

## Children's Perceptions of Anacrusis Patterns within Songs

Peggy D. Bennett

*The University of Texas at Arlington*

In order to help children become musically literate, music teachers have reduced the complexity of musical sound into manageable units or patterns for study. Usually, these patterns are then arranged into a sequence that presumes level of difficulty, and educators lead children through a curriculum based on a progression of patterns "from simple to complex." This practice of using a sequential, "patterned" approach to elementary music education in North America was embraced in the 1960's and 1970's when the methodologies of Hungarian, Zoltan Kodaly, and German, Carl Orff, were imported and introduced to American teachers.

Touting the "sound before symbol" approach, these methods, for many teachers, replaced the notion of training students to recognize symbols, then to perform the sounds the symbols represented. For many teachers of young children, this era of imported methods reversed the way they taught music, and the organization of music into patterns for study was a monumental aspect of these changes.

A "pattern" approach to music education is supported by speech and brain research which indicates that, even when items are not grouped, individuals naturally process information by organizing it into patterns for retention and recall (Neisser, 1967; Buschke, 1976; Miller, 1956; Glanzer, 1976). Similar processing occurs when musical stimuli are presented (Cooper & Meyer, 1960; Mursell, 1937; Lerdahl & Jackendoff, 1983, p. 13). Some questions remain, however, about how patterns are selected and presented for children to study and what constitutes a pattern.

In a "sound before symbol" approach, it would seem crucial to begin with the sound patterns that are perceived by children from the songs that comprise their musical vocabulary. Are the musical sound patterns that students hear consistent with those being taught? Do the visually-oriented, metric groupings (note groups that occur within a measure or a beat) or the aurally-oriented, figural groupings (notes that are grouped according to meaningful units regardless of notation) take precedence in determining a "pattern?"

Common practice in lessons utilizing Kodaly, Orff, series textbook, or eclectic methodologies is to select 4-beat measure patterns *not* including anacrusis for performing, identifying, notating, and reading rhythm and tonal patterns. An earlier study (Bennett, 1988) found that, although 4-beat units were most frequently perceived and demonstrated by students from three age groups, students were also able to hear and appropriately include anacrusis to the 4-beat patterns they demonstrated. Articles, prepositions, and adjectives cause the English language to be filled with speech patterns (and consequently, folksong patterns) in which nonstressed sounds lead into and away from stressed sounds. This intrinsic, figural organization of patterns does not necessarily match the organization determined by bar lines and beat groups. The only methodology found that recognized and addressed the figural aspect of patterns is Education Through Music (ETM) (Richards, 1971, p. 10, 17, 95; Richards, 1978, p. 53, 45). Is it possible that the "sound before symbol" approach, as it is frequently used, is more rooted in teachers' perceptions of the *symbols* of music than in their students' perceptions of the *sounds* of music?

In "Teaching Rhythm" (1960), Ernest Harris writes:

Rhythm is not a series of printed symbols. For practical purposes rhythm must be regarded as a unique kind of attitude toward a group of notes or printed symbols ... Students are taught note-values. To be sure, this is important but the missing ingredient is concepts for perceiving groups of notes. These are not taught. (p. 324)

To begin answering some of the questions surrounding how patterns are determined and selected for children to study and to further investigate previous findings on children's perceptions of anacrusis, a project was designed to study children's perceptions of figural groupings in folksongs. [Note: Terminology became awkward in distinguishing patterns that begin with an anacrusis from those that do not. Because the phrase "patterns with anacrusis" suggests the anacrusis are not a part of the pattern, the phrase "anacrusis pattern" will be used to identify units of sound that begin with an upbeat or pick-up sound.]

The purpose of this study was to investigate children's abilities to perceive and demonstrate anacrusis patterns from whole song contexts. Specific research problems were: (a) to determine the length of patterns students' perceived, (b) to determine and compare response mode preferences, and (c) to determine and compare accuracy of response modes.

### Method

Forty Grade Four students from two elementary schools in the Arlington Independent School District, Arlington, Texas were subjects for the study. Students at both schools were enrolled in music classes that met daily for 25 minutes. Time restraints allowed for testing of 19 students from one school and 21 from the other.

Three response modes, oral/vocal, kinesthetic/motor, and graphic/motor, were selected for students' pattern demonstrations. These response modes were: chinning (singing a song or song pattern on "doo"), tapping (tapping a finger on the opposite palm), and dotting (tapping a marker in a line across a paper). Prior to testing, the music teachers at each school familiarized students with these techniques. Five folk songs were selected for the testing sessions. Each song cadenced with one long phrase of eight beats that could be divided into two four-beat phrases. For each song, the four beat cadence pattern began with an anacrusis, but there were no rests or obvious breaks in the music preceding the anacrusis pattern. (See Figure 1.)

At both schools, students from intact music classes were sent in random fashion to the testing room. Students were tested individually, and all sessions were video-taped for subsequent analysis. To investigate students' perceptions of sound patterns, I asked them, "How did that song end?" and "Could you show or sing me the ending of that song?" In response, a student had to aurally back-track from the cadence of the song and recall a grouping of sounds that to him or her was a meaningful unit. Each student was given the instructions that I would chin a song, then ask them to tap, dot, and chin the ending. The order in which students tapped, dotted or chinned was their choice. Paper and a wide, felt-tip marker were provided for the dotting responses. After completing their responses in three modes, I sang the same song with words and asked students to sing the ending words. This same sequence was followed for each student and with each of the five songs presented. The five songs were: "The Farmer in the Dell," "Roll That Brown Jug Down to Town," "Polly Put the Kettle On," "Here Come Three Dukes A-Riding," and "High Stepping Horses."

Care was taken in the presentation of each song to use a moderate tempo and a range comfortable for children's singing voices, although matching pitch was not prerequisite to response accuracy. Also, in performing the songs, no emphasis was placed on the anacrusis or the shorter 4 beat cadence pattern. My neutral reactions to students' demonstrations, communicating more curiosity than approval or disapproval, avoided signaling correctness or incorrectness about their responses. If students seemed confused or forgetful of the song pattern, they could request or I would offer to chin the song again. This practice helped minimize the effects of auditory memory as a factor in the accuracy of their responses.

Video-tapes were analyzed and responses were coded according to anacrusis patterns, pattern length, mode preference, and pattern accuracy. For the dotted responses, students' papers were consulted in combination with the video-taped responses.

## THE FARMER IN THE DELL

1. The farmer in the dell, the farmer in the dell,  
Hi ho the der-ry oh, the farmer in the dell.

## ROLL THAT BROWN JUG

Roll that brown jug down to town. Roll that brown jug down to town.  
Roll that brown jug down to town so ear-ly in the morn - ing.

## POLLY PUT THE KETTLE ON

Polly put the kettle on, Polly put the kettle on,  
Sally take it off a-gain, Sally take it off a-gain,  
Polly put the kettle on, we'll all have tea.  
Sally take it off a-gain, they've all gone a-way.

## THREE DUKES A-RIDING

1. Here come three dukes a - rid - ing, a - rid - ing, a - rid - ing.  
Here come three dukes a-rid - ing with a ran-cy tan-cy tay.

## HIGH STEPPING HORSES

High stepping hors - es, High stepping hors - es.  
High stepping hors - es go jiggety jiggety jog.

Figure 1. Folksongs selected to test anacrusis perception.

For coding *pattern length*, responses were categorized as 8 beats, 4 beats, and 2 beats long. In coding *mode preference*, the order in which each student performed the pattern was recorded. For coding *accuracy* of responses, it became necessary to calculate responses according to level of accuracy, because many responses did not fit discretely into categories of accurate or inaccurate. Because tapping and dotting do not require reproducing a melody, it was necessary to avoid a coding bias against the vocal responses. Therefore, chinned responses were considered accurate if they rhythmically matched the song pattern. "Somewhat accurate" responses included those with only slight modifications to the song pattern: an omitted eighth note or an extra tap at the cadence. In an effort to avoid confusing anacrusis perception with accuracy in pattern demonstration, a response was considered accurate if it was *only* missing the anacrusis. Each record of response accuracy also included a mark that indicated whether or not an anacrusis was accurately performed with the pattern.

The chi square formula was used to determine statistically significant differences. Level of significance was set at .05. After a period of four weeks, responses were recoded for eight randomly selected students. The Scott coefficient of consistency indicated "good agreement" (.86) between the two sets of assessments.

## Results

### *Anacrusis Perception*

When words were used in song presentations and for students' responses, 33 of 40 students (83%) included anacrusis in 100% of their responses. Of the remaining seven students, each deleted the anacrusis only once in their five responses.

Of the total responses for the chinned presentations of songs ( $N = 769$ ), 75% included an anacrusis to the pattern performed. Thirteen of the 40 (33%) students included anacrusis in 100% of their responses, and 33 of 40 students included anacrusis in over 50% of their responses.

Table 1  
*Anacrusis Perception in Percentages*

	Chinned		Word	
	Presentation	<i>N</i>	Presentation	<i>N</i>
Group A ( $n = 19$ )	72	363	97	78
Group B ( $n = 21$ )	78	406	94	89
Total ( $N = 40$ )	75	769	96	167

Considering responses in all three modes and song word presentations, "Roll That Brown Jug" was the song in which the anacrusis was most frequently missed ( $n = 40$ ). Following was "Polly Put the Kettle On" ( $n = 37$ ), then "The Farmer in the Dell" ( $n = 24$ ), "High Stepping Horses" ( $n = 22$ ), and "Here Come Three Dukes" ( $n = 21$ ). When the presentation mode and response mode used words, only "High Stepping Horses" ( $n = 5$ ) and "Roll That Brown Jug" ( $n = 2$ ) had missed anacrusis.

### *Pattern Length*

Perceptions of pattern length were determined by categorizing each student's responses to the five songs, chinned and with words ( $N = 411$ ). A total of 89% ( $n = 364$ ) of responses were 4 beats in length, 11% were 8 beats in length. Thirty of the 40 8-beat responses were with words of the song, and 27 of these 30 were "The Farmer in the Dell."

Table 2  
*Length of Patterns in Children's Responses in Percentages*

	Beats			N
	8	4	2	
Group A (n = 19)	10	89	1	188
Group B (n = 21)	11	88	0	223
Total (N = 40)	11	89	0	411

*Mode Preference*

There were significant differences in the frequency with which students chose initial response modes,  $\chi^2(3, N = 200) = 240.76, p < .001$ . Of the total number of mode responses ( $N = 200$ ), the frequencies of preferred initial response modes were chinning 73%, chinning combined with tapping 10%, tapping 8%, and dotting 9%. The choice of several students to combine chinning with tapping for their initial response was an unexpected but not uncommon occurrence. Chinning, therefore, was the preferred initial response mode in 83% of students' pattern demonstrations. The most frequently preferred sequence was chin/dot/tap (39%), followed by chin/tap/dot (34%). The least preferred sequence was dot/tap/chin (.2%).

Table 3  
*Children's Response Mode Preferences in Percentages*

	Chin	Chin/Tap	Tap	Dot	N
Group A (n = 19)	61	15	11	14	95
Group B (n = 21)	83	6	7	5	105
Total (N = 40)	73	10	8	9	200

*Accuracy*

Although differences were not significant, within modes, students were most frequently accurate in chinning (64%), then tapping (51%), then dotting (48%). Students were more frequently accurate than they were inaccurate or somewhat accurate

Table 4  
*Percentages of Accuracy within Response Modes*

	Chin			Tap			Dot			N
	+	0	-	+	0	-	+	0	-	
Group A (n = 19)	57	25	18	48	28	23	45	26	28	285
Group B (n = 21)	70	20	10	53	31	16	51	29	19	315
Total (N = 40)	64	22	14	51	29	20	49	27	24	600

Note. + = Accurate, 0 = Somewhat accurate, and - = Inaccurate responses.

### Discussion

The tendencies for students' responses to be four beats in length, for the most frequently preferred mode of response to be chinning, and for the percentages of inaccurate responses in all three response modes to be low (10% - 28%) parallel those of earlier research (Bennett, 1988). Also, because individual students were not equally accurate in each mode and students varied in their preferred sequence of mode response, the three response modes used (chinning, tapping and dotting) were apparently effective and efficient for these students in demonstrating their pattern perceptions.

It is interesting to note that 30 of the 40 8-beat responses occurred when song words were used, suggesting that for these students the words were a tool for recalling a greater number of sounds or for perceiving larger figures from the music. Also, 27 of the 30 8-beat word responses were performed with "The Farmer in the Dell," suggesting that familiarity with the song may result in perception of larger units.

Though not statistically significant, the chinning mode was most frequently accurate and was most frequently preferred. Though responses may not have been melodically accurate, I did not focus attention on students' matching pitch because the tapping and dotting responses only required rhythmic accuracy. As in the 1988 study, it was not uncommon for students to accompany their dotted and tapped responses with chinning. Why was chinning most frequently preferred and often used in combination with other modes? Because chinning was the mode in which the song was presented, perhaps students' chinning was simply imitative. Maybe chinning aided auditory recall by allowing students to keep the pattern audible for the subsequent repetitions. A term and technique not widely used, chinning provides a mechanism for a vocal response that can be purely imitative and a direct performance of sound, rather than a verbal response that requires identification, discrimination, or labeling. Chinning, as this study has indicated, can be a valuable tool for children's musical performance, perception, and retention.

Students seemed to have little or no difficulty perceiving the anacrusis patterns from the five selected songs, especially when words were used. The findings that 33 of 40 students included anacrusis in 100% of their responses when words were used and that the remaining students missed only one in five anacrusis, strongly suggests that students are "tuned in" to the figural groupings of music. Because the musical units created by stressed and nonstressed sounds are common to both speech and music (Bennett, 1981; Cooper & Meyer, 1960), perhaps students' lifetime of perceiving and responding to the architectonic structures of language has provided them

with advanced training in perceiving these groupings in music. Because 75% ( $n = 577$ ) of students' responses included anacrusis from chinned, non-word contexts, this premise seems to warrant further corroboration.

When presented with a whole song rather than song segments, the forty Grade Four students in this research were able to perceive musical units within that whole. The inherent musicality in these students' aural ability to perceive meaningful sound groupings brings into question the emphasis in elementary music education of patterns whose configurations are derived from beats and barlines. Anacrusis patterns that connect notes across beats and barlines, although plentiful in music, are rarely recognized. Although research indicates that we tend to hear patterns as sound clustered around stress points, rather than just the stress points themselves, (Bamberger & Brody, 1984; Uptis, 1987), this intrinsic, *perceptual* approach seems contrary to current practices in many music education classrooms. Unless teachers are sensitive to performing songs for children in a musical way, to selecting patterns from songs that maintain the naturally perceived figural relationships among sounds, and to avoiding letting the notation supercede the figural quality of patterns to study, music education may be at risk for training the inherent musicality *out* of children.

What is rhythm?...Rhythm, they imply [teachers], is inexorable strictness of time values, and they enforce it by counting, clapping, stamping irritably: one, two, three and four. But other musicians tell us just the contrary: their rhythm is the willful deviation from deadly strictness. (Sachs, 1953, p. 53)

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