

PIPE-PSYCH:
Competitive Piping
Performance Psychology:
(Imagery)



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So what is imagery? Several terms can be used to describe a piper's mental preparation for competition e.g. visualisation, mental rehearsal, imagery and mental practise - all of these terms refer to creating an experience in the mind.

The process involves recalling from memory pieces of information stored from experience and shaping these pieces into meaningful images - basically, you recall and reconstruct previous events - so imagery is a form of simulation - similar to an actual real experience.

Our minds can also “image” pictures and events that have not yet occurred. We can build an image from several parts of memory (e.g. from simply observing and listening to others - we can “see” ourselves performing a beautiful pibroch if not yet played that particular one - as we put together finger movements that we already know and use from experience into the image we make).

We should also be able to go through a pre-performance routine of the tunes we are going to compete with by imaging every detail of how we are going to technically execute, express and perform to the best of our abilities before we actually go on to play! We can do this before practise sessions too as this has been found to be beneficial!

As can be seen, the uses of imagery are extensive - pipers can employ imagery in many ways from improving existing physical and technical elements of performance to acquiring and practising new skills. Moreover, imagery can be used to improve psychological skills too, such as concentration, confidence, control over emotional responses, solving problems, coping with pain, injury or illness, and keeping mentally sharp to return to competition.

Like all psychological techniques, imagery is required through practise - a good idea is to incorporate imagery into your daily routine and practise this technique for e.g. about ten minutes each night before going to sleep - when you are very relaxed - (mastery of the technique can take up to three months but you will notice differences really quickly!) However, imagery is not for everyone! Although some folk may find imagery has an “interfering effect”,

for the majority it works really well and particularly after good practise of the techniques.

There are two key elements to good imagery and these include **VIVIDNESS** and **CONTROLLABILITY** - making the image as “real” as possible and having good control over the image itself in terms of e.g. size, shape speed of the image. By controlling the image this helps you to picture what you want to accomplish. What is most important is to use **ALL** the senses (the visual, kinaesthetic, auditory, olfactory and tactile senses as well as emotional awareness, which tends to be forgotten!) Furthermore, it is crucial that once the image of a performance routine is completed, the outcome of this is recognised and imaged as well, in terms of (e.g. satisfaction, joy, contentment etc.)

The **TWO** main types of imagery - are **INTERNAL** or **EXTERNAL**. We can either image from an **INTERNAL** perspective (which refers to imaging the execution of a performance from our own vantage point - first-person perspective for viewing the image) or from an **EXTERNAL** perspective (which is when we view ourselves from the perspective of an external observer as if we were watching a recording of ourselves).

Whilst imaging, it is important to just focus on **POSITIVE** images rather than **NEGATIVE** ones (as the negative ones are in fact, much easier to do and tend to become a self-fulfilling prophecy! If, we think we are going to make a mistake or slip up, it’s highly likely we will do!)

Finally, the best way to image is through using **VMBR** (Visuo-Motor Behavioural Rehearsal) a technique originally developed by Suinn (1993), which combines relaxation and imagery. A good idea would be to precede imagery with **PR** (Progressive Relaxation) by Jacobson (1938), which is a non-pharmacological method of progressing from relaxing one major muscle group to the next (hence “progressive”) through the tensing and releasing of these major muscles. It is based on the premise that muscle tension is the body’s psychological response to anxiety-provoking thoughts and muscle

relaxation blocks anxiety. You cannot be tense and relaxed at the same time!

The technique involves learning to monitor the tension in specific muscle groups by first tensing each major muscle then releasing so that attention is directed towards the differences felt during tension and relaxation. However, it is crucial, whilst carrying out this technique that you release the tension **IMMEDIATELY** after contraction and not **GRADUALLY** so that you notice the difference!

Although this technique usually lasts about twenty minutes, a quick five-minute version of PR can be combined with imagery for effective VMBR.

The quick PR version includes tensing (contracting) and releasing each of the following major groups in the order in which they are presented here): -

- Face
- Arms/shoulders/neck
- Stomach/chest
- Feet/legs

N.B. hold and tense - (in other words maximally contract) each of these four major groups (separately) for a count of five seconds each then release for a count of five seconds - repeat this five times for each major group.

Once completed and relaxed then continue with your imagery! This is simple VMBR!

Imagery:

Imagery should involve ALL the senses to make the image as real and as rich as possible. THE SENSES should include, the kinaesthetic, the visual, the auditory, tactile, olfactory and emotional awareness (which tend to be missed out and forgotten):

- VISUAL SENSE - *e.g. watching the Pipe Major, an audience member you know, a spot on the wall.*
- AUDITORY SENSE - *e.g. hearing the sound of the crowd, the hum of other pipers in the background tuning up.*
- OLFACTORY SENSE - *e.g. smelling the freshly mowed grass at an outdoor event or the musty wooden smell of an old hall.*
- TACTILE SENSE - *e.g. noting how the chanter feels in your hands - whether you are gripping it tightly or if you have sweaty fingers.*
- KINESTHETIC SENSE - *this involves the information the brain receives from the sensations of bodily position or movement (e.g. fingers playing different movements, foot tapping, transferring weight between feet, marching etc.) This arises from the stimulation of sensory nerve endings in muscles, joints, and tendons - it's the feeling of the body as it moves in different positions or finger movements played as in different tunes and how much effort is required to perform specific skills.*
- EMOTIONAL AWARENESS - *involves becoming aware of the different emotional states, such as anger, joy, pain, e.g. controlling anxiety before going on to compete, exhilaration after a great routine, deflation after a poor performance.*

Factors that Impact Effectiveness:

Several factors seem to determine to what extent imagery can improve performance.

- NATURE OF THE TASK - *e.g. cognitive tasks show greatest benefits.*

- SKILL LEVEL OF PERFORMER - e.g. imagery helps the novice learn the basic technical and cognitive elements of the task.
- SKILL LEVEL OF PERFORMER - e.g. imagery helps the experienced performer refine skills, & prepare for perceptual adjustments exhibiting more “mastery” imagery such as imaging various challenging situations.
- VMBR - (Visuo Motor Behavioural Rehearsal) - (Suinn, 1993), combining imagery with relaxation is most effective (e.g. using a quick five mins PR or the longer 20 mins version originally developed by Jacobson, 1938).

***NB.** (Negative imagery is very powerful! Be cautious using it and use positive imagery more.*

- IMAGING ABILITY - vividness & controllability makes imagery more effective.
- IMAGERY WITH PHYSICAL PRACTISE - mental practise should complement normal physical practise.
- MENTAL PRACTISE - is a good substitute when an individual is unable to compete or practise e.g. through illness or injury.

How Imagery Works:

We can generate information from memory that is essentially the same as an actual experience - so imagining events can have a similar effect on our nervous system to what the real or actual experienced world would. Below are listed two of the most simplistic but informative theoretical explanations along with one of the most up-to-date and widely used explanations of this phenomenon.

The Psycho-neuromuscular Theory Carpenter (1894):

Originated with Carpenter (1894) - who proposed the Ideomotor principle of imagery. According to this theory, imagery facilitates the learning of motor skills because of the nature of neuromuscular activity patterns activated during the imaginal process. Vividly imagined events innervate the muscles somewhat as does physically practising the movement. The slight neuromuscular impulses are identical to those produced during actual performance, but reduced in magnitude - though are considered a mirror image of the actual performance.

- **GENERATING INFORMATION FROM MEMORY** (same as an actual experience).
- **IDEOMOTOR PRINCIPLE** - imagery facilitates the learning of motor skills because neuromuscular activity patterns are triggered during this process.
- **VIVIDLY IMAGINED** events innervate muscles like physically practising the movement.
- **VIVID MOVEMENT** imagery uses similar neural pathways to those in actual performance.

Symbolic Learning Theory Sackett (1934):

Sackett (1934) argued that imagery helps individuals understand their movements. His theory suggests that imagery may function as a coding system to help people understand and acquire movement.

- **MAY FUNCTION** as a coding system to help people understand & acquire movement patterns.
- **BY CREATING** a motor program in the CNS a mental blueprint is formed this enables the learner to understand the requirements of the skill and what needs to be done in order to successfully perform a movement.
- **IMAGERY IS BEST** with cognitive tasks (which piping predominantly is), as you get better results in performance.

The PETTLEP Model Holmes and Collins (2001)

• **HOLMES AND COLLINS (2001)** highlighted the link between physical and imagined movements which proposed that there's **CERTAIN AREAS** in the **BRAIN** that are **ACTIVATED** during both **PHYSICAL** and **IMAGINED MOVEMENTS** - defined as "**FUNCTIONAL EQUIVALENCE**" and believed to be the means by which imagery can improve performance.

PETTLEP is an acronym, which stands for **SEVEN** key elements to include during imagery to create the most functionally equivalent image possible:

- **PHYSICAL** - image the relevant characteristics e.g. a piper would imagine being dressed in their kilt with their pipes under their arm.
- **ENVIRONMENT** - image the environment where the performance takes place e.g. outdoors in an arena or on a platform.

- **TASK** - try to image details relevant to the task (e.g. attentional demands) and image an appropriate level of expertise for the performer (i.e. a novice piper should avoid imagining an elite level player as it is not functionally equivalent).
- **TIMING** - the most functionally equivalent approach is to image in “real time”, but “slow motion” imagery, can be used to emphasise and perfect more difficult aspects of a skill, e.g., “slow motion” image a particular tricky piece of finger-work.
- **LEARNING** - the imagery should be continually adapted and reviewed over time to match changing task demands as the experience level of the piper, e.g. a novice piper progresses and masters a skill, they should adapt the imagery to reflect the improvement in performance such as refining performance.
- **EMOTION** - include the same images that would be felt in the physical situation such as confidence, satisfaction, and avoid debilitating emotions such as fear, panic.
- **PERSPECTIVE** - the imagery can be first person (through your own eyes) or third person (like watching yourself, after being recorded) - we tend to fluctuate between both of these - but internal is better for the tactile part of piping.

(n.b. the more PETTLEP elements included in the image the better).

Functions of Imagery:

Pipers can employ imagery in many ways to improve both physical (technical elements) and psychological skills, including concentration, confidence, control over emotional responses, acquiring and practising skills as well as coping with pain or injury.

- **IMPROVE CONCENTRATION** - by visualising what you want to do and how you want to react in certain situations.
- **IMAGING** - yourself in situations where you often lose confidence (e.g. making a slip).
- **BUILD CONFIDENCE** - seeing yourself perform well in your mind gives confidence for performing under adverse conditions (e.g. elite performers use more mastery imagery such as imaging challenging situations).

CONTROL EMOTIONAL RESPONSES - to visualise dealing with past problematic situations in a positive way, (e.g. going on to compete at an important

championship, thinking ahead about winning or losing, choking under pressure).

- **ACQUIRE & PRACTISE SKILLS** - imagery is used for practising, fine tuning skills and pin-pointing weaknesses.

- **PRE- AND POST COMPETITIVE ANALYSIS** - taking the form of a preview or a review.

(e.g. going through a pre-performance routine or reviewing how performance went when its fresh in the mind).

COPING WITH PAIN OR INJURY - imagery can help speed up recovery of an injured area and keep skills from deteriorating.

(e.g. used for pain relief and relaxation such as shoulder pain and to keep mentally sharp when away from competition to help with the return back).

- **PROBLEM SOLVING** - imagery can be utilised to discover or solve problems in performance.

(e.g. a piper can use imagery to critically examine all aspects of a current performance to find and isolate the potentially confounding factor - such as a particular technique not being executed correctly etc.)

(e.g. by comparing current and past performance - what is being played now (technique-wise) in comparison with what has been previously played when performing well in a particular tune or set such as a ground in the pibroch etc., the confounding factor can be isolated).

Types of Imagery:

Pipers use either an internal or an external perspective for viewing imagery - which is largely unconscious as we tend to fluctuate between both of these perspectives automatically. However, which perspective is used depends on the individual and the situation.

- **INTERNAL IMAGERY** - refers to imaging a skill from your own vantage point.

(e.g. a piper imaging his fingers gripping the chanter, the weight on the supporting foot as the other foot taps the beat out, the weight of the pipes on the shoulder).

- **EXTERNAL IMAGERY** - refers to viewing yourself from the perspective of an external observer.

(e.g. the piper images seeing his/herself performing from where the audience is or where the judges are sitting).

- **VIVIDNESS** - using all the senses to keep the picture as detailed as possible.
- **CONTROLLABILITY** - manipulating the image to do what you want with it in terms of image, shape, size, speed.
- **FEW DIFFERENCES EXIST** - between internal and external imagery in performance e.g. we tend to shift from one to the other automatically. There doesn't seem to be a dominant perspective used.
- **SOME EVIDENCE EXISTS** - that internal imagery may yield better results as it produces more electrical activity in muscles etc.
- **INTERNAL IMAGERY** - makes it easier to bring in the tactile, kinaesthetic sense, feel the movement and approximate actual performance skills.

Most folk switch back and forth between internal and external imagery. The important thing is to get a good clear, controllable image regardless of whether it's internal or external and fluctuate from internal to external as the situation demands.

When to Use Imagery:

Although imagery can be used virtually any time, it appears to be most effective, before and after practise, competitions, during breaks, during personal time and when recovering from injury or illness.

- **BEFORE AND AFTER PRACTISE** - (e.g. visualising specific skills, specific technique, parts of tunes etc.)
- **BEFORE AND AFTER COMPETITION** - (e.g. reviewing specific skills, sets, pre-performance routines etc.)
- **DURING BREAKS** - preparing for what is ahead.
- **WHEN RECOVERING FROM ILLNESS OR INJURY** (when cannot practise or compete) - used with relaxation to reduce anxiety, reduce pain and to keep mentally sharp for going back to competing.

Basic Controllability Exercises:

The following are a series of basic exercises from clinical sport psychology for improving imagery control. They're not magic, however, with continued practise they do help. It is important to practise **CONTROLLING** the events in

the image and to practise starting and stopping imagery at command as this can be transferred to your piping imagery later.

The purpose of these exercises is to introduce you to several different activities aimed at improving the ability to control images. Below are four separate images for you to create. After you have completed the exercises then rate the control you had over your images.

- **RATIO EXERCISE:** One good exercise for acquiring the skill of imagery control begins with the image of a good friend. Try to create a truly vivid image of this friend. Now imagine that you have sprinkled your friend with “ratio”, a magical potion that allows you to change his or her size. Gradually shrink the person you have selected down to the size of a soda can. Try to see a gradual change. After you shrink your subject, return him/her to normal size. Then go the other way. Make your friend a giant. Before you finish, always return your friend to his/her normal size.

- **WOODEN CUBE EXERCISE:** A little bit more advanced, this exercise tests your ability to manipulate an object. Start with a wooden cube painted a bright colour on all six sides. After you get a good picture in your mind, manipulate the cube. Begin by dividing it in half. Now there are two objects in your vision, with painted and unpainted sides. Try to notice each of them. Then push on to a more challenging image. Divide each of the halves again. Now there are four pieces. Counting the painted and unpainted surfaces is a good exercise in controlling concentration and for improving vividness as well. Still there is more. Divide each of the pieces again to create eight pieces. Put them where you want them. Pick out and count the number of unpainted and painted surfaces. When you are finished, slowly put the cubes back together again in reverse order.

- **ARM HEAVINESS EXERCISE:** Imagine that you are holding a bucket in your right hand, and extend your arm straight out to the side at shoulder level. Feel the weight of the bucket as you hold it straight out to the side. Now imagine someone pouring five 1bs of sand into the bucket. Let yourself feel the heaviness of your bucket as your arm gets more and more tired. Feel your arm getting heavier and heavier...very, very heavy. Focus on the heaviness of your arm. Now someone takes the bucket from you. Tell yourself that your hand and arm feel perfectly normal again. Let your hand and arm come back down to your side and relax.

• **ICE WATER EXERCISE:** Imagine that you have twisted your ankle. You know you need to put some ice onto the injury to reduce the swelling. Feel the throbbing in your foot and ankle. Now imagine gingerly putting your foot into a bucket of ice water. Feel the cold sensation. You are tempted to take your foot out of the ice mixture. Now the coldness grows to a burning sensation. Your foot is very cold. Feel the coldness and toughness of your flesh. As time passes, your foot moves from feeling cold to feeling numb. Focus on these sensations. Your ice treatment is now over. Imagine yourself taking your foot out of the bucket. Immediately your foot begins to regain feeling. You feel the burning sensation. Now you feel the extreme cold in your toes. Gradually, however, you begin to feel the warmth radiating from your ankle down to your toes. Tell yourself that your foot is now completely back to normal.

Basic Emotional Awareness and Control Exercises:

Directions: Start this exercise with imaging a general situation in which you were particularly anxious (e.g. the dentists etc.,) then repeat the exercise and progress to a more specific situation (such as competing etc.) Try to recall as many details about the situation as possible and recreate them using all your senses. Focus on your emotions, feelings and reactions experienced in that particular setting.

	Low				High
Rate the vividness of your image	1	2	3	4	5
Rate your control of the image	1	2	3	4	5

What caused you to be anxious?

What emotions came back to you in this image?

What feelings were the most vivid?

What were your thoughts at the time?

How did your body respond to anxiety?

How did you handle the situation?

How could you have handled the situation more effectively in the future?

Now image yourself coping effectively with the stressful situation.

Evaluating Your Imagery Skills:

Directions: Below you will read descriptions of four piping situations. You are to imagine each general situation and provide as much detail from your imagination as possible to make the image seem “real”. Then rate your imagery on five dimensions:

- How vividly you saw or visualised the image.
- How clearly you heard the sounds.
- How vividly you felt your body movements (e.g. hands piping, foot tapping, marching, etc.)
- How clearly you were aware of your state of mind or mood, or felt the emotions of the situation.
- How well you were able to make the images do what you wanted them to do.

After you read each general description, think of a specific example of it - (e.g. the skill, technique, artistic expression), the people involved (e.g. other competitors, bands, audience, judges), the place (practise or competition), the time. Next, close your eyes and take a few deep breaths to become as relaxed as you can. Put aside all other thoughts for a moment. Keep your eyes closed for about a minute as you try to image the situation. There are, of course, no right or wrong images. However, your accurate appraisal of your images will help you to determine what skills you need to focus on in the development of your imagery training.

After imagining the situation, please rate the five dimensions by circling the appropriate response:

(5 = Very Well, 4 = Well, 3 = Moderate, 2 = Poorly, 1 = Very Poorly)

SITUATION 1

Select a specific piece of music or a set (e.g. MSR, Medley etc.) Imagine yourself performing this activity in the place where you would normally practise, without anyone else present. Now close your eyes for about one minute and try and see yourself at this place, hear the sounds, feel the body movements, (e.g. the finger movements on the chanter, foot tapping etc.) and be aware of your mood (e.g. relaxed or tense etc.)

Very Poorly

Very Well

1 2 3 4 5

- a. Rate how well you saw yourself performing the activity.
- b. Rate how well you heard the sound of performing the activity.
- c. Rate how well you were able to feel yourself performing the activity.
- d. Rate how well you were aware of your mood.
- e. Rate how well you were able to control your image.

SITUATION 2

You are performing the same activity but are now practising with your tutor or pipe major or an acquaintance present. This time, however, you make a mistake that everyone notices. Now close your eyes for about 1 minute and imagine the error and the situation immediately afterwards as clearly as possible.

Very Poorly

Very Well

1 2 3 4 5

- a. Rate how well you saw yourself in this situation.
- b. Rate how well you heard the sound in this situation.
- c. Rate how well you felt yourself performing the movements.
- d. Rate how well you felt the emotions in this situation.
- e. Rate how well you were able to control your image.

SITUATION 3

Think of an acquaintance performing a specific activity (e.g. MSR etc.) in a competition, for example. Now close your eyes for about one minute to imagine watching your acquaintance performing this activity unsuccessfully (remembering to keep the image as vivid and realistically as possible).

Very Poorly

Very Well

1 2 3 4 5

- a. Rate how well you saw your acquaintance in this situation.
- b. Rate how well you heard the sound in this situation.
- c. Rate how well you felt *your own* physical presence or movement in this situation.
- d. Rate how well you felt *your own* emotions in this situation.
- e. Rate how well you were able to control your image.

SITUATION 4

Imagine yourself performing the same activity (e.g. MSR etc.) in the same or similar competition, but imagine yourself performing very skilfully! The audience and acquaintances show their appreciation. Now close your eyes for about one minute to imagine the situation as vividly as possible.

Very Poorly

Very Well

1 2 3 4 5

- a. Rate how well you saw yourself in this situation.
- b. Rate how well you heard the sound in this situation.
- c. Rate how well you felt yourself performing the movements.
- d. Rate how well you felt the emotions of this situation.
- e. Rate how well you were able to control your image.

Now add up your responses to each question and see what your score is for each dimension: (this will give you a good idea which dimensions you are good at and which ones you need to work on more).

Dimension	Score
Visual (all "a" items)	-----
Auditory (all "b" items)	-----
Kinaesthetic (all "c" items)	-----
Mood (all "d" items)	-----
Control (all "e" items)	-----

Score

Rating

- 18-20 Good skills. Periodically do an exercise to keep yourself sharp.
- 13-17 Average development of skills. Spend time each week improving these skills.
- 0-12 These dimensions need daily attention to bring your imagery skills to a useful level.

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