

CHAPTER 26

EXPLORING THE HARMONICA FOR RUDIMENTARY MUSIC

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Abstract

This paper explored the capability of the harmonica- a small mouth-blown wood-wind musical instrument- in handling rudimentary music. The potentiality of this musical instrument has been ignored for decades because of the predominance of some other musical instruments like the Piano-keyboard, viloin, guitar, saxophone, autoharp, etc. The nature of the diatonic harmonica was studied in this paper and it was discovered that the instrument is capable of conveying virtually all aspects of rudimentary music such as, scale, pitch, melody, rhythm, harmony, texture, note discrimination, phrasing, accompanying, sightreading, and music appreciation. Several years of experimentation and experience with the harmonica in teaching children music has also shown that the instrument is handy, simple, affordable, available, durable, and adaptable for the fundamentals of musicology.

keywords: Harmonica, Wood-wind musical instrument and Rudimentary music.

Introduction

The popularity of the Piano-keyboard, guitar, violin, saxophone, autoharp, etc, in the study of music has downplayed the relevance of several other musical instruments such as the harmonica. The search for a simple and comprehensive musical instrument for beginners has been a challenge. Even among musicologists there is no consensus on the musical instrument that could

serve exclusively as a basic musical instrument for beginners. The reasons for this situation emanate from the premise that: learners should be allowed to make their choices regarding musical instruments for learning so that no one stalls their passion; most musical instruments are employable for rudimentary lessons on pitch, scale, solfege, melody, note identification e.t.c.; however, for some practical reasons these presumptions are not working out but rather confusing more learners.

Some learners have found the more popular musical instruments such as the piano-keyboard (pkd), guitar, violin, clarinet, saxophone, trumpet, tuba, trombone, violin, etc., unwieldy and thereby even scared them away entirely from music. The confusion that comes from grappling with the black and white notes on the keyboard with its attendant twenty four modern keys (12 major keys and 12 minor keys) is not what every music learner can contend with. The energy level required in the tone production of trumpet and learning musical basics with the trumpet does not augur well with many music beginners. Apparently, what is of utmost importance to music learners is a handy musical instrument which can effectively guide them through the fundamentals of music.

Pursuant to these challenges, this paper makes a strong case for the harmonica because of its simplicity, handiness, affordability, availability, durability, suitability, and sustainability in exploring rudimentary music.

Brief History of the Harmonica

Randel(1986), gives insight on the history of the harmonica:

The western instrument often called a harmonica (sometimes also mouth harp) was invented in the 19th century. Its reeds are mounted in narrow channels, usually side by side in a rectangular case. In the most common models, each channel contains two brass reeds pitched a diatonic scale-degree apart, one activated by blowing, one by sucking. Channels can be blown or sucked singly or in combination producing the diatonic scale as well as some intervals and chords derived from it. More elaborate models, often with a button-operated slider that closes off one set of reeds while making another available, play a chromatic scale. Other types exist as well, including bass instruments with circular cross section that are used principally in ensembles. Blues musicians (especially John Lee "Sonny Boy" Williamson and "Little Walter" Jacobs) developed a strikingly expressive style of playing, and it is widely used also in country and western music. A few virtuosos have inspired a limited concert repertory(p.514).

This historical brief throws some light on some aspects of the instrument:

- The harmonica dates from the 19th century which makes it a modern musical instrument compared to some others that date back to as far back as to the 12th, 13th, and 15th centuries.
- It has reeds which make it a wood-wind musical instrument
- The reeds are placed a diatonic scale degree apart
- It comes in different models

- Notes are produced by the technique of blowing and sucking/drawing of air
- It can feature in ensembles
- It is popular in country and Western music genres.
- There exist several virtuoso or accomplished players of the instrument.

Overview

The harmonica, also known as a French harp or mouth organ, is a free reed wind instrument used worldwide in many musical genres, notably in blues, jazz, country, rock [wikipedia. Sourced: November, 2019].

Fig.1 The Harmonica



Types of Harmonica

There are many types of harmonica including, diatonic, chromatic, tremolo, octave, orchestral, and bass versions. These versions exist for specific purposes in bands, chamber music, country and blue music, rock and roll, school orchestra, personal studies, and music appreciation.

- Diatonic Harmonica

The diatonic harmonica also known as blues harp, offers simple major scales arranged in order of tones and semitones. It also plays basic chords that emanate from a normal diatonic scale configuration as on a piano. The diatonic harmonica contains the notes of a specific scale (usually a major scale) of a given key let us say, C, D, F, OR G. The standard diatonic harmonica is designed to allow a player to play chords and melody in a single key.

- Chromatic Harmonica

The chromatic harmonica contains all notes in the chromatic scale, and is mainly used in Jazz and classical music. However, it is possible to play all of the notes of the chromatic scale on a diatonic harmonica by using bends.

Other harmonicas exist such as the Tremolo, Octave, Orchestral, and Bass Harmonica but for the purpose of this paper we shall be exploring the potentialities of the diatonic harmonica. Because the tremolo harmonica requires more air to play, and because the chromatic harmonica requires that you have to learn a ton of music theory, the diatonic harmonica is undoubtedly the easiest harmonica to learn how to play.

The Range of the Diatonic Harmonica

A diatonic harmonica can play one octave of major scale and one octave of minor scale completely without the need of bending. It usually has 10 holes with focus on playing music in one key (although capable of playing music in multiple keys).

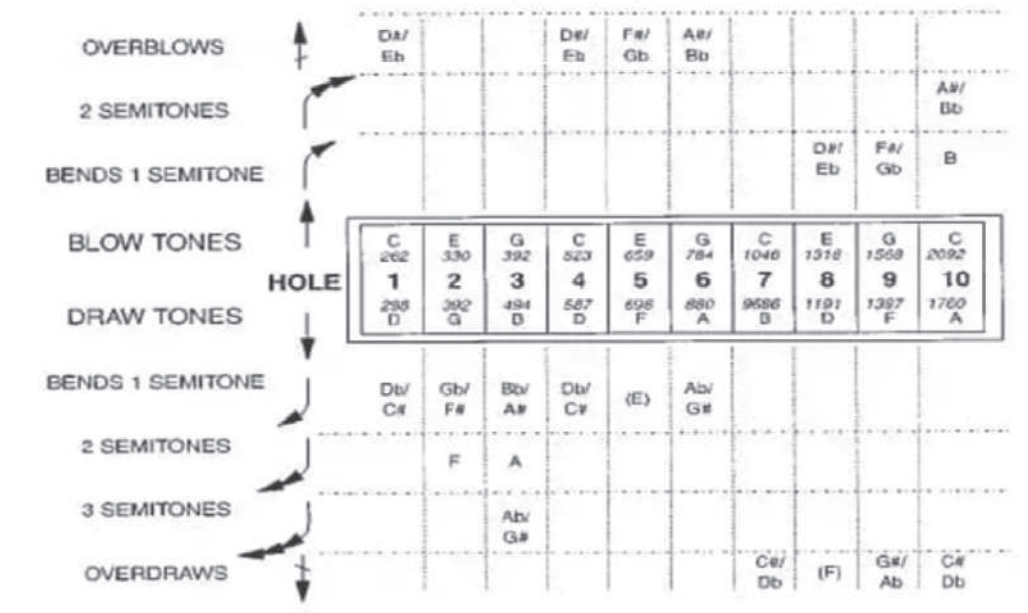


Figure 2a. Range of the diatonic Harmonica

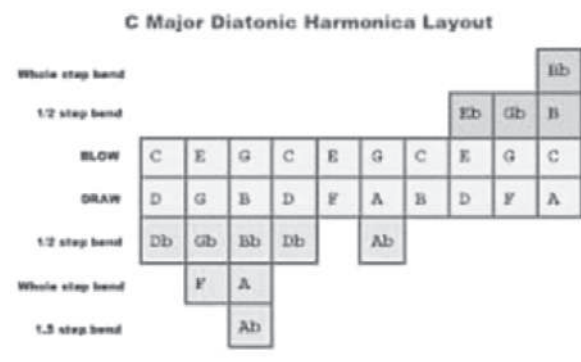


Fig. 2b. Diatonic Harmonica Chart (Cmajor)

How to Play the Harmonica

Fig.3.Sketch of Harmonica Chart

The harmonica is played by blowing air into the reeds or drawing air from the reeds. If we blow air gently into the harmonica or draw air from it, it produces beautiful musical sounds called notes.

Some Harmonica technical precautions

Gindick (1977: 19) gave some intricate precautions regarding playing the harmonica:

- A harmonica is not a tuba. You can't blast out good tone. It has to be coaxed, especially when you first start to play. As you blow and draw your way up and down the harmonica, be gentle yet firm.
- Make your breathing controlled and natural so your sound will be controlled and natural
- Keep your lips moist to help the harmonica slide back and forth. Think of a typewriter carriage
- Don't hold your lips down tightly on the harmonica
- Try not to let saliva collect in the harp (yuck). Gently tapping the harp with the holes down on your palm or knee should take care of the problem
- Be gentle as you blow and draw. Think nice thoughts
- Keep the harmonica in its box when it's not in use. Little bits of dirt and whatnot can jam up the reeds
- You may run across a harmonica expert who will tell you to soak your harp in water to improve its tone. Ignore him.

Some Harmonica Techniques

- **Tonguing**

Tonguing as a playing technique for most woodwinds may not apply effectively on the harmonica because it can only work for the blown tones but not for the drawn tones. One might adopt 'tonguing' for some effect on some blown notes only.

- **Blowing**

This is simply the blowing of air into the reeds of the instrument with the buzzing of the lips. On a diatonic C Major harmonica, the notes that are naturally produced through blowing with the proper placement and shifting of the lips in-between the reeds are: C E G & C' which correspond to, d: ...m: ...s: ...d'.

- **Drawing or Sucking of air**

Drawing or sucking air on the C Major diatonic harmonica with respect to peculiar intervals on the reeds of the instrument produces these notes known as the drawn notes: D, F, A, & B which correspond to ...r:...f: ...l: ...t.

• **Handling**



Fig. 4a: Hands closed in airtight position to mute the tone and open to produce a 'waah' tone. Culled from *Country & Blues Harmonica for the Musically Hopeless*. Gindick:(1977).

This technique blends well in producing muted and bright tones on the instrument in alternation. If you close and open several times, returning to a snug, airtight position each time, the harmonica plays in a tremolos timbre(Gindick, 1977).

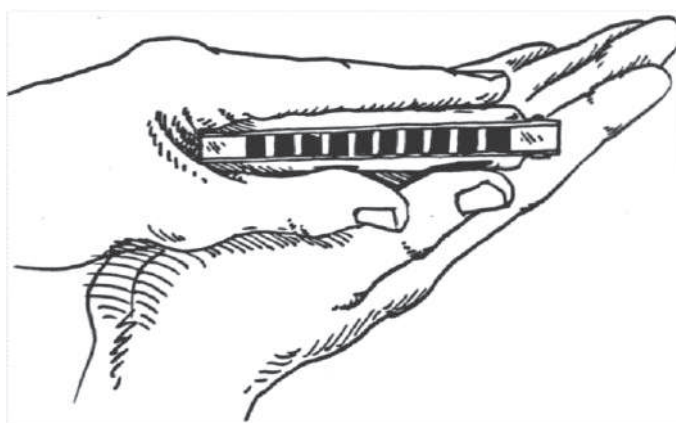


Fig. 4b: fluttering one hand over another with a gentle clapping motion.

Culled from *Country & Blues Harmonica for the Musically Hopeless*. Gindick (1977).

This handling technique produces a warbling effect on the tones. It is based on the principle of coloring the tones with the hand. It is sometimes referred to as 'teaching the harmonica to talk' (Gindick,1977).

• **Breathing**

Playing the harmonica demands proper supply of air via the respiratory tracts to the lips. Therefore, controlled breathing from the lungs is required for good tone production on the instrument.

Playing simple tunes

Diatonic harmonicas are the easiest type of harmonica to start playing from as a beginner, and they are also perfect for playig nearly all genres of music. for example:

Playing Simple Tunes

Merrily We Roll Along

4-4 time

/m:r:d:r/m:m:m:--/r:r:r:--/m:m:m:--/

/m : r : d :r /m : m : m :--/ r : r : m :r : /d :-- :-- :--//

Twinkle Star

4-4 time/d:d:s:s/l:l:s:--/f:f:m:m:/r:r:d:--/

/s:s:f:f/m:m:r:--/s:s:f:f/m:m:r:--/

/d:d:s:s/l:l:s:--/f:f:m:m/r:r:d:--/

Tips on proper playing of the Instrument.

It should be noted that the harmonica is not a large instrument like the trumpet or tuba where you are supposed to blast out notes but gentle blowing and drawing are required for the harmonica. Gindick (1977) suggests the following tips for easy playing of the instrument:

- Make your breathing controlled and natural so your sound will be controlled and natural
- Keep your lips moist to help the harmonica slide back and forth. Think of a typewriter carriage
- Do not hold your lips down tightly on the harmonica
- Try not to let saliva collect in the harp. Generally tapping the harp with the holes down on your palm or knee should take care of the problem
- Be gentle as you blow and draw.
- Keep the harmonica in box when it is not in use. Little bits of dirt can jam up the reeds
- You may run across a harmonica expert who will tell you to soak your harp in water to improve its tone. Ignore him. (p.19).

More Practice Tips on the C Major Diatonic Harmonica

- It is pitched on key C Major.
- The notes are very close together.
- It is played by blowing or Drawing air.
- Handle your instrument with care.
- Never share it with people!
- Practice makes perfect!

The Benefits of Instrumental study to Children

Beginning with the harmonica does not solve only the rudimentary musical needs of children but can also serve as a full musical instrument for accompaniment, solo, personal training, music

appreciation, foundation for more complex instruments, and a fulfilling musical experience. Campbell and Scott-Kassner (2010) expatiated on this:

For some children, making music is equivalent to playing musical instruments. The appeal of tapping, striking, shaking, blowing, and strumming musical instruments is one of the great joys in their lives. Because musical instruments are extensions of the musical self, when children play they are often demonstrating what they know and can express musically. To play a musical instrument is to deliver to others ideas that are not easily expressed verbally (p.218)

Why Employ the Harmonica for Rudimentary Music

Invariably, the harmonica presents itself a formidable instrument for children and beginners in exploring and appreciating the world of music. This has become possible because of the affordability, durability, handiness, capability, and sustainability in rudimentary music which every child and learner who is talented and enthusiastic about music must begin with.

How the Harmonica can handle the Rudiments of Music

Rudimentary music is the foundation or basics of music such as pitch, scale, melody, rhythm, dynamics, and harmony. This section demonstrates the capability of the harmonica in handling these fundamental concepts of music.

- **Pitch**

Pitch is the relative highness or lowness that we hear in a sound. The pitch of a sound is decided by the frequency of its vibrations. The faster the vibrations, the higher its pitch. In music, a sound that has a definite pitch is called a tone. It has a specific frequency, such as 440 cycles per second. The vibrations of a tone are regular and reach the ear at equal time intervals (Kamien, 1986).

The harmonica can play various pitches appropriately from low, medium, and high. Playing on the left part of the instrument produces low tones; on the middle part produces medium tones; while the right side yields high tones. This is shown on the figure below:

Fig 4. Different pitch levels on the harmonica



L- low tones

M- medium tones

H- high tones

Fig. 5. Pitch levels on the Harmonica

- **Scale**

Scale is the collection of pitches arranged in order from lowest to highest or from highest to lowest. The pitches of any music in which pitch is definable can be reduced to a scale (The New Harvard Dictionary of Music, 1986). The harmonica can easily be used to play the scale of its designated key if the learner carefully blows and draws air appropriately and shifts his lips on the instrument as the scale ascends or descends. For example:



B D B D B D D B
 d:r:m:f s:l t:'d *BBlow
 *DDraw

Fig.6. Scale of C major on the Harmonica

It should be noted that basically on the harmonica some notes are produced with the blowing technique while some others come from drawing. For instance, the notes: d: m: and s are produced by the blowing technique while notes: r: f: l: and t are usually realized by the air drawing technique.

- **Sightreading**

Sightreading refers to the performing of a piece of music on seeing it for the first time (The New Harvard Dictionary of Music, 1986). The harmonica can improve sightreading skills on the learner by learning simple graded pieces of music to more difficult ones. For example:

Fig. 7. Sightreading with the Harmonica

Skip one window
 (3-4-5) l s f m r d

m s s s m s s m s s s m r d d

Skip one win-dow ti - de - o. Skip two win-dows ti - de - o.

m s s s m s s l l l l s f m r d d

Skip three win-dows ti - de - o. Jin-gle at the win-dows ti - de - o.

Culled from (*Move, sing, Listen, Play*: Wood,1971)

This piece of music aids the harmonica beginner in proper sight reading of notes and also proper counting of time as he plays.

- **Melody**

A melody is a series of single tones that add up to a recognizable whole. A melody begins, moves, and ends; it has direction, shape, and continuity. The up -and -down movement of its pitches conveys tension and release, expectation and arrival. This is the melodic curve, or line (Kamien, 1986). Melody playing is a wonderful experience on the harmonica after the learner must have mastered pitch production and scale playing. For instance:

Merrily We Roll Along

4-4 time

/m:r:d:r/m:m:m:--/r:r:r:--/m:m:m:--/

B D B D B B B DD D B B B

/m:r:d:r/m:m:m:--/r:r:m:r:/d:--:--:--//

B D B D B B B DD B D B

B - Blow

D - Draw

Care must be taken to shift the lips appropriately to get the proper position of the respective tones before blowing or drawing. The lips must be shifted accordingly as shown in the scale playing in order to articulate the notes well.

As the learner advances, more technical melodic patterns can be incorporated in his repertoire. For example:

Fig.8. Melodic exercise with the Harmonica



Culled from (*The Treasury sight-reader*: Jacobson:1980).

- **Phrasing**

Many melodies are made up of shorter parts called phrases. These short units may have similar pitch and rhythm patterns that help unify the melody. On the other hand, contrasting phrases can furnish variety. Phrases often appear in balanced parts; a first phrase of rising pitches may be followed by a second phrase of falling pitches. The second phrase may partly repeat the first one but have a more conclusive ending, a point of arrival. (Kamien, 1986) pp.52-53.

Fig.9. Phrasing with the Harmonica

Form or design	10 a) Phrase feeling Frère Jacques French
Phrase I	
Phrase II	
Phrase III	
Phrase IV	

Culled from (*Move, sing, Listen, Play*: Wood,1971)

The beginner can practice melodic phrasing on the harmonica using the song sample *Frere Jaques* which is a familiar French tune.




- **Cadence**

A cadence is a resting place at the end of a phrase. Cadence is a melodic or harmonic configuration that creates a sense of repose or resolution. Cadences thus most often mark the end of a phrase, period, or complete composition (The New Harvard Dictionary of Music, 1986). The various cadences in modern music can all be explored with the harmonica such as the perfect, imperfect, and interrupted cadences.

- **Rhythm**

Rhythm is the ordered flow of music in time(Kamien, 1986, P39). Fundamental knowledge of rhythm is basic to musicianship.

Fig. 10a. Some Rhythmic practice using the Harmonica

WALKERS	RUNNERS	SKIPPERS
		
ta ta ta ta	ti ti ti ti ti ti ti ti	ta ti ta ti ta ti ta ti

Culled from (*Move, sing, Listen, Play*: Wood,1971)

Learning these rhythmic patterns above can be fun on the harmonica and they should be played on a monotone, that is, on a single tone. More rhythmic patterns on various time signatures can be learned on a monotone using the harmonica such as:

Fig. 10b. More Rhythmic examples



Culled from *Complete Series of sight Reading and ear Tests*: Bennet & Capp, 1968)

- **Dynamics and Tempo**

Degrees of loudness or softness in music are called dynamics. Loudness is related to the amplitude of the vibration that produces the sound. When instruments are played more loudly or more softly, or when there is a change in how many instruments are heard, a dynamic change results, such change may be made either suddenly or gradually (kamien, 1986).

Various types of dynamics and tempo can be learned using the harmonica such as *piano*, *forte*, *pianissimo*, *fortissimo*, *accelerando*, *andante*, *vivace*, etc. for example:

- **Harmony**

Harmony refers to the way chords are constructed and how they follow each other. A chord is a combination of three or more tones sounded at once. Essentially, a chord is a group of simultaneous tones, and a melody is a series of individual tones heard one after another. As a melody unfolds, it provides clues for harmonizing- some of the tones of the melody are usually included in the chords of the accompaniment. (kamien, 1986)p57.

The harmonica serves as a formidable instrument in learning musical harmony because it is a harmonic instrument as could be perceived from its timbre and name 'harmonica'. For example,

Fig.11. Harmonic progression using the Harmonica.



C D E F G A B
Blow draw blow draw blow draw draw

Culled from *Complete Series of sight Reading and ear Tests*: Bennet &



Capp,1968)

The learner can successfully practice and master the various chords of the harmonic series in C Major using the harmonica.

- **Texture**

Texture describes the way the vertical and horizontal strands of melody are interwoven. In this sense, texture combines both melody and harmony. In addition to strands of melody, the term texture can refer to how many different layers of sound are heard at the same time(Charlton and Hickok, 20007). The harmonica is one of those peculiar musical instruments like the piano, Guitar, and autoharp which can combine both melody and harmony together to give various shades of textures perceived as monophonic, homophonic, and polyphonic. For example:

Fig. 12. Different textures realizable on the Harmonica.

Culled from *Complete Series of sight Reading and ear Tests*: Bennet &Capp,1968)

The musical example above is so interesting that the harmonica learner can practice multiple musical textures with it. He can play the chord as chord I in key C major and thereafter play the following melodies even though the

respective notes of the melodies will surely sound as different layers of notes meshed together as a single note. This is very unique and interesting about the harmonica.

Insight from the theory of adaptive Musicology

Although the harmonica has the capability of providing a competent rudimentary musical base for all learners, the precautions of the theory of 'Adaptive Musicology' must be put into perspective. The theory posits that: The capability to adapt successfully to the learning and mastery of a given musical instrument is native to the individual. This implies that the potentiality to excel in a given musical instrument is traceable to the individual's adaptive features, which includes: height, dentition, body shape, tongue size, lip structure, finger and toe size, lung capacity, musculature, intelligence, temperament, voice timbre, etc. (Okeke, 2020). The implications of this theory for Harmonica practice is that the instrument may not be suitable to every learner because of its physical and physiological demands on the learner such as sound dentition, lip structure, and lung capacity for proper breathing and air supply into the instrument for tone production. The harmonica has also been reported to induce feeling of dizziness on some players when played for a few moments.

These revelations show that every musical instrument, no matter how small it appears, comes with its physical challenges and it is proper and professional to lead learners towards the instruments they can naturally adapt to and guide them away from the ones that they cannot naturally adapt to.

Conclusion

So far in this paper, we have been able to demonstrate that the harmonica satisfies the quest for a formidable musical instrument for rudimentary music because of its handiness, availability, affordability, durability, and sustainability of core aspects of music. The instrument has the capability of handling musical rhythm, pitch, melody, harmony, phrases, texture, and tone discrimination effectively.

Recommendation

It is recommended that music educators, children, music enthusiasts, and musicians should tap into the richness and capabilities of the harmonica which have been explored and highlighted in this paper. The harmonica is highly recommended for school music, ensembles, and personal practice. Its size and handiness make it a most suitable instrument for travels, holidays, picnics, and chamber music. The harmonica is also recommended for learners who wish to graduate to larger and more technical woodwinds and brasses such as the saxophone, piccolo, trumpet, clarinet, etc., because of the similarities in the playing techniques and mechanism of tone production.

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