

Identifying the Gifted in Music

A keynote address delivered to the inaugural conference of the Thai National Center for the Gifted and Talented, December 2003, Bangkok.

Can we define and test talent in music?

To some extent, I share the opinion of Gene Wenner that there is a “widely accepted belief that talent in the arts are *too difficult to define* and cannot easily be tested by true-false or multiple choice questions, in spite of the fact that judgements about artistic endeavours have been made and quantified for many years.” There *is* a general reluctance to specify the nature of musical talent. Personally, after years of identifying and developing musically gifted students of all ages, I now find it relatively simple to recognise those special characteristics which indicate gifted potential in music. Simple? To recognise, yes. But to describe in real terms, it’s not simple at all. There is a lack of agreement in defining giftedness in general, so it’s not at all strange if we’re confused about how ‘gifted’ might apply to music. The terms ‘musically gifted’ and ‘musically talented’ can mean different things in different contexts. The fundamental distinction lies between relating talent to demonstrable achievement or to assessable (“guess-able?”) potential.

In recent years, United States Department of Education policy statements have replaced the word “gifted” with the phrase “outstanding talent”, marking a fundamental philosophical shift in the field of gifted education. This shift favours identification and development of talent to some extent in ALL children, which is a reasonable argument. It also suggests that we might consider introducing musical training to all those identified as ‘gifted’.

But this is different from the concept of giftedness, which is a sign of early precocious intellect in a specific field. It is different from intelligence (which Gardner calls ‘biopsychological potential’), and separate from prodigiousness (extreme giftedness) and genius (transcends time).

Academics have only recently become interested in explaining what being gifted in music really means, and how to identify the musically-gifted in more objective ways than those traditionally employed by music schools. Research on the identification of musical talent is increasing, but it is mostly focussed on the narrow field of Western classical music.

Context is the key

Context is extremely important in music, so the principal purpose of this paper is to *question* the context in which we plan to identify musical talent and to investigate the potential methods for identification relevant to that context.

Consider what type of musically-gifted students we’re interested in identifying:

- Are they to be future masters of Thai classical music?
- Western classical music?
- Or is there an idealistic goal of finding the gifted musicians and allowing them to choose their particular pathway?

- Will they be performers?
- Composers?

- What age groups will we target?
- Are we interested in early identification or identification for professional development?
- What do we plan to offer those who are identified as gifted? How will that relate to what we are trying to identify in the first place?

- How will identification change their lives?
- What support will be there for them?

- And for how long?
- Do we assume that gifted students leave behind their gifts once they leave school?

- Are we considering only those styles of music which emerge from formal training, or
- Is there a place for musical talents which can be developed with little or no formal training at all?

Some research suggests that we should identify musical talent even if it isn't conventional

Generally speaking, the essence of all musical development relies on understanding how to detect, store, organise and present musical materials according to individual underlying structures. Cultural experiences shape these processes to some degree, but learning environments need to be specifically designed to support the particular musical style or culture being studied .

There are motivational and social factors involved in acquiring relevant skills, for example, disciplined practice is essential in developing skills relative to the performance of Western classical music. Virtuosity is a feature of this musical style, so it carries implications of a higher art form, of being more difficult to realise. In the West, we are amazed by the virtuoso, capable of performing at levels unimagined by renowned experts in various fields .

But each musical genre and culture must be seen in the context of the relevant demands it makes on the participant. Thai music has its own form of complexity.

Suzuki training produces very impressive results from very young children. That doesn't mean they are gifted. Kodaly and Suzuki would argue it is normal.

Social and economic influences strongly affect the quality of performance and the realisation of potential . Environmental circumstances, especially at home, are vitally important to exceptional performance, even when there is support from school or the private teacher. Long-term studies have demonstrated the cumulative effects of family attitudes in the development of talent . In particular, some research asserts that parental expectations and family influences play an important role, noting the following factors from eminent artists and musicians:

- The persistent interest of a family member
- A role model provided by a family member
- Encouragement given
- Parents taking for granted that the child would progress
- Informal teaching and spontaneous learning
- Parents being actively involved
- Parents taking a part in practice time
- Parents sought excellent teachers, specialised instruction
- Public display of talent in recitals, concerts, contests

Although the study was not related to Asian families, it is reflective of the influence of Confucian beliefs found in Japanese and Chinese cultures. Confucius suggested that humans are "by nature, near together; by practice, far apart".

Confucianism emphasises what can be done through environmental intervention, supporting and stressing diligence, persistence, and practice to a degree rarely experienced in Western cultures.

These findings shouldn't be ignored, because international studies of achievement indicate overall high performance for students from Asian countries. Such studies provide valuable evidence that it is essential for us to keep the cultural context in mind.

Culturally-disadvantaged children find it more difficult to practice and increase the complexity of their early perceptual learning, and commitment to practice has been found to be a principal

determinant in musical achievement. An earlier study noted the effect of parental praise even in those cases where students had achieved high results with less formal practice than that of average students. Other studies confirm that a child's awareness of and liking for music is probably prompted and encouraged by the significance given to music in the family home.

On the other hand, there is evidence of children who have a high level of musical aptitude despite the absence of a supportive family environment. In some such cases, even the slightest musical stimulation becomes a 'crystallizing experience'. On receiving formal training, such children develop very quickly. Pianist Arthur Rubinstein is such an example.

How do we recognise the musically gifted?

Essentially, there are two fundamental techniques of identifying the gifted in music: through assessment of demonstrated achievement in performance, or the recognition of musical potential. The former is straightforward, though variable in its process and outcomes. It is the formal mode of achievement, as opposed to the intuitive mode of aptitude, otherwise known as potential. Until now, the latter has existed in the 'too difficult to define' category. The principal difference between the two methods is the timing of identification. If it is early, then it cannot rely on the demonstration of already-acquired skills, and instead looks towards the recognition of potential.

What is the conventional music school approach to identification? Essentially, music schools have two typical means of locating musically-gifted students. The first, and more common, relies on the student finding the school, and that usually occurs only after a period of study long enough to result in the acquisition of demonstrable skills. Perhaps the teacher or the parents have noted an unusually high level of achievement in comparison to other students, or perhaps the music student's high level of motivation results in a search for more intensive training. Sometimes that comes too late for effective outcomes.

Alternatively, the school might 'find' the student by promoting a scholarship or special scheme to which the student is attracted for an audition.

Whatever the approach, the gifted young musician is usually identified through performance, and in most cases, it is only one performance, in a 'do-or-die' setting!

The traditional option: Performance-based assessment

In music, performance assumes prior skills, usually in playing an instrument. In reality, the voice is the most accessible of musical instruments (and certainly the cheapest!) but in most cases, it has only limited capacity to demonstrate real identifiable talent until vocal maturity occurs, relatively late, in the mid-late 20s. Whilst young children usually enjoy singing, control over vocal quality is not assured, and at a very early age, neither is control over pitch. Confidence also impacts on the vocal quality, and therefore on the potential result. Hence, the gifted young musician typically demonstrates talent primarily through performance on an instrument other than voice.

Whilst performance-based tests may seem more relevant to the musician, they have their weaknesses. **The more obvious of the limitations is that the young musician must first acquire the skills** to perform on the chosen instrument. Only in very rare cases does acquisition occur without training, and before training can show any effect, it needs to be sought, economically attainable, and consistently followed. A significant performance audition is usually the result of some years of practice, usually requiring substantial financial commitment to both lessons and the purchase of the instrument.

Less obvious are other limitations imposed by performance auditions. Research demonstrates that **single observations are not reliable** and therefore less valid in predicting real talent, and that creativity and commitment may be reduced by anxiety in a single audition. An unfamiliar environment, a different instrument (e.g. a grand piano for a pianist who has only ever played an

upright), a number of strangers observing the performance, all have the potential to build anxiety and jeopardise the presentation.

The criteria for identification of musical talent in such cases is largely dependent on evidence of comparatively high performance capability, perhaps supported by a series of aptitude tests which measure the young musician's aural discrimination skills. **Even aptitude tests are problematic if they require written responses which assume prior understanding of the musical language required for the response.** These same tests are subject to the influence of the environment in which the testing takes place. The student's response might be affected by the degree of familiarity with aptitude testing. Some of the typical instruments used for evaluating musical aptitude are susceptible to prior experience, and they may tend to measure achievement rather than aptitude.

Performance-based identification inevitably involves a degree of subjectivity dependent on such variables as the experience of the assessor(s), the subject's age and years of musical experience, and the context in which the assessment takes place. Measurement of this kind should only be taken as an indicator of potential in a musician because the performance is not seen in the broader context of the student's background: his/her motivation and learning environment, the length of time taken to prepare the performance, the experience and method of the teacher, and any number of economic and cultural considerations which shape the actual result. These same factors continue to have an effect on the student's further development after identification, and his/her eventual success or otherwise is not a reliable indicator of whether or not they had ever been truly gifted in music.

This example highlights the **downside to early identification**. Knowing that a child is musically gifted, that he/she has the potential for high achievement in music, brings with it an overwhelming sense of responsibility to ensure that the talent is realised. There are acknowledged cases of early burnout in young musicians who have been forced into rigorous training patterns, resulting in the gifted young musician abandoning music studies at a critical point in his or her development. According to Bamberger, children who have relied on intuition face a crisis when confronted with the need to supplement intuitive understanding with more systematic study. What he calls the 'midlife crisis' typically occurs somewhere between the ages of fourteen and eighteen, and may prompt the child to cease participating in music altogether. Arguably, the benefits of such training are never lost, but the psychological damage caused by gruelling practice and performance schedules enforced on a young child may negate the advantages.

The early identification option : aptitude-based assessment

Because of the length of time required to achieve a highly-defined level of musical skill, potential needs to be detected and nurtured at an early age. For this reason, in music it is more expedient to use identification procedures reliant on aptitude testing rather than the demonstration of skill. Along similar lines, it should be acknowledged is that there is an enormous range of types of musical skill and musical media and any identification procedure should take those factors into account.

One consideration in the early identification process is of particular significance to this conference. **Because tests of musical aptitude may be based on a wide variety of discrimination skills, it is important that they are selected judiciously.** Most published aptitude tests have been developed in Western countries and are skewed specifically to the characteristics of Western classical music. Arguably, such tests are becoming less relevant even in Western countries. Western music is not a monoculture, and classical Western music is only one of a number of diverse musical genres through which future musicians might express their talent. Its relevance in a non-Western environment is questionable.

Given the importance of context, Thailand presents a number of interesting challenges in regard to this question: **Gifted in which musical culture? What kinds of musical aptitude are more appropriate in the testing process? How early does the testing need to occur?** The

responses to such questions have significant differences for Thai classical music and Western classical music. The aptitude test may incline specifically to one or the other of these musical cultures, or the testing may be more generic, leaving the choice of cultural transmission more open. Given the escalating view that the musician of the future will need a diversity of skills, the potential for cross-cultural musical development is significant.

Beyond the cultural question lies the economic consideration. Musical training, especially for the gifted, demands many years of training and consequently requires a substantial financial commitment to individual teaching, purchase of instruments and associated costs of developing the talent. Is the family expected to bear such expense? If so, the development of musically-gifted students will be confined to those who can afford it, yet music is not known to limit its talents to the wealthy classes! At the same time, the implications of research on the effect of environment suggest that subsidising training where there is a lack of strong support from the family may well prove worthless.

There is considerable evidence of the relationship between early identification and providing the best development of talents for young musicians. According to Horner, there are two "critical periods" for musical development: the sixth year for concentration and adequate attention span and between ages 9 and 12, for greater concentration and the development of technical skill. Other research indicates that serious study of the piano needs to begin by the age of seven and it should follow improvising and playing by ear. Once again, these findings are skewed towards Western classical music.

Identifying musical potential

For early identification to occur, in most cases it requires the recognition of musical potential, or tendencies towards music. These may take many forms, which is why they're placed in the 'too difficult to define' category. Included amongst the several methods used to assess potential are psychometric testing, musical aptitude tests, musical creativity tests, and interest inventories. Using more than one of these procedures tends to result in more secure results.

Musical aptitude is usually defined by measuring discrimination skills, specifically those related to pitch and rhythm pattern differences, although in some cases comprehension of stylistic and timbral differences are also tested. All of these components exist to varying degrees in every musical genre and culture.

The measurement of musical creativity is based on the ability to think differently and to produce music imaginatively. The characteristics of fluency, flexibility, and originality all contribute to creative ability in music, and are incorporated into the testing procedures. Once again, these measurements may be adapted to various musical cultures.

Among the tests of musical aptitude, creativity and interest, there is a high degree of correlation between their various definitions and approaches. In order to demonstrate those parallels, I've selected some of the more well-known research findings for comparison.

Identification Criteria

Many of the characteristics associated with young gifted children are those which are aligned with the musically gifted. A typical example of behaviours and characteristics used in the identification of gifted children are as follows:

- Has a long attention span
- Works independently and uses initiative
- Loves books and reading activities
- Is extremely curious about many things
- Raises insightful questions about abstract ideas like love and justice
- Discusses and elaborates on ideas in complex, unusual ways
- Is very interested in cause-effect relationships

- Loves playing with number concepts and figuring how to solve math problems in unique ways
- Learns quickly and applies knowledge to new contexts with ease
- Has a vivid imagination and an ability to improvise games from commonplace materials
- Is extremely creative
- Has a spontaneous and whimsical sense of humour
- Likes to play with words
- Is often singing, moving rhythmically, or using mime in self-expression
- Is responsive to music and can improvise with easily memorized tunes, rhythms, or sounds
- Is a leader in organizing games and resolving disputes
- Is sensitive to the feelings of others
- Expresses concern about world problems
- Has a high intuitive gift and a willingness to follow 'hunches'

As we proceed through the examples devised for music, note the high degree of parallel between this generic list and those which are music-specific. It is also important that we note any Western music bias in each (*italics highlight items for further discussion*), whilst at the same time considering any possible adjustment relevant to this current project.

Example 1:

According to Gardner, the central components of musical intelligence are:

- Pitch
- Rhythm
- *horizontal and vertical relationships*
- timbre.

Significant to the Thai context is his comment that pitch is more crucial in those cultures which make use of intervals less than the half-tone, and rhythm has more emphasis in cultures which utilise complex metrical structures. Whilst he acknowledges the importance of the auditory sense in music, he does observe that rhythmic organisation can exist without auditory realisation. Indeed, the renowned British percussionist, Evelyn Glennie, is testimony to the fact that a deaf person can achieve remarkable success as a performer in music.

Example 2:

A recent study in the UK assessed students already identified as musically gifted using tests of personality, intelligence, verbal fluency, and a personal interest questionnaire. In all these tests, three aspects of short-term memory in music formed the measurement criteria:

1. **Resuscitation:** perception and retention of pitch relationships
2. **Aesthetic discrimination:** matching beginnings and endings of music in *distinctive styles*
3. **Practical ability:** the ability to hold an image of *tonal sequences* (a tune) without the ability to read music

The range of assessment instruments in this case is impressive, but the detail is revealing. Whilst each of the three criteria is potentially able to cross musical styles and cultures, the actual tests themselves did not. The latter two show significant bias to backgrounds in Western music, a credible perspective, given the country in which the study took place. It does, however, highlight the importance of viewing research results in context.

Example 3:

Marek-Schroer & Schroer suggest the following behaviours as possible indicators of musical giftedness in young children:

- *Perfect or absolute pitch*

- Ability to correctly reproduce melodies
- Interest in musical instruments
- Well-developed sense of rhythm
- *Ability to harmonize without training or with training at an early age*
- Fascination with the masters of music
- Ability to play an instrument by ear
- Ability to play an instrument without formal instruction
- *Composition of songs*
- Ability to identify musical instruments by sound
- Deep, passionate love of music
- *Ability to read music without training*
- Fascination with or gravitation toward music
- Emotional involvement with music
- Extreme sensitivity to music
- *Commitment to practice*
- Desire to perfect performance

Example 4:

A number of checklists have been devised for use by teachers in measuring interest, participation and quality of the child's musical performance. Of them, one devised by Anne Elam, as Elam's Interest Inventory, suggests that the musically gifted student:

- Demonstrates strong interest in music
- Demonstrates understanding of the concepts of music
- Discriminates pitches, dynamics, tempo, tone color, form, and harmonic changes
- Creates original rhythmic and melodic patterns
- Makes up songs and creates verses to songs
- Expresses feelings and emotions through music creatively
- Shows interest in performing
- Shows confidence in performance
- Is persistent in new learnings
- *Studies music privately and performs in recitals*
- Other (specify)

Example 5:

Many Meeker has also published an interest inventory, which lists the characteristics of musically talented children Grades 1-6:

- Spontaneous response to rhythm and music
- Love for singing familiar and made-up songs
- Relative or absolute pitch and strong feelings for tonality
- Highly developed ear and *ability to associate pitch with visual symbols*
- *Interest and skill in singing descants or other harmony parts*
- Remarkable memory and ever-expanding repertoire
- Ability to identify familiar melodies on *tonal instruments*
- *Marked aptitude for playing introductions, accompaniments*
- Choice of music as a means of expressing feelings and experiences
- Creative flair for improvisation and signs of ability to compose
- Special interest in musical instruments and a desire to play an instrument
- Voluntary involvement with music and a high interest in learning about music
- Notable skill in performing on one or more musical instruments
- Great enjoyment in listening to both live and recorded music
- Natural sense of aesthetic values (beauty, order, form)
- Keen power of attention, auditory discrimination and evaluation

- Quickness in discriminating among identical, similar, and contrasting phrases in songs and sections of longer musical compositions
- Sensitivity to the communicative power of music, even to the slightest changes in tempo, dynamics, and tone color
- Ability to hear, identify, and follow two or more rhythm patterns, metric groupings, or melodic themes played simultaneously
- Perception and understanding of the subtle interrelationships within and among the constituent and expressive elements of music

All of these criteria are applicable to early identification of musically gifted potential. There are common threads related to musical aptitude, musical creativity and interest in music, which broadly relate to potential for musical skill, creativity and motivation.

Example 6:

Haroutounian's research confirms these three categories, suggesting the following criteria for identification:

- Perceptual awareness and discrimination: biological givens, raw capacities, enabling skills
- Metaperception: perceptual/cognitive process which senses sound internally, remembers it, manipulates it expressively, and communicates the creative interpretation to others
- Creative interpretation: the most decisive factor – the way students extend, manipulate and 'play' with musical ideas; and eagerness to express themselves musically. This characteristic is valuable if it helps identify students who may not demonstrate talent through performance skills. It may also indicate lack of depth in students who rely on rote learning to achieve high results in performance. Creative interpretation is "the ability of each child to make the music his own, putting his own distinctive stamp on the (music).."
- Behaviour/performance: tasks that include listening combined with performance highlight musical intelligence and recognises talent which extends beyond music-specific performance abilities, for example, reviewing performances
- Motivation: sustained interest, commitment, self-discipline, focus, perseverance; all emphasise a student's direct involvement, rather than general interest.

Earlier research by Haroutounian suggests that multi-staged and multi-faceted procedures similar to those used for academically gifted students are particularly effective in identifying artistically talented students. Her study summarises literature and research findings that identification procedures should:

- Recognize developing potential
- Realize that potential can emerge at various ages
- Collect data concerning student abilities and backgrounds from multiple sources
- Recognize multiple talent areas and genres within each arts discipline
- Observe and assess student behaviour/performance in the process of developing artistic work
- Assess student behaviour/performance while involved in artistic activities that involve perceptual discrimination
- Avoid the use of standardised testing of intelligence, achievement, or general creativity as a basis for artistic talent identification
- Encourage the identification of potential artistic talent in underserved populations

Further, once identified, the students should be observed:

- Performing in small groups
- Involved in tasks that require artistic decision-making
- Reworking and refining performance
- Engaged in artistic activities, extending beyond performance
- Working creatively through the artform

Example 8:

The innovative *Talent Beyond Words* program has used the same three categories as the foundation for a detailed list of criteria for identification of the musically gifted and employs methods of developmental evaluation which makes possible some of the ideas suggested by Haroutounian. In Talent beyond Words, the identification criteria are organised in three areas of skill, creativity and motivation, using key words in each of the categories:

SKILLS

1. **Rhythm:** puts the beat in the body, is able to sustain an even beat, replicates rhythmic patterns accurately, can play repeating patterns, anticipates, *waits for proper moment to begin*, can find the underlying pulse or beat
2. **Perception of Sound:** perceives differences in tone and pitch, responds to dynamics, can match pitches, can replicate melodic phrases, is able to sustain independent part
3. **Coordination:** moves easily through space, able to do two or more things at the same time, can control body in movement and freeze, sustains repeating patterns, works with both hands

MOTIVATION

4. **Enthusiasm:** responds joyfully, eager to participate, curious, asks questions, is open to unfamiliar styles of music
5. **Ability to Focus:** directs attention, makes full commitment to the task, is interested and involved in class activities, listens carefully, follows instructions
6. **Perseverance:** doesn't give up easily, improves over time, takes time to think, is able to take and use corrections

CREATIVITY

7. **Expressiveness:** responds with sensitivity, performs with energy and intensity, is fully involved, communicates feelings
8. **Composition and Improvisation:** improvises spontaneously, takes risks, makes surprising or unusual statements, creates sounds in original ways, makes up songs

The parallels between each set of criteria are obvious, but the Talent Without Words approach has more flexibility for a culturally-diverse context. Despite its detail, it is more generic, and less specifically-related to a particular style of music or musical culture. At the same time, it is the detail which makes it more measurable, and an ideal foundation on which to build an identification process specific to the needs of this particular project. The principal advantages of this model are its avoidance of prior knowledge, the diversity of testing involved, and its developmental approach to identifying the gifted, which allows for testing of more generic traits including motivation, persistence, and personal commitment to music. Moreover, it is a model which may have implications for discovering academic potential as well as artistic talent.

Like Haroutounian's model, the Talent Beyond Words model combines various procedures to build a more comprehensive picture of the individual, at the same time, supplying greater detail about particular attributes. They are multisession audition processes which incorporate a broad range of activities. In the case of Talent Beyond Words, this includes psychometric evaluation, application of a specially-designed curriculum using instructional methods from various cultural traditions, a two-stage selection process and post-selection consultation.

The psychometric component of this evaluation process involved the development of an observational schedule, called the Talent Identification Instrument. The theoretical basis of this instrument is derived from Renzulli's three-ring model of giftedness in which the traits of above-average ability, creativity and commitment interact. In music, as in other artforms, there is a strong relationship between these three traits.

Having identified potentially gifted students, the program then places them in a learning program which purports to be free of cultural and economic bias. Throughout the learning program, it is possible to observe the levels of motivation and commitment, the attention span, perseverance and enthusiasm of the participants, in addition to skills specifically related to music. Given that other research demonstrates a high correlation between success in music and a high level of motivation and commitment, these traits are significant in the identification process, and virtually impossible to measure in a single audition. The multisession, multifactor approach is worth serious consideration.

Myths

Of significance in Haroutounian's research are findings which dispel traditional beliefs about musical talent. Among the myths is the role of coordination and fine motor skills, which are useful criteria, essential for some instruments, but not precursors of musical talent. Haroutounian recognises that poise and confidence are developed through training, and that it is more important to recognise performance that is comfortable and natural.

Some of the experts interviewed in this study described the false perspective of technique indicating talent. The general concern related to the 'robotic' quality found in performance which is always the same, without a personal connection to the sounds.

The issue of creativity raised concern among experts who considered it related only to composing and improvising. Using the term 'creative interpretation' broadened the scope to include interpretive performance and listening responses, and was more generally acceptable. Likewise, the phrase 'extending and manipulating sound' was found to be less intimidating to teachers than 'improvisation'.

Another of the myths questioned by recent research is the correlation between early indications of musical talent and success as a professional musician. The available research clearly indicates that not all successful musicians display early indications of exceptional musicality in early childhood. Although Sosniak's data is based only on professional pianists and it is reasonable to assume that recall may be selective, Howe and Sloboda used young music students between the ages of 10 and 17, and their parents, arguing greater reliability of their data as a consequence of the shorter memory span from early childhood to the time of testing. Their results are significant: half of the children demonstrated no evidence of musical talent before beginning formal instruction. What's more, children who displayed special potential at an early age were no more likely to be judged excellent when they were older than those children who had no early signs of exceptionality.

Howe and Sloboda also suggest that early tendencies towards specific musical talents might be more obscure, taking the form of qualities which *contribute to* abilities, for example, auditory sensitivity. Equally, they imply that an individual may have attributes of temperament and personality which might attract them to musical stimuli. They contend that such attributes may influence the likelihood of gaining musical skills just as much as other abilities which are directly relevant to musical performance. They quote research which produces a snowballing effect on abilities, as is found in the example of the child who spends more time on particular activities because they have a special sensitivity to them. The additional time spent on the activity means that the child recalls them more accurately, becoming more competent in activities of that kind, and attracting attention from adults because of what is perceived to be "special" ability. Attention and praise provide further encouragement, and the cycle repeats itself.

The relationship to movement

Of particular interest to our current purpose are the parallels between music criteria and those used in assessing dance. Talent in both music and dance comprises many related skills, for example, physical abilities, coordination and agility, motivation, expressiveness, and improvisational skill. The Talent Beyond Words curriculum deals specifically with these relationships, and their criteria for identifying gifted dancers includes only two criteria additional to

those in music: physical control and spatial awareness. Haroutounian, too, aligns characteristics of giftedness in music with those of dance. Many composers have stressed the close links between music and gesture. Stravinsky insisted that music must be *seen* to be properly assimilated in performance. Young children associate music and movement naturally, often engaging in physical activity while singing and movement has considerable potential to assist in the development of natural response to musical stimuli. Most particularly in this context, the relationship between dance and music in the Thai classical tradition may have some relevance in the choice of criteria for identification in this program.

How important is intelligence testing for the musically gifted?

There is an argument that all students might first be identified through intelligence testing, followed by specific assessment in individual disciplines such as music. Some research indicates a set of complex relationships between psychometric intelligence in the traditional sense and musical talent. Recent studies about the validity of some intelligence testing instruments including Wechsler's Intelligence Scales, have demonstrated inconsistencies in their results. However, intelligence tests are able to generate data on a range of attributes, including attention span, problem solving approach, relationship to people, adaptation to change, coordination, impulsivity and reflectivity, language usage, self concept, anxiety, and reaction to new tasks. At the same time, there are many examples of children who lack the stereotypical gifted skills but were found to have gifted mental abilities when administered an individual intelligence test. Because the person administering the intelligence test is trained as an observer of human behaviour, the process may identify gifted behaviours in a child even when the intelligence scores are below the established cutoff points. Although intelligence test scores should never be the sole criterion for placement in a gifted program, it is worth incorporating this factor into the assessment process.

Equally, there is criticism of IQ tests as narrow and arbitrary and inappropriate for domain-specific identification. Instead, Mesarosova recommends the ability to think critically, to understand complex materials, and to break new intellectual ground as the basis of assessment – all valuable traits, but not appropriate to early identification procedures.

As described earlier, Haroutounian recommends the avoidance of standardised testing of intelligence for music students. However, her alternatives include evaluation of similar aptitudes, particularly through musical methods.

How important is music assessment for all those identified as gifted?

Just as it is relevant for the musically gifted to be evaluated on a generic scale, so too is it worth evaluating all gifted students for musical potential. Creativity is an integral element in gifted identification, with most lists of the characteristics found in gifted students including tests of musical aptitude and interests. Beyond that fundamental premise of creativity, however, lies the possibility that someone who is academically gifted may have unrealised musical potential, which can be identified through assessment for musical giftedness. It may be that the person's background has inhibited access to music, or any number of alternative reasons for lack of access prior to evaluation. Identification of the potential unlocks another option for further development, provided that motivation and commitment to music also exist parallel to the identified aptitude. This is where multifactor evaluation is useful, to identify not only the talent, but also such traits as motivation and perseverance, which are necessary for the realisation of musical potential.

The big questions: Where to from here?

From the given examples, what are the significant issues and components which should underpin our choices of identification procedures for use in Thailand?

1. PARAMETERS
 - What do we wish to identify?
 - i. Consider the cultural context
 - ii. Account for diversity

- What age groups are being targeted and how?
 - i. Early identification
 - ii. Identification at later stages
- What will we offer those who are identified?
 - i. Access
 - ii. Diversity
 - iii. Quality assurance
 - iv. Assessing the results

2. METHOD

- Testing should not be the sole determiner of musical talent
- Extend the process beyond prepared performance
- The setting: small group or individual? Observations: direct or by video?
- Use the generic process as a starting point? Generic assessment might be applied across all disciplines prior to the application of more specific identification procedures : benefit to all students
- Multifactor/multistage/multisession approach gives clear results, incorporating psychometric assessment, using specifically devised tests:
 - i. evaluation of musical aptitude: pitch discrimination, tonal memory, rhythmic memory, musical sensitivity, timbral response. A high ceiling is important – perhaps through retesting at progressively higher levels
 - ii. evaluation of musical creativity: fluency, flexibility, originality
 - iii. interest inventory: checklists of behavioural characteristics given to parents, teachers, students
 - iv. developmental learning: assessment of motivation, commitment, concentration, rate of response
 - v. observations of artistic activity (performance or production) and artistic decision-making
 - vi. evaluation of involvement in artistic activity extended beyond performance/production
- What is the timeframe? How do we position the tasks along the timeline?

3. VALIDITY

- An opportunity for a longitudinal study to
 - i. develop specific identification procedures
 - ii. monitor
 - iii. evaluate
 - iv. validate the results
- This would lead to:
 - i. Improvement of future identification practice
 - ii. A model for other similar contexts