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Beyond Music: Identifying Musical Aptitudes

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Aptitudes impact a multitude of areas in a person's life. They affect aspects of personality, education, and employment. Aptitude testing uncovers strengths along with weaknesses. One element of such testing involves the measurement of musical ability. Music touches nearly every facet of life. Not only is it an interest for a large percentage of the population, but it can also be an essential component in the long-term satisfaction of an individual's aptitudes. Music interest can be easily ascertained; music aptitudes, however, may not be as apparent. Aptitude Inventory Measurement Service (AIMS) administers six worksamples that determine these inherent traits. Two measurements determine one's memory related to beats and tones (Rhythm Memory and Tonal Memory), and the other four deal with the discernment of differences related to Loudness, Pitch, Timbre, and Time. These inherent traits make up one component of the complex puzzle that is an aptitude profile.

Music aptitudes cannot be learned; that is, experience in playing musical instruments does not improve one's aptitudes. However, research has shown that those who already possess the aptitude are more likely to find enjoyment in learning new instruments, thereby maintaining the activity for longer periods of time.

Many of our clients are surprised that musical aptitudes are an element of the testing program, and AIMS administrators are often asked why they conduct multiple music tests, especially when someone does not possess a particularly strong interest in the field. The music industry is a fickle field, and there are relatively few career options available. Yet, there are hundreds of industries and careers in which musically talented employees will benefit from these inherent traits. Adults who possess strong music aptitudes but do not find an outlet for the combination of such scores will eventually experience a sense that something is missing.

The Six Categories of Musical Aptitudes

Developed by Carl E. Seashore, the measurement of musical aptitudes dates as far back as 1919 (Larson). The resulting abilities can be utilized across a multitude of career fields, in both subtle and obvious ways. In order to discover these applications, this article will define each aptitude and its greater uses. AIMS defines musical interest as a preference for all types of activities related to music – performance, composition, or simply listening to, and having an appreciation for, music. Each musical aptitude, however, enjoys its own characterization.

Tonal Memory is the ability to recall melodies and harmonies. Tonal Memory, the most basic and most recognized musical aptitude, allows an individual to "play by ear." Most professional musicians score high, as it is one of the most essential for a career in music.

Rhythm Memory consists of the ability to hear and/or reproduce patterns of sound either mentally or physically. It is used in music and in activities requiring highly coordinated body movements. It also seems important in certain mental activities such as poetry. Traditionally, athletes score high in this measure, and outlets for a strong ability in this category can be found in swimming, horseback riding, fishing, tennis, gymnastics, and dance.

Timbre Discrimination, the most difficult to explain of the musical aptitudes, can be defined as an ability to hear "tone quality," overtones or upper partial-vibrations of a fundamental note. It is useful in hearing and perhaps appreciating the differences in tone qualities produced by different musical instruments playing the same note. Careers that require a distinctive voice, such as soloist, public speakers, actors, and announcers frequently score high, whereas choral singers tend to score low.

Time Discrimination gives an individual a natural capacity for hearing the duration of tones or short time intervals. The ability to sense tempo and repetitious patterns like those used in the metrics of music and certain physical activities would be bolstered by a high score in Time Discrimination. Skeet shooting and hunting, as well as specific skills in sports would benefit from this aptitude.

The measurement for **Loudness Discrimination** has been used for over a century. It tests the ability to hear the least perceptible difference in sound intensity. A strong score in this area allows a person to play the piano with varying levels of intensity (pianissimo and fortissimo). However, this characteristic denotes sensitivity to noise pollution, making crowded areas especially painful for the person with Loudness Discrimination. An individual with this aptitude should consider investing in a pair of noise-canceling headphones if he or she is required to spend long hours in concentration.

Pitch Discrimination describes the ability to hear differences in the relative level of tones. This trait can be used by musicians who tune their own instruments, technicians who calibrate delicate apparatus, physicists, and laboratory workers who do careful weighing, balancing, and measuring. Used in singing "on key," Pitch Discrimination is important in adjusting sound equipment, flying an airplane, working with electronics, and tuning sports cars. Photographers also tend to score high in this aptitude; enhanced sensitivity to light, color, shading, and nuance play a role in the creation of a beautiful picture. Almost any activity requiring the production of extremely exact results or the operation of highly sensitive apparatus is likely to be performed better by individuals who possess high Pitch Discrimination. Further examples include playing the violin, interpreting radar information, monitoring missile telemetry, and selecting a better quality fabric. Why Pitch Discrimination predicts success in these non-musical fields remains unknown. The only explanation that seems to fit the results in AIMS research is that Pitch Discrimination is a general sensitivity factor, otherwise known as the "niceness of sense perception."

Non-Musical Music Careers

AIMS suggests strong and sustained musical training to develop musical talents into abilities that can provide pleasure later in life, regardless of age or vocation. Unused high music aptitudes seem more likely than most to be a problem as an individual goes through life. Many aptitudes peak fairly early. Musical aptitudes, however, tend to maintain strength into middle age. At age 45, when almost all of the other aptitudes have dropped below their plateau levels, high music aptitudes are as strong as ever. Non-musical outlets for these high aural aptitudes are possible, and the entire aptitude profile must be taken into account to discover fields in which satisfaction can be found. A Generalist-Extrovert, for example, may pursue a job in marketing music-related products, directing a program for a broadcasting station, or managing a small business in the entertainment industry. On the other hand, an engineering student could specialize in electronics, acoustics, biomedical engineering, and other related subdivisions.

Technological developments have spurred a growth in audio-visual aids, working in education media, and sound-based computer programs. With its superiority in highly precise activities, Pitch Discrimination may provide an edge to those in piloting, radiology, geographic information systems analysis, and carpentry.

Unfortunately, even those with an early exposure to music and its cultural outlets tend to abandon its pursuit. Much of the blame can be fixed on the regard (or lack of it) American society places on the arts in general, and on performing arts in particular. If you are familiar with music and have skill with an instrument, extend your musical education to include theory, harmony, and musicology. If you are high in the aural measures, you should learn the language of music because even just the act of listening to music can provide somewhat of a satisfying outlet for inherent traits.

Musical Aspirations without High Music Scores

As with any aptitude, possessing a high score allows an individual to complete associated tasks with greater speed, accuracy, and enjoyment. This does not mean, however, that a person without strong results in the musical aptitude tests cannot glean satisfaction in a related career field. Someone with a strong desire to pursue a career in music should not be discouraged by scores outside of the high range. Rather, such an individual will leave the AIMS program armed with a greater understanding of strengths and weaknesses, thus knowing which areas require more practice.

The pursuit of a career in the fine arts is a risky path for anyone to take. Deepening the knowledge of one's natural abilities, and the interconnection between these traits, can make the difference between long-term satisfaction and frustration.

Resources

Larson, Ruth Crewdson. "Studies on Seashore's 'Measures of Musical Talent'" University of Iowa Studies Series on Aims and Progress of Research Volume II Number 6. March 1, 1930. Iowa UP, Iowa City.

The Aptitude Handbook: A Guide to the AIMS Program. Dallas, TX. AIMS Staff, eds., 2011.