledge of the organisation of his muscular and skeletal

system. By constructing a more accurate body image through tactile aids and imagination, Hawkins improved neuromuscular patterning which healed his injuries. He also found that through the adoption of kinaesthetic awareness, his technical abilities facilitated greater precision in dance performance.

Barracuda, who was a student at the Julliard School had physical difficulties with modern dance. She began to study classes with Swiegard who, firstly, critically analysed her dance movements then gave her imagery to assist in fixing the problem. This process was followed by an informal discussion and exchanging of images with fellow students which proved to be beneficial as it positively reinforced improved movement quality and techniques laying the foundation for future dancers. Barracuda further studied methods of introducing imagery and where to focus the imagery for particular exercises and other applications (Matt, 2005). After graduating from Julliard School, Barracuda became a dance instructor and incorporated Swiegard's imagery approach to teaching dance, finding that her students became more proficient in less time (Matt, 2005).

Therefore, Swiegard's postural alignment and imagery approach has become a significant approach in dance training, developed further by Barracuda and Barracuda's contemporaries to show that, by using postural alignment and imagery, students became more proficient in modern class with less amount of effort.

Gaga Method

Another powerful dance technique that utilises imagery extensively is the Gaga method created by Ohad Naharin from the Batsheva Dance Company, over 20 years ago. Similar to the explorations of kinesiology, Naharin found that he could move his body efficiently to tap

into unused potential in other body parts through the use of different initiation points and imagery.

Gaga uses a series of words that signify particular ways to initiate movement and parts of the body (Naharin, 2009). These initiation points include: 'Luna' which refers to the base of the fingers or the 'heals of the palms', located between the metacarpals, the proximal phalanges, and also found at the base of the toes. 'Luna' refers to movement that is initiated from these points and also refers to the isolation between these points to create a rich sensation in the hands and feet. 'Lena', describes a circular source of energy that exists between the navel and groin and spreads out through the body, which is used to assist in explosive actions among other movements. 'Beba', depicts the idea of stretching the body away from the sit- bones. 'Oba' translates into a notion of travelling matter moving through the body to initiate movement. For example, making the body become 'thick' tubes and imagining soft cotton wool travelling inside it. 'Ushi' relates to the outside of the feet. Using 'Ushi' can create movement in the feet, initiating change in the pelvis or knees and letting the resonance of the movement echo through the rest of the body. Finally, 'Pashi', imagines the feet being glued to the floor and moving only from the isolation of your ankle and heel bones, again enabling resonances of movement to echo throughout the body (Naharin, 2009). These initiation points assist the dancer to imagine new patterns and qualities of movement.

In addition, the Gaga technique uses the imagery based method of teaching to create different textures and sensations within the dancers body. In a Gaga class, movement occurs continually for the whole hour and takes the form of structured improvisation with images and movement cues, so that students are able to translate these images into dancing (Namerow, 2008). For example, images used may be, "tiny ants crawling all over your body, ice cold water rushing off your limbs" (Holmes, 2007, p. 3). Therefore the imagery utilised

with dancers helps them become aware of their whole body as well as the relation of the different body parts to the whole.

Namerow (2008) also states that images are used to keep the mind active while the body rests. For example, "imagining your body floating in air" assists the dancer to recognise air under the arms, behind the back, and under the feet (Namerow, 2008). Then the dancer is instructed to think about the organs floating, such as the heart or the eyes (Namerow, 2008). Recognising the space surrounding the body creates a heightened sense of the body as a whole organ, which forces dancers to be aware of everything that makes up the body, such as bones, flesh, muscles and organs. Gaga is a dance between the mind and the body. Namerow (2008) writes:

> *I felt very alert and aware not only of my body and the way I was moving but also of my surroundings and the space between and around my bones, muscles and flesh. I was using my senses in an integrated way that was both calming and invigorating* (Namerow, 2008, p.3).

By listening to what the body needs and by feeling from within, a dancer is able to use all their senses which inevitably promote variable qualities of movement. Naharin (2009) has strongly suggested that by using imagery, a dancer can focus from within rather than using mirrors to manufacture the body from the outside. Naharin has stated:

> *Abolish mirrors, break all the mirrors in all studios they spoil the soul and prevent you from getting in touch with the elements and multi-dimensional movements and abstract thinking, and knowing where you are at all times without looking at yourself. Dance is about sensation, not about an image of yourself* (as quoted in Namerow, 2008, p. 3).

Traditional dance practices use mirrors so that dancers can be aware of the body and where it is in space. This reflective method promotes the idea that the body becomes a two dimensional object and dancers lose a sense of their sides and back. Utilizing internal focus, Gaga promotes the use of all the senses, to become aware of your body and find pleasure in

the movement. It also challenges multi-dimensional movement to emerge through using images that bring the awareness to the parts of the body that dancers tend to forget about.

Another image technique promoted by Gaga is to challenge the body to move with two separate ideas at the one time. For example, Namerow (2008) describes one of the images given to him in a Gaga class, "Walk with speed and intention while letting the arms and upper body float and be light" (Namerow, 2008, p.3). Dance techniques have a history of being interested in the struggle and difficulty to think about, coordinate and perform two different ideas at once. For example, in ballet, the *bourree* or *battement* step, where the feet vigorously move, the upper body is held with smooth arm gestures. Perhaps Gaga has invented and improved an easier way to coordinate two separate qualities of movement at the one time? "[Gaga] It's just a way to make the body much more sophisticated and smart , and learn to do alot of things at once – coordination" (Garfinkel as quoted in Holmes 2007, p. 3).

Gaga teaches dancers not only to become multidimensional and coordinated with movements it also teaches a kinaesthetic awareness which enables fast transition from one state of being to another no matter how contrasting. Naharin's dancers onstage can transition from complete stillness to large, explosive, dynamic, space-eating movement and subside just as quickly (Holmes, 2007). "The kinaesthetic awareness they gain from gaga enables them to move with speed and clarity through choreography that is complex and often contorted." (Holmes, 2007, p. 3).

Namerow (2008) suggests that the use of imagery fuels the imagination so that anything is possible. The images such as "imagine you are in a cold shower and you're feeling the water wash over you"(Namerow, 2008, p. 3) can relate to everyone, and being able to bring that feeling into movement can make you become aware of the slightest movements in your back,

your emotions and senses. By using imagery, the Gaga technique brings sensation, awareness and emotion into the movement thus improving quality of movement.

Naharin's Gaga technique strives to establish a flow throughout the entire body that allows complete fluidity, no matter where the movement is initiated (Holmes, 2007). Gaga uses the conjunction of the brain and the body to create rich sensations in movement in both training and performance. It has been suggested by Naharin and many dancers that used this technique that imagery can affect the body's output and quality of movement (Namerow, 2008; Holmes 2007).

Kinesiology and Gaga techniques Comparison

It appears from the literature that kinesiology focuses on an anatomical type of imaging in contrast to Gaga which incorporates the use of imagination and sensual imaging. Ideokinesis uses literal and direct images related to the skeletal structure (Overby, 1997). It has been found that this dance technique assists safe dance practices, the re-patterning of bad habits as well as getting the most out of the body with the minimum amount of effort.

On the other hand, Gaga uses imagination in an indirect way as well as using memory. Gaga also focuses on many classifications of imaging at the same time, so that emotion and the senses are brought together into the movement. This has shown to assist a dancer in performance in a multitude of ways. It helps to portray and communicate themes and ideas, emotions and characters, as well as assisting dancers with intention and authenticity of movement. Gaga focuses on 'feeling' in order to heighten a dancer's senses to the millisecond of the movement. Gaga technique promotes the creating of a multidimensional

movement for performance. Therefore, one could say that the Gaga technique may be preferable for performance and Ideokinesis for training the body. When Ideokinesis and Gaga are used in conjunction, a dancer who trains and facilitates ideas from both these techniques will successfully produce dancing that is very 'bodily aware.' The dancer would also learn to embody movement in a multidimensional way at a deep level.

Findings and Discussion

The questionnaire responses demonstrated that subjects tended to lean toward utilising one type of imaging, whether it be closely related to the ideas of Ideokinesis or Gaga technique. This will be discussed as follows:

Questionnaire responses: How dancers perceive the values of imagery

This case study used a purposeful sample. The subjects consisted of eight post graduate and undergraduate students; from the Victorian College of the Arts, the Western Australian Academy of Performing Arts and the LINK Dance Company. The questionnaire was devised to discover any imagery-based methods used by these dance students and how they might use imagery. Subjects were given a questionnaire via email (see Appendix A). Subjects recorded their views on the questionnaire and returned the information via email.

The data was examined by content analysis through manual coding. The data revealed three main areas that were mentioned by the eight research participants. These three areas that connect to the use of imagery to facilitate movement are:

- Anatomy
- Learning and developing
- Quality of movement

Anatomy

Several subjects mentioned anatomy in their use of imagery to facilitate movement. They referred to imagery to assist in the correction of alignment and the use of the right muscle groups for ease of movement. As Franklin (1996b) has observed, the participants' responses indicate a strong interest about the workings of alignment and efficiency. Seven of the eight subjects expressed their use of imagery in reference to the anatomy of the body and stated that they found it very useful in developing their skills in dance class. One participant stated: "In class I focus more in the anatomy when I image thinking about alignment"(1)[1] and another stated, "most of the imagery I use in class is associated with the skeletal structure" (7).

Imagery to support the alignment of the skeletal structure was an area that many of the participants mentioned. Four of the participants observed that they used imagery to support the alignment of their skeletal structure, to stabilise themselves in dance class. Subject one explained that if she was having trouble with a skill, she used imagery to think through it and figure out the problems. By imagining the length of the spine, she was able to ensure correct alignment and stability. Subject six also mentioned 'lengthening of the spine' to centre alignment acquiring stability by imaging strings lengthening up her vertebrae. Subject seven stated that she used imagery associated with the skeletal structure to assist her in stabilising balances: "when trying to balance in attitude I think of an imaginary line connecting my sitz bone with my heel, it helps in stopping my ankles from wobbling".

Subject five comented that she used imagery associated with the skeletal structure to correct the alignment of the pelvis in moves such as *plié*. Subject one used imagery to open the hip sockets to avoid injury and repattern new neuromuscular habits. Inefficient movement habits

[1] The respondents have been coded 1 to 8 and will appear as such after their responses

that had crept into her performances and which caused her injuries were discarded by acquiring new knowledge of the organisation of the muscular and skeletal system through imagery of the openness in the hip sockets. These reflections from the participants confirm that dancers are using Swiegard's version of Kinesiology in their dance training to assist their alignment of the skeletal structure and to gain greater stabilisation.

Another commonality was that all the subjects reported and illustrated positive experiences using tactile aid to correct alignment and to reinforce the use of correct muscle groups to work more efficiently. Tactile aids promoted ease of movement and the establishment of new neuromuscular patterns. One participant stated that 'tactile line of movement' was especially helpful for her in dance class and that she had experienced her body changing its alignment and extending along the line of movement. Another participant referred to Sweigard's lines of movement assisting her to align her pelvis better. Subject four stated that the only imagery that was useful to her was tactile information:

> *I find it difficult to 'feel' my body moving, in particular certain small muscles or joints. When learning to activate my calf muscles I used tactile aid. When asked to activate my inner gastrocnemius I was unable to, however through repetition of the tactile aid I was eventually able to replicate it without tactile aid.*(4)

Numerous participants stated that tactile information helped them use correct muscle groups in order to lessen effort and load on muscles. Imagery was also used in a general sense to assist with anatomical aspects. For example, one participant described how she learnt to use her back muscles correctly in order to hold the arms in second position without an aggressive activation of the deltoid muscle. Another example given was that imagery was used to assist to change the feeling of a *plié*: "More smooth and less effort I can feel my separate muscles engaging to do the *plié* and I can isolate the ones I don't, using the adductors to close the legs, rather than the quads"(5).

Another participant observed that by imagining the movement, the elimination of muscle tension was apparent so that when the movement is physically activated, the movement is more efficient on the body.

It is evident from the analysis that the dancers in this study found imagery useful in relation to anatomical aspects especially in relation to the alignment of the skeletal structure. They also found tactile aid very useful in activating and repatterning certain muscle groups, alignment, and to assist with ease and efficiency of movement.

Learning and Developing

Another area that surfaced in the analysis is that imagery was a useful tool for learning and developing as a dancer. Many participants described their use of imagery in relation to visualisation, development of movement, creativity and intention. From the responses, it became evident that many of these areas are interconnected and interrelated. Furthering the use of Ideokinesis or Gaga training methods were similarly reflected in their responses.

Udow's (2004) eidetic image and memory imaging was reflected in some of the participants' responses, for example one participant stated: "When I forget things I close my eyes and use recollection envisioning my every step and remembering small details in my photographic memory to help to myself remember things"(8).

Dancers also noted that they responded to visualisation of imaginative imagery to calm themselves of stress, nerves and sleeplessness in their every day lives and in their dance,

> *At night to help myself relax and go to sleep, sometimes I will imagine a warm sun shining its rays on each part of my body, from my toes to my skull, penetrating every cell on my skin. When on stage I use the image of 'flushing out' and coming back to*

> *the breath that I take at that time it helps me to be present in the moment, clears all my negativity and nerves, and helps my stage fright* (8).

This particular response reflects the literature on Gaga technique, whereby imagery is given to evoke an emotion or a response to bring into the dancing. This participant has found other ways to help her deal with unwanted negative emotions or states of being in her everyday life and in dance performance.

Another response, related to the visualisation category in learning and developing movement and self is that dancers use imagery to picture themselves succeeding at their goals to execute particular difficult steps. As Hargendoorn (2003) observes, when imaging, feelings and thoughts are unified with dance and the subject will become more cohesive and present. Indeed, these dancers, envisioning their goals and applying the imagery of succeeding at these goals, activate the same motor areas in the brain that are used to actually perform the goal.

One particular participant stated that during dance classes she found the use of imagery very helpful because every time she repeated a difficult movement or phrase of movement, she applied the same imagery which automatically came to her mind and enabled her to keep improving the movement. This is reflective of Udow's (2004) memory and imagination image. In this case, the dancer was able to create the movement through her imagination and simultaneously slot it into her memory in order to assist in developing the movements. Also, this strategy highlights the use of body mind connection, where she has applied imaginative practice techniques to improve neural pathways and therefore develop her skills as a dancer, which supports new research on neuroplasticity.

This participant noted further that, when it came to performing difficult movements that she had not physically been able to accomplish, she would use her imagination to embody the idea of the movement and the sensation of the action even if it was not correctly executed.

Eventually through the use of the imaginative image, she was able to physically experience execution of the movement.

> *I used imagery to imagine myself completing a clean double pirouette every class I had to do them, over the past 4 years of imagining myself doing this I have been able to achieve this image and replicate the feeling and the movement* (2).

This participant response has described a strong example of the use of the imagination through the indirect classification of imagery as described by Udow (2004) and Short, Afremow & Overby (2001). She has also utilised imagery intensively to tap into the unused potential in her body, similar to Naharin's methods. This participant's behaviour also correlates with the literature's suggestion that the mind can enhance the performance of the body through the engagement of cognitive and physical processes (Hargendoorn 2003).

As in Gaga technique, two participants mentioned that they used imagery to experiment with their movement, to try and find new movement patterns and ways of thinking about simple movement to help them stay engaged in their dancing. This tactic helped them to develop their movement and gain new information about their bodies that they had previously not had knowledge about, giving a new response to the movement.

> *New movement patterns ways of doing the same step I have done a million times in ballet, it keeps it exciting. An example would be imaging I'm drawing pictures in wet sand with my feet in tendus at the barre it helps me with the articulation of my feet and making clear shapes in ronds* (8).

> *I feel that I can gain information I have not been able to achieve myself, as I may not have thought to take that particular approach or it may give me a different response to movement* (5).

Other responses from the participants related to finding new movement pathways and used imagery to experiment with their movement in order to enhance creativity in choreography, improvisation, teaching, class and also in performance. In fact, many of the participants

mentioned that they had used imagery in their performances to assist in developing a character or themes and intentions that a choreographer had requested. One participant stated:

> *The work used a lot of animalistic motifs and movements. It was important to use the animal [that was] in mind, qualities, movement styles and textures in order to make the most of the movement. The most beneficial way of making this movement genuine was by using the image of the animal as the motivation behind the movement* (7).

Another states:

> *In dance performance I have used imagery to help me portray a certain theme or idea for example the idea that I used to portray a struggle against gravity was a ghost of a person sitting on my shoulders continually pushing me down every time I tried to stand. I think that imagery in performance brings more intention and discovery to the movement, as dance is ephemeral it is nice for both the performer and the viewer to be 100 percent immersed in the dancing mind and body, finding discovering their movement that will never be the same again* (8)

And:

> *In terms of character roles in dance I use it to help me feel a certain way for example in one dance performance I had to wobble on the end of a chair as if I was going to jump, the intention and image I used to help this come across in an effective way was that I was dangling of a very tall building I wanted to get down but the only way down was to jump, as I imagined myself in this situation, how I would feel look, what would happen to my muscles when I was overcome with this fear and how would I approach the jump, it brought alot more intention to my movement and characterisation.*(8)

It is evident through the responses that imaginative imagery can motivate movement and bring textures, style, intention, discovery and generosity to the quality of performance. As Arnold (2000) states, the embodiment of the movement is bound up with the imagination and expressive capabilities of the dancer, therefore, these subjects' responses capitalise the use of imagery to embody themes and ideas creatively. These subjects' responses also use techniques that are used in Gaga, to allow a feeling or emotion to inhabit the movement, exploding the expressiveness and authenticity.

From the participants' responses it was found that imagery has become an important tool for them to use in developing and learning about themselves as human beings and as dancers.

Their use of imagery in dance training and performance facilitates movement qualities through the imagination and also endorses Wozny's (2010) statement that there is no brain and body separation: the brain affects the body and the body will affect the brain.

> *Imagery is a vital tool that every dancer should use. Without imagery there would be limited ways of moving through improvisation and creating new dance movement. If you imagine yourself doing something enough, you will do it* (7).

> Imagery *has helped me to overcome many hurdles in my dancing and I recognise it as a very useful tool for learning and keeping things exciting* (8)

Quality of movement

Through the analysis of the responses, it became apparent that imagery is a useful tool for dancers to use to enhance the quality of their movement, whether it be to change the aesthetic look of their movements, or to help them to apply certain energy to the movement. Four significant topics related to the two classifications of movement quality surfaced, which were; effort/ energy, intention, presence and sensation. All categories of movement quality that were extracted from the questionnaire responses interrelated. Generally, participants outlined how imagery helped them to achieve movement quality but it was rarely elucidated what type of quality (aesthetic or energy) they were referring to.

Several dancers mentioned that using imagery in their dancing facilitated their movement quality by enhancing or decreasing the amount of effort and energy they put into the motions. Most of the responses related to effort and energy closely aligned with principles of Swiegards's Ideokinesis. The responses indicated that imagery had helped them achieve quality of movement, or a specific movement quality, with proficiency, and less amount of effort and tension.

Reflecting Gaga's concept that imagery based methods can create different textures and sensations within the dancer's body (Naharin, 2009), one dancer mentioned that using the images of soft textures assists her in producing movements with a soft energy, as well as using the image of a whip to help her apply a fast thrashing energy into her movements. Another dancer stated that she had used the image of circles in the body while imagining her legs extending outward to produce movement that was large, continuous and facilitated by a constant amount of energy. This description in particular, reflects Gaga technique which strives to establish a flow throughout the entire body that allows complete fluidity (Holmes, 2007). How multiple images applied to the body can assist in coordination of two contrasting ideas was also raised (Namerow, 2008; Holmes, 2007).

Imagery that facilitated movement qualities of effort and energy in relation to the aesthetic of the movement was evident in the responses. One response stated that imagery had facilitated the movement quality aesthetic so it looked 'more natural and not manufactured' (7). This also helped change the aesthetic and feeling of the movement compared to not using the imagery. This reflects Arnold's (2000) point of view whereby the dancers have clearly understood and used the appropriate concepts of aesthetic refinement in order to perform their movement with intelligence and insight. Arnold (2000) believes that by practising the aesthetic, movement becomes perceivable, analytical and evaluable. Furthermore, this is reflective of Gaga whereby the promotion of movement comes from within by using imagery and sensation, rather than movement being manufactured externally (Naharin, 2009).

Intention was mentioned in relation to movement quality by numerous subjects and was often referred to in combination with presence and sensation. Many subjects observed that using imagery added a new level of intention and thought to the movement, consequently facilitating the sensation and quality of the movement, changing the way it was performed. "I

find that using imagery such as moving through water or thick air adds a new level of thought and intention behind the movement and helps to make the movement become much richer"(6).

Again, Gaga's use of imagery is reflected by layering thought, intention and richness to the movement. Generally the responses also reflected the literature that describes how the mind's images can affect the performance of the body (Wozney, 2010; Hargendoorn, 2003; Doidge, 2010).

Imagery connected to cognitive engagement with movement was an area that surfaced from the responses. One respondent described her recognition of her body as a whole enabling her therefore to add intention, presence and interest into her movement. This response strongly reflects the ideals of Gaga technique where imagery is used to stay engaged with the movement, while also evoking the sensation and recognition of space surrounding the body in order to sense the body as one whole organ (Namerow, 2008). Another response described how this level of cognitive engagement with her motions had changed the intention and the quality of her movement by assisting her to produce the feel and sensation of the image. This reflects Gaga technique's use of imagery to create particular sensations in the body (Namerow, 2008; Holmes, 2007).

The use of imagery to convey characterised movement quality that had intention, sensation and authenticity was also revealed from the study. One response described how she had used the image of dark thoughts and negativity thinking about being pushed down into the ground to produce the feeling of struggling against gravity (2). Another stated that she used the imagery of herself dangling off a tall building to imagine the muscle tension, fear, as well as inner feeling and facial expression of the character in the moment (8). By using this imagery

for performance, the imagery brought a certain intention into the movement and character, therefore facilitating the aesthetic and the overall presence of the dancer in her movement. This example is reflective of how imagination is used to change a previous brain image into new brain image altering the performance of the body (Wozney, 2010; Hargendoorn, 2003; Doidge, 2010). Also, it is an example of how images and connections to thought allow for the aesthetic to become authentic and engaging like Gaga improving movement quality as discussed by Arnold (2000).

It was revealed that the sensation of movement was an important component to movement quality. Some of the participants mentioned the use of imagery to assist them in changing the sensation a movement and getting more out of a movement, especially when the movements were difficult or abstract. This aligns with Gaga technique as it promotes the use of imagery to fuel the imagination to make anything possible (Namerow, 2008). It also highlights research that has discovered that the brain's images can enhance the performance of the body, reinforcing the mind and body connection (Wozney, 2010; Hargendoorn, 2003; Doidge, 2010).

Imagery to articulate the aesthetic was another prominent area that was revealed from the responses. One participant stated that imagery helped her focus internally on her movements which brought a heightened state of awareness to her dancing. "Using imagery brings a heightened state of sensation to my dancing as it makes me really focus internally on what is happening through my body, so therefore makes my dancing more sensitive" (6).

This response relates to the literature on Gaga in which Gaga develops a kinaesthetic awareness and a heightened state of sensation to be brought into dance via the tool of imaging (Namerow, 2008).

Many of the participants who had used imagery in dance performance recorded that imagery helped their capacity to remain immersed and present in their performance, also enabling them to let go and concentrate on different types of sensation, in order to physically portray what was necessary and needed. The level of sensation added to their performance facilitated improved movement quality so that their dancing was more aesthetically expressive. This imagery sensation technique (reflective of Gaga) assisted the dancer to move with clarity as well as master complex choreography (Namerow, 2008).

Another participant has discovered the connection of aesthetic, sensation and imagery to facilitate quality of movement:

> *I think that if you use imagery to its fullest potential it can not only make to movement more beautiful or even ugly if that is [the] desired [aesthetic] but it can also make to movement feel fantastic. It is not something you just dance; it is something you feel which is ultimately why we choose to dance! Because we love the way movement feels* (7).

This response also highlights Gaga's integration of the senses which can calm and/or invigorate the dancer, promoting emotions within the dance that generates variable qualities of movement (Namerow, 2008).

Interestingly one of the eight participants stated that although imagery was useful to her in many ways, the quality of her movement when she used it was immeasurable. She states that: "Imagery is useful in performance, but might take away from other elements such as audience awareness/project. This depends on the work and movement" (3).

This response is reflected by Arnold (2000) and Preston (1999) who have pointed out that no matter how much the dancer is engaged with what she is doing and how connected to her imagination she is, the audience's interpretation and personal taste ultimately defines how the quality of the movement is perceived.

Conclusion

Many definitions and interpretations of imagery are evident from the literature, as well as in the responses from the participants. However, it is apparent that imagery is widely used and a useful tool for dancers, students, teachers and choreographers. It is also evident that the various classifications of imagery can facilitate movement in different ways, depending on how the individual uses their imaginative practice. The use of imagery to connect the mind and the body is supportive of recent scientific brain research called neuroplasticty. This plasticity of the brain has allowed dancers to re-pattern movements and neural pathways for physical rehabilitation and alignment of the skeletal structure as well as for aesthetic and artistic purposes. The literature and the participants from this paper have highlighted the use of imagery for these purposes. Alignment of the skeletal structure, Ideokinesis, and Gaga techniques were prominent avenues through which imagery was used to facilitate movement. Imagery connected directly to physical alignment was the most popular amongst the responses with 100% using visual and tactile aid. However 75% also used indirect imaginative imagery to facilitate movement quality and intention.

Defining and interpreting movement quality has proven to be more difficult and problematic. Therefore categorising movement quality into three areas of energy, aesthetic and characterisation has assisted the research. However, these areas have still been difficult to discuss separately because they are interrelated and interconnected. Intention, presence, sensation and characterisation were themes that participants and the literature used to describe quality of movement. Even though movement quality has a relationship to the imagination, kinaesthetic and mind- body connection, it is an area that is impossible to measure because of the subjectivity involved. This subjectivity may come from the dancer or

from how the audience views and understands the movement. Therefore, a new study that involves defining movement quality in more specific terms and from different points of view and cultures is warranted.

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Appendix A

1. AGE:
2. How many years have you been training or performing in dance?
3. Have you done improvisation class before? Y/N
4. Are you familiar with Feldenkrais and or kinesiology? Y/N
5. Are you familiar with Gaga Method?
6. Would you consider yourself to use some type of imagery in day to day life?
7. One being the everyday and 5 being never how much do you use imagery? 1 2 3 4 5
8. Do you use imagery to enhance your performance of skills in dance class/ or to assist in teaching the skill?
   What are some examples?
9. Have you used imagery in performance?
   When?
   What was the imagery?
10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create?
11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)
12. Is the way you imagine yourself moving the way it feels when you do the movement?
13. Do you find you respond to tactile information to help with your alignment or movement? Y/N
14. If you answered yes please describe....
15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.)
16. If you think about specific movement using different ideas and images, do you find new movement patterns?
17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing?
18. Any other comments about imagery?

Appendix B

1. AGE: *21*
2. How many years have you been training or performing in dance? *16*
3. Have you done improvisation class before? *YES*
4. Are you familiar with Feldenkrais and or kinesiology? *YES*
5. Are you familiar with Gaga Method? *YES*
6. Would you consider yourself to use some type of imagery in day to day life? *Most likely*
7. One being the everyday and 5 being never how much do you use imagery? *2*
8. Do you use imagery to enhance your performance of skills in dance class? *Yes*
   What are some examples?
   If I'm having trouble with a skill I use imagery to think through it and figure out where I'm going wrong
   Make sure my alignment is correct – imagine the length of my spine etc.
   Avoid injury and tightness – image openness in my hip sockets
9. Have you used imagery in performance? *Yes*
   When? *Most recently in Dust, throughout the work.*
   What was the imagery? *One example is the image of being pulled forcibly away from something, or extracting body parts one by one from sticky flypaper.*
10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create? *Yes*
11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc) *Feel the bones and joints moving from the inside*
12. Is the way you imagine yourself moving the way it feels when you do the movement? *YES*
13. Do you find you respond to tactile information to help with your alignment or movement? *YES*
14. If you answered yes please describe.... *Line of movement tactile aid is especially helpful for me with alignment – if I am given a tactile line of movement I find my body responds by extending along that line.*

15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.) *Yes*
16. If you think about specific movement using different ideas and images, do you find new movement patterns? *Yes.*
17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing? *I think imagery is extremely important in remaining immersed in my performance – being present*
18. Any other comments about imagery? *I find that I use 2 distinct types of imagery – one more anatomical and one more sensational. In class I focus more on the anatomy when I image, thinking about alignment etc. Whereas in performance I find it is more important to let that go and concentrate more on what kind of sensation I can make use of to physically portray what I intend to.*

Appendix C

1. AGE: *20*

2. How many years have you been training or performing in dance? *I've been dancing since I was 4, but I have been training at a pre-professional institution for 4 years now.*

3. Have you done improvisation class before? *Yes*

4. Are you familiar with Feldenkrais and or kinesiology? *Yes*

5. Are you familiar with Gaga Method? *No*

6. Would you consider yourself to use some type of imagery in day to day life? *Yes*

7. One being the everyday and 5 being never how much do you use imagery? 1 2 3 4 5. *I would Say 3.*

8. Do you use imagery to enhance your performance of skills in dance class?

   What are some examples? *Yes. Generally when the movement is difficult or abstract I and they are asking for a certain feel or quality behind the movement, that's when I find imagery helpful for me.*

   9.Have you used imagery in performance? *No*

   When?

   What was the imagery?

10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create? *In dance class I found imagery really helpful, every time I have to repeat a difficult movement or phrase of movement the imagery I previously applied comes straight back to mind and I am able to keep improving the movement rather than go backwards.*

11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc) *I see myself dancing the steps, as if I was watching myself on TV*

12. Is the way you imagine yourself moving the way it feels when you do the movement? *No, not all the time. When I imagine myself going through movement generally its how I would like to perform the movement even if I cannot physically do the movement yet especially if its hard. If I have the movement comfortable on my body then yes the way I imagine it is how it feels on my body, but as I said if I'm still working on the movement then I imagine it how I want it to feel even if it's not quite the same yet. When I first started at WAAPA I had much difficulty physically doing specific steps such as pirouettes. I used imagery to imagine myself completing a clean double pirouette every class I had to do them, over the past 4 years of imagining myself doing this I have been able to achieve this image and replicate the feeling and the movement.*

13. Do you find you respond to tactile information to help with your alignment or movement? Y*es*

14. If you answered yes please describe.... *I find tactile information very useful as for example sometimes I'm not going to be activating quite the right muscles and if I have someone there actually moving my body in the way I should be then generally I will retain that better than if I have to find it myself.*

15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.) *Yes it does change the way I perform if that's the required outcome, the quality is different.*

16. If you think about specific movement using different ideas and images, do you find new movement patterns? *I find it's all about experimenting, so in some cases yes I do find new movement patterns, but not all the time.*

17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing? *Imagery really is useful to me when I use it to create a certain movement quality. For example, in recent rehearsals the choreographer asked for a section of his work where the movement was on the floor to be as if we were weighted by gravity, all peoples dark thoughts and negativity was acting like gravity, pushing us into the floor and it was all about the struggle against this weight. This image really helped me in replicating the movement quality.*

18. Any other comments about imagery?

Appendix D

1. AGE: *22*

2. How many years have you been training or performing in dance? *10*

3. Have you done improvisation class before? *Y*

4. Are you familiar with Feldenkrais and or kinesiology? *Y*

5. Are you familiar with Gaga Method?*N*

6. Would you consider yourself to use some type of imagery in day to day life?

   Y

7. One being the everyday and 5 being never how much do you use imagery? *2*

8. Do you use imagery to enhance your performance of skills in dance class?

   What are some examples?

   Yes, to change how a movement feels got get more out of a movement. i.e. imagine your feet have roots underground – for stability

9. Have you used imagery in performance? *Yes*

When?

To help with movement and character

What was the imagery?

I create a story to help me have the right characterisation and to help maintain the character onstage throughout the performance but I can't remember specific examples

10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create? *Yes*

11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)

I see myself moving – so I see what I would see if I was actually dancing. Sometimes also seeing myself from behind. I usually also feel the sensation of the movement.

12. Is the way you imagine yourself moving the way it feels when you do the movement? *Yes*

13. Do you find you respond to tactile information to help with your alignment or movement? *Y*

14. If you answered yes please describe....

In terms of energy, if I think of a soft texture then I'll move with less energy then if I thought about a whipping action.

15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.) *Yes*

16. If you think about specific movement using different ideas and images, do you find new movement patterns

Yes, my dancing becomes much more rich and I am able to achieve the movement quality that I aim for

17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing?

I think it is a powerful tool, especial in teaching/class. I think imagery is useful in performance but might take away from other elements such as audience awareness/project. This depends on the work and movement.

18. Any other comments about imagery?

Appendix E

1. AGE: *22*

2. How many years have you been training or performing in dance? *16*

3. Have you done improvisation class before? *Y*

4. Are you familiar with Feldenkrais and or kinesiology? *Y*

5. Are you familiar with Gaga Method? *One master class*

6. Would you consider yourself to use some type of imagery in day to day life? *No*

7. One being the everyday and 5 being never how much do you use imagery? *4*

8. Do you use imagery to enhance your performance of skills in dance class? *Not really*

   What are some examples? *Only when advised by a dance teacher or 'pilates' instructor (eg using the image of an elevator to engage the pelvic floor)*

9. Have you used imagery in performance? *No*

   When?

   What was the imagery?

10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create?

    No I don't find it useful

11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)

I imagine what I feel (muscles activating, feet against floor etc) and usually I see what I see as I would perform the movement. I occasionally see myself moving from an objective perspective.

12. Is the way you imagine yourself moving the way it feels when you do the movement?

Yes. usually

13. Do you find you respond to tactile information to help with your alignment or movement? *Y*

14. If you answered yes please describe....

I find it difficult to 'feel' my body moving, in particular certain small muscles or joints. When learning to correctly activate my calf muscles I used tactile aid. When asked to activate my inner gastrocnemius I was unable to, however when a finger was pressed against it I was. I became familiar with this sensation through repetition of the tactile aid and was able to replicate it without tactile aid.

15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.)

Depends on the thought, if there is a physical feeling included that I have experienced such as feeling of moving through a 'thick' substance then I can sometimes replicate the feeling by activating the same muscles and this makes a small difference to the intention of how I move however an unachievable thought such as having no bones is not affective.

16. If you think about specific movement using different ideas and images, do you find new movement patterns?

Occasionally i can make movement feel different and easier by using tactile information to activate the muscles.

17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing?

I don't really use it as I don't find t affective

18. Any other comments about imagery?

Appendix F

1. AGE: *21*
2. How many years have you been training or performing in dance? *18 years*
3. Have you done improvisation class before? *Yes*
4. Are you familiar with Feldenkrais and or kinesiology? *Yes*
5. Are you familiar with Gaga Method? *No*
6. Would you consider yourself to use some type of imagery in day to day life? *Yes, when I lose something I try an imagine my actions when I last had it and my surroundings*
7. One being the everyday and 5 being never how much do you use imagery? *2*
8. Do you use imagery to enhance your performance of skills in dance class? *Yes*
   What are some examples? *To correct my alignment*
9. Have you used imagery in performance? *No*
   When?
   What was the imagery?
10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create? *Yes*
11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)

I imagine my body moving through time and space and going through the motions of dancing.

12. Is the way you imagine yourself moving the way it feels when you do the movement?

When I do the actions I probably feel more weighted and acknowledge my interaction with gravity and my relationship with the floor more

13. Do you find you respond to tactile information to help with your alignment or movement? *Y*
14. If you answered yes please describe....

In some cases yes, but in others no. It depends on the particular type of aiding. I don't always positively respond to muscular tactile information. In terms of alignment and movement I feel I can gain information I have not been able to achieve my self, as I may not have thought to

take that particular approach or it may give me a different response to movement/alignment when being touched in a certain way.

15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.)

Yes

16. If you think about specific movement using different ideas and images, do you find new movement patterns?

    Sometimes, if I use imagery for example to correct my alignment of my pelvis in a plie it will feel different to if I just did the move without thinking about it. More smooth and less effort, I can feel my separate muscles engaging to do the plie and i can isolate the ones I need and the ones I don't, using the adductors to close the legs rather than the quads.

17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing?

When someone gives me the information I tend to think about it and try to make it work for me but I don't always use imagery on my own accorded. I do believe in some cases it can be very useful, especially when improvising or trying to find new movement pathways.

18. Any other comments about imagery?

Appendix G

1. AGE: *20*
2. How many years have you been training or performing in dance? *14*
3. Have you done improvisation class before? *Yes*
4. Are you familiar with Feldenkrais and or kinesiology? *Yes*
5. Are you familiar with Gaga Method? *No*
6. Would you consider yourself to use some type of imagery in day to day life?
   I don't really use imagery in day to day life, mostly just in dance classes.
7. One being the everyday and 5 being never how much do you use imagery? *3*
   Do you use imagery to enhance your performance of skills in dance class?
   What are some examples?
   Yes. I use imagery quite often to enhance my dancing and performing skills.
   I often think of strings lengthening up the body to help keep centre alignment and also think of the ankles, knees and hips folding to be able to drop my weight more.
   I also imagine the legs or body moving fluidly and as though they are very light to help keep movement from being laboured
8. Have you used imagery in performance?
   Yes.
   When?
   I use imagery in performance to help me to find themes and intentions the choreographer is asking for. I find it helps me to make the body sit better on my body and fit with how I move better.
   What was the imagery?
   The legs continually extending outwards as well as the body circles and movements moving in on large continuous movement.
9. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create?
   Yes. I believe that using imagery helps me to get movement to sit on my body better and allows ideas of the way I think a movement should be to develop further.
10. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)

When I imagine myself moving I imagine the way my body goes through the motions and which muscles are activated. I don't really imagine watching myself at all.

11. Is the way you imagine yourself moving the way it feels when you do the movement?
    Most often the way I imagine myself moving is the way it feels when I do. I also find that when I imagine the movement it helps me to illuminate any unnecessary muscle tension and use so when I physically do the movement it is more efficient on my body.
12. Do you find you respond to tactile information to help with your alignment or movement? *Yes*
13. If you answered yes please describe....
    I find that when I use tactile aid I can physically feel and sometimes see where my body needs to move to so it is in alignment. Then I can use this feeling of how far my body moved to be in the correct alignment for future reference.
14. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.)
    Yes. I find that using imagery such as moving through water or thick air adds a new level of thought and intention behind the movement and helps to make the movement become more rich.
15. If you think about specific movement using different ideas and images, do you find new movement patterns?
    Yes. For example if I imagine my leg lifting by decreasing the space between my leg and torso it makes the movement much easier and I don't hold as much unnecessary tension. Using imagery really helps to illuminate any movement patterns that are not helpful and find newer more appropriate patterns
16. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing?
    Using imagery brings a heightened state of sensation to my dancing as it makes me really focus internally on what is happening through my body, so therefore makes my dancing more sensitive.
17. Any other comments about imagery?

Appendix H

1. AGE: *21*
2. How many years have you been training or performing in dance? *15-18*
3. Have you done improvisation class before? **Y**/N
4. Are you familiar with Feldenkrais and or kinesiology? **Y**/N
5. Are you familiar with Gaga Method? *Familiar Yes*
6. Would you consider yourself to use some type of imagery in day to day life?
   If there was a time in my everyday life where I might use imagery it might be when I can't sleep due to stress. During these times I often use imagery to try and clear my mind.
7. One being the everyday and 5 being never how much do you use imagery? 1 2 **3** 4 5
8. Do you use imagery to enhance your performance of skills in dance class?
   What are some examples?
   Yes. Most of the imagery I use in class is associated with the skeletal structure for e.g. when trying to balance in attitude I think of an imaginary line connecting my sitz bone with my heel. It helps in stopping ankles from wobbling.
   When engaging my core I also use imagery, I think of my pelvic floor as an elevator rising from my pelvis to my belly button.
9. Have you used imagery in performance?
   Yes
   When?
   During a VCA performance choreographed by Sue Healy
   What was the imagery?
   The work used a lot of animalistic motifs and movements. It was important to use the animal in minds qualities, movement styles and textures in order to make the most of the movement. The most beneficial way of making this movement genuine was by using the image of the animal as the motivation behind the movement.
10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create?
    Yes and No. When in class I think imagery is extremely helpful as I get more out of the skeletal way of using imagery. It just makes more sense to me as an individual. I find trying to use imagery based on a feeling or motivation for e.g. "use imagery to create a dance about a wave" much more difficult and so in that situation I would find

another avenue other then imagery to create the movement. This again would be in a skeletal mind frame

11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)
    I would be looking at myself from the outside and from a frontal position. I would be watching myself doing the steps and the movement and often I find that I can only really see clearly the big movement I find it very hard to see the little movement when I imagine myself dance.
12. Is the way you imagine yourself moving the way it feels when you do the movement?
    I'd like to think so but often when I watch myself on video after the performance I find myself thinking "that feels much different to how it looks". I think that is how I would feel when imaging myself also.
13. Do you find you respond to tactile information to help with your alignment or movement? **Y**/N
14. If you answered yes please describe....
    I especially find this when working on the floor. I can remember movement sequences judging by how I think certain bones and muscles should feel when they brush, hit or scrape along the surface of the floor
15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.)
    Yes, and I think that using the above examples it helps to make the movement look more natural and not manufactured.
16. If you think about specific movement using different ideas and images, do you find new movement patterns?
    I don't think that individually I find new movement patterns but I definitely find a different quality to the movement which could potentially change the way that movement looks.
17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing?

I think that if you use imagery to its fullest potential it can not only make to movement more beautiful or even ugly if that is the desired effect but it can also make to movement feel fantastic. It is not something you just dance it is something you feel which is ultimately why we choose to dance! Because we love the way movement feels

18. Any other comments about imagery?

Imagery is a vital tool that every dancer should use. Without imagery there would be limited ways of moving through improvisation and creating new dance movement. If you imagine yourself doing something enough, you will do it.

Appendix I

1. AGE:*21*
2. How many years have you been training or performing in dance?**16**
3. Have you done improvisation class before? ***y***/N
4. Are you familiar with Feldenkrais and or kinesiology? ***Y***/N
5. Are you familiar with Gaga Method? *yes*
6. Would you consider yourself to use some type of imagery in day to day life?
   Yes, I use imagery every day, it helps me envision my goals I see myself succeeding at something I want. When I forget things I use close my eyes and use recollection envisioning my every step and remembering small details in my photographic memory to help to myself remember things. I also use it at night to help myself relax and go to sleep, sometimes I will imagine a warm sun shining its rays on each part of my body, from my toes to my skull, penetrating every cell on my skin. When on stage I use the image of 'flushing out' and coming back to the breath that I take at that time it helps me to be present in the moment, clears all negativity and nerves, and helps my stage fright.
7. One being the everyday and 5 being never how much do you use imagery? ***1***
8. Do you use imagery to enhance your performance of skills in dance class? *yes*
   What are some examples?
   An example would be imaging im drawing pictures in wet sand with my feet in tendus at the baree it helps me with the articulation of my feet and making clear shapes in ronds

9. Have you used imagery in performance? *yes*
   When? What was the imagery?
   Every performance I believe you use imagery, I use it to help me remember steps, the feel of the floor on your body and what feels right and wrong. In terms of character roles in dance I use it to help me feel a certain way for example in one dance performance I had to wobble on the end of a chair as if I was going to jump, the intention and image I used to help this come across in an effective way was that I was dangling of a very tall building I wanted to get down but the only way down was to jump, as I imagined myself in this situation, how I would feel look, what would happen to my muscles when I was overcome with this fear and how would I approach

the jump, it brought alot more intention to my movement and characterisation. But generally in dance performance I have used imagery to help me portray a certain theme or idea for example the idea that I used to portray a struggle against gravity was a ghost of a person sitting on my shoulders continually pushing me down every time I tried to stand. I think that imagery in performance brings more intention and discovery to the movement, as dance is ephemeral it is nice for both the performer and the viewer to be 100 percent immersed in the dancing mind and body, finding discovering their movement that will never be the same again.

10. Do you believe that the imagery you used in performance, dance class, or everyday life helped you enhance the skill or the idea you where trying to create?

Yes

11. If you were to Imagine yourself dancing how would you imagine you would move? (eg. do you see yourself dancing the steps, do you feel your body going through the motions, the air moving on your skin or your muscles activating. etc)

I would imagine watching myself from a frontal perspective, and I will recognise the feel of the movement eg. The wind against my skin, but I will not feel it. Some days I find imagining myself moving slower than other days

12. Is the way you imagine yourself moving the way it feels when you do the movement?

yes

13. Do you find you respond to tactile information to help with your alignment or movement? *y*/N
14. If you answered yes please describe....

Tactile information has helped me use my back muscles to hold my arms in second without an aggressive activation of the deltoid muscle. It has also helped me with the alignment of my pelvis with Swiegard's lines.

15. When you think about movement in a different way do you find it changes the way you perform the movement? (For example if you imagined you were moving through thick air when dancing or you imagined you had no bones in your body while you were performing a movement.) *Yes, imagery defiantly changes the quality of my*

movement, there is more intention and I am continually engaged in the move trying to produce the feel and sensation of that image.

16. If you think about specific movement using different ideas and images, do you find new movement patterns?

    Yes new movement patterns ways of doing the same step I have done a million times in ballet, it keeps it exciting.

17. What your thoughts on imagery, and integrating a heightened state of sensation into your dancing? *As I have said above imagery really helps me to stay engaged with the way I am moving, I recognise my whole body when I use imagery rather than just one part, I am more interested in my movement and more present. Imagery has helped me to overcome many hurdles in my dancing and I recognise it as a very useful tool for learning and keeping things exciting*

18. Any other comments about imagery?

Appendix J

Table of Responses

Subject	Age	Years of Training	Improvisation	Kinesiology	Gaga	Use of Imagery in Daily Life	Extent of use	Imagery in Performance	Imagery Classification	Tactile Response
1	21	16	Yes	Yes	Yes	Yes	2	Yes	Internal	Yes
2	20	16	Yes	Yes	No	Yes	3	No	External	Yes
3	22	10	Yes	Yes	No	Yes	2	Yes	External	Yes
4	22	16	Yes	Yes	Yes	No	4	No	Internal	Yes
5	21	18	Yes	Yes	No	Yes	2	No	External	Yes
6	20	14	Yes	Yes	No	No	3	Yes	Internal	Yes
7	21	15-18	Yes	Yes	Yes	Yes	3	Yes	External	Yes
8	21	16	Yes	Yes	Yes	Yes	1	Yes	External	Yes