

【DESCRIPTION】

【Invention Title】

ACCOMPANIMENT AND VOICE MATCHING METHOD FOR WORD
LEARNING MUSIC FILE

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【Technical Field】

This disclosure relates to an accompaniment and voice matching method for a word learning music file, and more particularly, to a method for matching accompaniment having a four-four time rhythm composed of four
10 beats of strong/weak/middle/weak with an accent of a word (voice).

【Background Art】

Along with the globalization of modern societies, foreign languages such as English, Japanese and Chinese have important parts of the social life.

15 Accordingly, languages are educated from early ages, and various methods have been developed for effective language education. For example, when learning a foreign language, learners generally may directly register as a member of a foreign language educational institute and attend a foreign language lecture, learn a language through movies or TV dramas, or use a
20 foreign language learning method using a pop song from a radio program.

However, the development of the vocabulary which is the basis of language learning dominantly tends to depend on the personal endeavor, and the effect of word learning is not great since learners feel tired and bored while

repeatedly listening to the same word.

For example, in a conventional English word pronunciation learning method, phonetic symbols are marked based on English words (alphabet) or pronunciation is marked with a mother tongue (e.g., Korean alphabet) so that the English word may be pronounced by using the correlation between the “word (alphabet)” and the “sound (pronunciation)”. But, this method has a limit in its learning effect.

Meanwhile, in order to enhance the word learning effect, there has been disclosed a learning method where accompaniment and words (voices) are composed to make a music file so that a learner learns the words while repeating the music without feeling bored.

However, in the learning method using a music file, since accents (beats) of the accompaniment do not agree with actual accents of the words, which is harsh to the ear, so the words are not easily input to the brain and their information is not efficiently delivered, resulting in deteriorated learning effect.

【Disclosure】

【Technical Problem】

This disclosure is directed to providing an accompaniment and voice matching method for a word learning music file, which matches accompaniment having a four-four time rhythm composed of four beats of strong/weak/middle/weak with an accent of a word (voice), thereby allowing a learner to automatically learn the accent of the word unconsciously without being harsh to the ear since the accent of the accompaniment agrees with the

actual accent of the word and also enhancing the learning effect due to excellent information transfer capability.

【Technical Solution】

5 In one general aspect, there is provided an accompaniment and voice matching method for a word learning music file, wherein a word voice composed of an original language voice and a translation voice is matched with accompaniment in four-four time where a single bar is composed of four beats of strong (the first beat)/weak (the second beat)/middle (the third beat)/weak
10 (the fourth beat),

 wherein the matching is performed so that a single word corresponds to the single bar,

 wherein the word is classified into a strong beat type having an accent on a first syllable and a weak beat type not having an accent on the first
15 syllable,

 wherein the word of the strong beat type is matched so that the original language voice is located at the first beat of the corresponding bar and the translation voice is located at the third beat of the corresponding bar, and

 wherein the word of the weak beat type is matched so that the original
20 language voice is located at the fourth beat of a previous bar and the first beat of the corresponding bar and the translation voice is located at the third beat of the corresponding bar.

【Advantageous Effects】

According to the present disclosure, by matching accompaniment having a four-four time rhythm composed of four beats of strong/weak/middle/weak with an accent of a word (voice), the accent of the word may be automatically learned unconsciously without being harsh to the ear since the accent of the accompaniment agrees with the actual accent of the word, and the learning effect may be enhanced due to excellent information transfer capability.

【Description of Drawings】

The above and other aspects, features and advantages of the disclosed exemplary embodiments will be more apparent from the following detailed description taken in conjunction with the accompanying drawings in which:

Fig. 1 is a diagram for illustrating a matching according to an embodiment of the present disclosure;

Figs. 2a and 2b are diagrams for illustrating a matching according to another embodiment of the present disclosure; and

Figs. 3a and 5b show examples of a screen actually output in a case where a text image is matched according to another embodiment of the present disclosure.

【Best Mode】

Hereinafter, configuration and operations of an embodiment of the present disclosure will be described with reference to the accompanying drawings.

In the following description, a word to be learned is assumed as an English word, for example.

In the present disclosure, accompaniment to be matched with a word (voice) is in four-four time. In the four-four time, a single bar has four quarter notes and is composed of four beats whose basic stream is strong/weak/middle/weak.

The term "strong" represents a strong beat, the term "weak" represents a weak beat, and the term "middle" represents a middle strong beat.

Meanwhile, an English word has an accent (stress) at a syllable, and so the syllable with an accent should be pronounced strongly.

Table 1 below shows types of English words having syllables.

[Table 1]

Type		Word	Phonetic symbol	
Strong beat type	Strong-1 syllable	bell	[bel]	
	Strong-2 syllable	roost·er	[rú:ster]	
	Strong-3 syllable	ab·ne·gate	[æbnigèit]	
	Strong-4 syllable	tem·po·rar·y	[tèmpərèri]	
Weak beat type	Weak-1 syllable	Strong-1 syllable	to·night	[tənáit]
		Strong-2 syllable	u·ten·sil	[ju:ténsəl]
		Strong-3 syllable	u·nan·i·mous	[ju:nænəməs]
		Strong-4 syllable	con·tem·po·rar·y	[kəntèmpəréri]
	Weak-2	Strong-1 syllable	under·buy	[ʌndərbái]

	syllable	Strong-2 syllable	u·ni·ver·sal	[jú:nəv:rsəl]
		Strong-3 syllable	u·ni·ver·si·ty	[jú:nəv:rsəti]
	Weak-3 syllable	Strong-2 syllable	a·bi·o·gen·ic	[èibaïoudʒénik]
		Strong-3 syllable	a·bi·o·chem·is·try	[èibaïoukémistri]
	Weak-4 syllable	Strong-2 syllable	a·bi·o·ge·net·ic	[èibaïoudʒənétik]

As shown in Table 1, English words may be classified into words of a strong beat type having an accent at the first syllable, such as bell, rooster, abnegate and temporary, and words of a weak beat type having an accent at a syllable other than the first syllable, such as tonight, underbuy, abiogenic and abiogenetic.

In addition, the strong beat type words may be classified into strong-1 syllable such as bell, strong-2 syllable such as rooster, strong-3 syllable such as abnegate, strong-4 syllable such as temporary or the like according to the number of syllables.

If having an accent at the second syllable (weak-1 syllable), according to the number of syllables after the second syllable, the weak beat type word may be classified into weak-1 syllable/strong-1 syllable such as tonight, weak-1 syllable/strong-2 syllable such as utensil, weak-1 syllable/strong-3 syllable such as unanimous, weak-1 syllable/strong-4 syllable such as contemporary or the like.

In addition, if having an accent at the third syllable (weak-2 syllable), according to the number of syllables after the third syllable, the weak beat type

word may be classified into weak-2 syllable/strong-1 syllable such as underbuy, weak-2 syllable/strong-2 syllable such as universal, weak-2 syllable/strong-3 syllable such as university or the like.

In addition, if having an accent at the fourth syllable (weak-3 syllable),
5 according to the number of syllables after the fourth syllable, the weak beat type word may be classified into weak-3 syllable/strong-2 syllable such as abiogenic, weak-3 syllable/strong-3 syllable such as abiochemistry or the like.

In addition, if having an accent at the fifth syllable (weak-4 syllable), according to the number of syllables after the fifth syllable, the weak beat type
10 word may be classified into weak-4 syllable/strong-2 syllable such as abiogenetic or the like.

As described, words may be classified into the strong beat type and the weak beat type depending on whether or not the first syllable has an accent. In addition, the weak beat type words may be classified into weak-n syllable and
15 strong-n syllable according to the number of syllables after the syllable without an accent and the number of syllables after the syllable with an accent. Moreover, the strong beat type words may be classified into strong-n syllable according to the number of syllables after the first syllable with an accent.

At this time, as described above, it can be understood that n is 1 to 4.

20 Fig. 1 is a diagram for illustrating an accompaniment and voice matching method according to an embodiment of the present disclosure.

As shown in Fig. 1, a single bar in four-four time is composed of four beats, among which the first beat is strong, the second beat is weak, the third beat is middle strong, and the fourth beat is weak, in a basic stream.

The bar in four-four time is repeated many times to compose single accompaniment. In the present disclosure, single accompaniment is composed of about thirty bars.

In addition, a single bar corresponds to a single voice (an original language voice or a translation voice). A strong beat type word having an
5 accent at the first syllable is matched so that the original language voice is located at the first beat of the corresponding bar and the translation voice is located at the third beat of the corresponding bar.

In other words, as shown in Fig. 1, in case of strong beat type words
10 such as bell, rooster, abnegate and temporary, an original language voice of bell, rooster, abnegate and temporary is matched with the first beat of the corresponding bar, and its translation voice is matched to the third beat of the corresponding bar.

The first beat matched with the original language voice is divided again
15 into four equal parts (a single beat is composed of four sixteenth notes) and matched so that the strong-1 syllable is located at the $1/4$ section of the first beat, the strong-2 syllable is located at the $1/4$ region and the $2/4$ region of the first beat, the strong-3 syllable is located at the $1/4$ section to the $4/3$ section of the first beat, and the strong-4 syllable is located at the $1/4$ section to the $4/4$
20 section of the first beat.

In other words, the first beat of the corresponding bar is divided into four equal parts and matched to occupy corresponding sections of the first beat, divided into four equal parts, from the front as much as the number of corresponding strong-n syllables of the original language voice.

In regard to the weak beat type word not having an accent at the first syllable, the strong-n syllable of the original language voice is matched with the first beat of the corresponding bar, the weak-n syllable of the original language voice is matched with the fourth beat of the previous bar, and the translation
5 voice is matched with the third beat of the corresponding bar.

The syllable having an accent is matched to be located at the 1/4 section of the first beat, and the other syllables of the original language voice are matched with the first beat of the corresponding bar and the fourth of the previous bar on the basis of the syllable having an accent.

10 In other words, the strong-2 syllable is matched to correspond to the 1/4 section and the 2/4 section of the first beat, the strong-3 syllable is matched to correspond to the 1/4 section to the 3/4 section of the first beat, the strong-4 syllable is matched to correspond to the 1/4 section to 4/4 section of the first beat, the weak-1 syllable is matched to correspond to the 4/4 section of the
15 fourth beat of the previous bar, the weak-2 syllable is matched to correspond to the 3/4 section and the 4/4 section of the fourth beat of the previous bar, the weak-3 syllable is matched to correspond to the 2/4 section to the 4/4 section of the fourth beat of the previous bar, and the weak-4 syllable is matched to correspond to the 1/4 section to the 4/4 section.

20 In more detail, as shown in Fig. 1, among weak beat type words, a word having weak-1 syllable/strong-n syllable is matched so that the weak-1 syllable of the original language voice corresponds to the 4/4 section of the fourth beat of the previous bar, and the strong-n syllable of the original language voice is matched like the strong beat type described above.

Similarly, a word having weak-2 syllable/strong-n syllable is matched so that the weak-2 syllable of the original language voice corresponds to the 3/4 section and the 4/4 section of the fourth beat of the previous bar, and the strong-n syllable of the original language voice is matched like the strong beat type described above.

In this way, the original language voice of the weak-n syllable is matched with the fourth beat of the previous bar, the original language voice of the strong-n syllable is matched with the first beat of the corresponding bar, and the translation voice is matched with the third beat of the corresponding bar.

In other words, the first beat of the corresponding bar is divided into four equal parts and matched to occupy corresponding sections of the first beat, divided into four equal parts, from the front as much as the number of corresponding strong-n syllables of the original language voice, and the fourth beat of the previous bar is divided into four equal parts and matched to occupy corresponding sections of the fourth beat, divided into four equal parts, from the rear as much as the number of corresponding weak-n syllables of the original language voice.

Figs. 2a and 2b are diagrams for illustrating a matching method according to another embodiment of the present disclosure, where a text (image) is matched together with accompaniment and voice.

The accompaniment and the voice are matched as shown in Fig. 1. In the text, an original language text is matched to output from the fourth beat of the previous bar to the third beat of the corresponding bar, and a translation text

is matched to output to the second beat and the third beat of the corresponding bar.

Accordingly, after a text of a word is output on the screen, voice of the corresponding word is output.

5 In the present disclosure, if a text (image) is output first, voice is output later after 0.5 to 0.7 second.

Figs. 3a to 5b show examples of a screen actually output in a case where a text (image) is matched according to another embodiment of the present disclosure.

10 In the present disclosure, if an original language text is output to the screen, a translation text is not newly output after the original language text disappears, but the translation text is output to overlap the original language text.

15 Accordingly, the original language voice and the translation voice are played to be matched with a text or image of a word.

While the exemplary embodiments have been shown and described, it will be understood by those skilled in the art that various changes in form and details may be made thereto without departing from the spirit and scope of this
20 disclosure as defined by the appended claims.

【CLAIMS】**【Claim 1】**

An accompaniment and voice matching method for a word learning music file,

5 wherein a word voice composed of an original language voice and a translation voice is matched with accompaniment in four-four time where a single bar is composed of four beats of strong (the first beat)/weak (the second beat)/middle (the third beat)/weak (the fourth beat),

10 wherein the matching is performed so that a single word corresponds to the single bar,

 wherein the word is classified into a strong beat type having an accent on a first syllable and a weak beat type not having an accent on the first syllable,

15 wherein the word of the strong beat type is matched so that the original language voice is located at the first beat of the corresponding bar and the translation voice is located at the third beat of the corresponding bar,

 wherein the word of the strong beat type is classified into strong-n ($n=1-4$) syllables according to the number of syllables after the first syllable, the first beat of the corresponding bar is divided into four equal parts, and the word of
20 the strong beat type is matched to occupy corresponding sections of the first beat, divided into four equal parts, from the front as much as the number of corresponding strong-n syllables of the original language voice, and

 wherein the word of the weak beat type is matched so that the original language voice is located at the fourth beat of a previous bar and the first beat

of the corresponding bar and the translation voice is located at the third beat of the corresponding bar.

【Claim 2】

5 The accompaniment and voice matching method for a word learning music file according to claim 1,

 wherein the word of the weak beat type is classified into strong-n ($n=1-4$) syllables and weak-n ($n=1-4$) syllables according to the number of syllables after the syllable without an accent and the number of syllables after the syllable
10 with an accent, and the weak-n syllables are matched to correspond to the fourth beat of the previous bar and the strong-n syllables are matched to correspond to the first beat of the corresponding bar.

【Claim 3】

15 The accompaniment and voice matching method for a word learning music file according to claim 2,

 wherein the first beat of the corresponding bar is divided into four equal parts and matched to occupy corresponding sections of the first beat, divided into four equal parts, from the front as much as the number of corresponding
20 strong-n syllables of the original language voice.

【Claim 4】

 The accompaniment and voice matching method for a word learning

music file according to claim 2,

wherein the fourth beat of the previous bar is divided into four equal parts and matched to occupy corresponding sections of the fourth beat, divided into four equal parts, from the rear as much as the number of corresponding weak-n syllables of the original language voice.

【Claim 5】

The accompaniment and voice matching method for a word learning music file according to any one of claims 1 and 2 to 4,

wherein, in a text (image) of the word, an original language text is matched to output from the fourth beat of the previous bar to the third beat of the corresponding bar on a screen, and a translation text is matched to output to the second beat and the third beat of the corresponding bar on the screen.

【Claim 6】

The accompaniment and voice matching method for a word learning music file according to claim 5,

wherein the matching is performed so that the word voice is output on the screen later after 0.5 to 0.7 second when the text of the word is output on the screen.

【Claim 7】

The accompaniment and voice matching method for a word learning

music file according to any one of claims 1 and 2 to 4,

wherein the original language voice, the translation voice and the text or image of the word are matched and generated.