L2 Acquisition and Yoruba Tones: Issues and Challenges[1]

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1. Introduction

In tonal languages, tone is crucial for understanding all aspects of grammar: phonology, morphology, syntax, semantics and pragmatics (for example, Akinlabi & Libermann 2000). Thus, the mastery of tones is crucial in the acquisition of tonal languages. In first language acquisition (L1), tone is one of the earliest aspects of the sound structure acquired by children (Ioup and Tansomboon 1987, Orie in progress). However, tone presents great difficulty for second language (L2) adult learners whose native language is non-tonal (e.g., Kiriloff 1969, Bluhme and Burr 1971, Shen 1989). For example, Gottfried and Suiter (1997) found that American English speakers had little trouble learning Mandarin vowel quality, but have little success in tonal acquisition. Yoruba foreign learners face similar problems. As Alao (1999) observed, French speakers find the acquisition of Yoruba tones quite challenging.

Based on acquisition data from a wide range of L2 American learners (K-12, undergraduate and graduate learners), this paper addresses issues and challenges in L2 acquisition of Yoruba tones. The specific issues and challenges identified are (1) first language interference, (2) narrow pitch range, (3) age, (4) learners' motivation for L2 acquisition and (5) tone teaching strategies.

In what follows, first, I describe the learner population; second, L2 tonal problems are laid out in detail; third, suggestions for overcoming the challenges are offered.

2. Learner population and language learning interests

This study draws on data collected from two sources. The first is data drawn from K5-12 learners at the Yoruba Language Summer Camp, an annual event jointly organized by Tulane University and the Yoruba Forum for the Advancement of Nigeria (YOFAN), a Yoruba Society in New Orleans. The learners in this group are ages 5-17. This group is referred to as GROUP 1 throughout our discussion. The second set of data is drawn from learners in two university-level beginning courses at Tulane University. All the learners in the second group are over 18 years. This latter group is identified as GROUP 2 in the paper.

Based on the tenets of the Goal-based approach (Folarin-Schleicher 1999), the courses are designed to cater for the general educational goals and the goals of the students for studying Yoruba. Because the parents of GROUP 1 learners are Diaspora Yoruba, learners in this group are interested in acquiring Yoruba as a heritage language. Therefore, this summer course is taught as a Language and Culture course with language learning activities centered around cultural topics such as greetings, respect, rites of passage (e.g., birth, naming ceremony, puberty, marriage, and death), dressing, music and dance, festivals and so on.

The learners in GROUP 2 fall into two categories: those who are interested in Yoruba/Africa for academic reasons and those whose interests lie in Yoruba religion and the variety of Yoruba spoken before and during colonization and the transatlantic slave trade. The section labeled 'Spoken Yoruba' is designed for the 'academic group,' and emphasis is laid on the acquisition of sounds, vocabulary, grammar and culture. All learning activities are arranged to enable learners acquire listening, speaking, reading and writing skills. On the other hand, the section for the 'religion group,' labeled "Colonial Yoruba,' is primarily designed to stimulate and sharpen listening and speaking skills using rhythmical language such as chants, poems and songs. Therefore, this section begins with a brief introduction to the structure of Yoruba after which emphasis is laid on the acquisition of traditional chants, poems and songs. Materials are primarily drawn from Warner-Lewis' (1994) and (1997) books on *Yoruba songs of Trinidad* and *Trinidad Yoruba*. Culture and history are also discussed in detail. Toward the end of the semester, reading and writing are introduced.

Data were collected from GROUP 1 and GROUP 2 learners over a period of five years (1996, 1998, 2000, 2002, 2004). GROUP 1 learners have at least one Yoruba-speaking adult at home from whom they constantly receive language input. GROUP 2 learners, on the other hand, receive input through four months classroom instruction only. In the following section, I describe the patterns observed in L2 tone acquisition by these two groups.

3. L2 tone patterns: problems
3.1 First Language Interference

First language interference is the first problem for L2 tone acquisition. Yoruba[2] has three tones: High (H) *rá* 'disappear,' Low (L) *rà* 'buy,' and Mid (M) *ra* 'rub' (Ward 1952, Bamgboṣe 1966a,b, Awobuluyi 1978). Phonologically, these tones vary in strength. The H tone is the most stable and the M tone is the weakest and most unstable (Akinlabi 1985, Pulleyblank 1986, Orie 1997, Akinlabi & Libermann 2000). For example, in vowel deletion contexts, H and L tones are retained but M tones are lost, as follows: *rí igbá* 'see a calabash,' which is realized as *rígbá* and *wo ĭgbá* 'look at egg plants,' which is realized as *wògbá*.

The relative strength of these tones is reflected in the acquisition pattern of tone by L2 learners. For example, English speakers recognize and use only H and L tones. At the initial stages of acquisition, when English speakers start using Yoruba tones, H and L tones are imposed on all nouns based on the English stress pattern, for example:

(1) Yoruba name   Adaptation by L2 learners
     Ṣọlá   Ṣólà
     Bòdé   Bódè
     Yéwandé   Yèwáńdè
     Títílayò̀   Tîtiláyò̀

When this problem is brought to learners' attention, an effort is made to mimic the Yoruba tonal structure but only H and L tones are still used. For example, *Ṣọlá* may be realized as *Ṣò̀lá* or *Ṣólá* and *Títílayò̀* may be pronounced as *Títílàyò̀* or *Títíláyò̀*. Error rates for H and L tones are 12% and 26.5% respectively. These results show that learners have less difficulty producing H tones.

Mid tones, on the other hand, are hardly acquired. With regard to perception, although L2 learners were able to discern the differences between H and L tones, they had a distorted perception of M-tones. Sometimes M-tones are identified as H tones, sometimes as L tones, depending on the context. The general tendency is to interpret utterance or word-initial M tones as H tones. Utterance or word-final M tones are frequently identified as L tones. M tone production tendencies mirror the perception patterns. For example, a word-initial M tone is realized as a H- tone (*owó* becomes *ówó* 'money') and a word-final M is produced as a L-tone (*Ṣégun* becomes *Ṣégùn* 'personal name'). M tone words such

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[2] The examples in this paper are given in Standard Yoruba orthography. In Yoruba orthography, *ẹ* = [ɛ], *ọ* = [ɔ], *Vn* = nasalised vowel, *ṣ* = [ʃ], *p* = [k͡p], an acute accent [´] = H(igh) tone, a grave accent [ˋ] = L(ow) tone, unmarked for tone = M(id) tone, a tone-marked nasal = syllabic nasal.

as *oko* 'farm' may be realized as *ókó* 'a non-existing word' or *òkò* 'stone/missile' in word-initial and word-final contexts respectively. Errors involving M tones are very high (over 97%).

Two language features in Yoruba and English are responsible for the difficulty described above. First, as noted earlier, lexical M tones are unstable. This instability is compounded by the fact that Yoruba has various syntactically-derived mid tones, for example, an L-toned verb becomes M when followed by noun object (rà ìwé becomes ra ìwé 'buy book'). Furthermore, the genitive marker is an M-toned vowel and is required when the head noun is Consonant-initial (*ilé Kúnlé* is realized as *ilé e Kúnlé* 'Kunle's house.' The complexity of the phonological and syntactic behavior of M tones makes it a difficult tone to acquire even in L1 acquisition (Orie in progress).

Second, L2 learners observe a crucial hindrance in acquiring M tones: 'H tones are like the pitch on a stressed syllable in English and L tones are like the pitch on unstressed syllables but the M tone has no equivalent in English.' From this observation, we see that learners are aware of the limitations imposed on them by their L1. This gap and the resulting acquisition limitations show that tone acquisition is subject to L1 interference (Shen 1989).

3.2 Narrow Pitch Range

As the preceding discussion shows, Yoruba has three tones for making lexical contrasts but only two of the three pitch range is recognized by American learners. Two additional pitch ranges are attested in derived context. For instance, a H tone after a L becomes a rising (R) tone (*òré* 'friend is realized as *òrě*). Likewise, a L tone after a H tone becomes a falling (F) tone (*Báyò* is realized as *Báyô* 'personal name'). None of the additional tones are acquired by American learners. On the basis of these tonal data, one can conclude that the pitch range of American learners is narrow compared with that of Yoruba native speakers. The narrow pitch range is the second problem for L2 tone acquisition.

3.3 Age

The third problem concerns age. As is well known, there is a 'critical period' for language acquisition. Lenneberg (1967) observed that once a learner reaches puberty, the attainment of native-like competence is virtually unattainable. That is, beyond the early teens, a learner will speak L2 with a foreign accent.

The acquisition of Yoruba tones by L2 learners provide strong evidence for the 'critical period' hypothesis. For example, young GROUP 1 learners (K5-Grade 5) performed better than the older learners.[3] With time, these learners recognized and use all the three lexical tonal pitches (H, L and M), but acquisition of contour tones (R and F) was still problematic. This finding demonstrates that age is a crucial factor in tone acquisition.[4]

3.4 Incentive for language learning

Language learning incentive presents the fourth problem. Kotey (1995) observed that L2 learners can possess near native tone proficiency if they can "parrot" the tone structure. GROUP 1 young learners have this parroting ability because they are naturally endowed to do so within the 'critical period' timeframe.

In contrast, older learners in GROUP 1 and GROUP 2 who are learning Yoruba for heritage or academic reasons have difficulty parroting tones. Interestingly, older learners learning Yoruba for religious reasons do not have the same problem. They put great effort into parroting chants and songs because they believe that the efficacy of religious materials lies in the accurate rendition of the texts.

The importance of specific incentives in language retention is highlighted in Mufwene's work. Specifically focusing on the issue of language endangerment and ecology, Mufwene (2001) argues that language endangerment is socio-economic driven. When two or more languages are in ecological competition, a language that is of greater significance socio-economically will win. Thus, in the US

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[3] This group (GROUP 1) also has the advantage of having at least a Yoruba-speaking parent.
[4] That is not to say that adults cannot acquire tone with native or near native proficiency. As shown by work such as Rvachew and Jamieson (1995), adults can acquire non-native phonemes if they receive long term training.

and other English-based colonial economic systems, native languages have been disfavored. Preservation efforts have been unsuccessful in America because 'the overall society is monolingual and the globalizing socio-economic system promotes uniformity.' Wales, in contrast, has succeeded in its revitalization efforts because there are socio-economic incentives for acquiring Welsh (Williams 2000).

Applied to L2 Yoruba learning in America, heritage and academic interests seem not to be sufficient incentives for acquiring tone with near-native accuracy but religion appears to provide greater incentive.[5]

3.5 Tone teaching strategies: rhythmic language as a crucial tool

The fifth problem involves tone teaching strategies adopted by teachers. Typically, tone is taught through an Intuitive-imitative approach. This approach assumes that a student's ability to listen to and imitate the rhythms and sounds of the target language will lead to the development of an acceptable threshold of pronunciation without the intervention of any explicit information. First, the teacher gives students tone-marked materials and asks the students to repeat after him or her. These repeated pronunciation drills are supposed to enhance word memorization and 'proper' tone use. Second, teachers who are grounded in Yoruba phonetics and phonology use simple pedagogical aids such as articulatory descriptions, minimal pairs, and explanations of the role of prosody in tone processes in enhancing learning. The didactic approach to teaching, described above, sounds simple and logical but in general, it is not very effective. Most often, it is a daunting, non-palatable and frustrating experience for adult L2 learners. Therefore, most L2 learners conclude very early that it is impossible to learn Yoruba tones.

In contrast, in L1 acquisition, tone (and language in general) is presented to Yoruba children gradually and leisurely. Language acquisition is not a 'rushed' event among the Yoruba. From birth, Yoruba mothers introduce their babies to language through sounds and movement packaged in accentuated rhythm. At this time, babies are considered 'helpless strangers with no language,' therefore communication with them is mainly through rhythmic phrases and movements called *pípasè fún* 'mother's footwork' (Iṣọla 1995) There is also *fífẹnu lùlù* 'mother's mouth drumming,' which may accompany rhythmic phrases and movements. Examples appear below:

(2)   Taa ló pa á lẹ́kún o?
        ìyá ẹ̀ ni
        ó gbọ́mú roko
        ó fẹ́rẹ̀ẹ́ dé

"Who made this child cry? It is the mother. She carried her breasts to the farm. She will soon be back"

(3)   Ọmọ méjì ń ki yín o
        Wọ́n ní ẹ lówó, ẹ bímọ
        Wọ́n ní ẹ ṣòwò, ẹ jèrè

'The twins greet you; they say you will be blessed with money and children; they say you will have abundance of profit in your trade'

These accentuated rhythms are sung all day, especially when babies are crying. In addition, the *oríkì* (praise poem) of the family linage is chanted to lull children to sleep (Iṣọla 1995). Together, these two strategies, which are used frequently in the first two years of life, constitute a powerful tool in introducing children to Yoruba tones very early in life. Given the frequency of the tonal input through chants and songs, children's perception of tones is fully developed long before they can talk.

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[5] There are exceptions. There are many English speaking learners (who are now Yoruba scholars) who have succeeded in parroting Yoruba tones. For example, Professor Karin Berber (University of Birmingham UK) taught Yoruba at the University of Ifẹ in the 1970s; she was also an actress in the Yoruba Popular Theater, Oyin Adejọbi. This case is different from the typical classroom-based cases examined here, however, because Professor Berber learned Yoruba within and outside classroom settings in Nigeria.

Consequently, by age 2.5-3, lexical tones are fully acquired; hence, they are able to map sound (word) and symbol (meaning) accurately. By age 4.5, most syntactic tones are used correctly (Orie in progress).

As mentioned previously, in teaching religion-based GROUP 2 American learners, a brief overview of grammar is given but grammatical structure is not emphasized. During the overview, L2 learners in this group make the same mistake as those who are studying Yoruba for heritage and academic reasons but once the focus is shifted to chants and songs, tonal problems are minimized. Following chant and song acquisition, grammar and conversation skills are taught again. Interestingly, greater improvement is observed in the tonal performance of learners.

Two questions arise from the observations described above. First, why are tonal errors minimized in chants and songs? One explanation is that chants and songs are a fixed formula, which does not involve the creativity needed to use a language. Therefore, tones in chants and songs are simpler than the tones of the spoken language and are easier for L2 learners to acquire.

The second question is: why is tonal performance in regular speech much improved after the acquisition of chants and songs? A natural explanation is that this strategy follows the natural trajectory for data presentation to children as mothers introduce their children to Yoruba during the first language acquisition expedition. This result therefore shows that teaching tones through chants and songs enhances Yoruba L2 tone acquisition.

3.6 Summary

Let us summarize the discussion so far. Yoruba tone acquisition presents several problems for L2 American learners. First is the first language interference, which causes L2 learners to impose the English stress pattern on words. Secondly, American learners have a narrow pitch range which makes mid and contour tones hard to acquire.[6] Age is the third factor—most university-level learners have passed the critical stage for native language learning, thus tone acquisition is challenging. Fourth, language learning motivation and incentive is crucial. Learners who acquire Yoruba for religious purposes are make a greater effort to 'parrot' tones more than learners whose goals are heritage and academic-based. Fifth, L2 learners do not overcome tone acquisition problems if tones are taught through vocabulary drills involving pronunciation and word memorization; however, when tones are first taught through chants and songs, tone errors are reduced.

In the following section, strategies for overcoming the identified challenges are discussed. First, the existing strategies are examined. Secondly, the shortcomings of these strategies are discussed. Thirdly, suggestions are made for overcoming the teaching problems.

4. Strategies for teaching tone
4.1 Existing teaching strategies

Kotey (1995) identifies three basic strategies for teaching tone—the No Tone strategy, the Classical strategy and the Proficiency oriented strategy.[7]

The No Tone (NT) strategy uses tone-marked materials in teaching L2 learners but does not insist on tone accuracy since tone is observed to be a problem for adult learners. Instructors who use this model focus on the acquisition of other aspects of grammar instead. Writing and silent reading are developed but listening and speaking skills are not. This strategy is not effective. It is at best suited for teaching a reading course, not a course designed to develop the four language skills.

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[6] A reviewer for this paper has noted that the narrow pitch range raises the probability of the role of binarity (for example, McCarthy and Prince 1990, etc.) in L2 tone acquisition. This would account for why learners are squeezing the three-way tonal distinctions into two. In particular, (i) it predicts that Yoruba MH, LH and LM words are produced as LH, and (ii) it predicts that Yoruba HL, HM and ML words are pronounced as HL. There are two potential problems for this suggestion. First, although the data show a tendency toward the predicted patterns but there are English-based boundary stress effects which override this tendency. Second, as noted in 3.3, younger learners are able to acquire the M tone, showing that they not limited by binarity. I leave the investigation of the role of binarity for future research.

[7] The reader is referred to Kotey (1995) for detailed discussion and evaluation of these strategies.

The Classical (CS) strategy uses the intuitive-imitative approach described earlier, an approach which assumes that a student has the ability to listen to and imitate the rhythms and sounds of the target language which will lead to the development of an acceptable threshold of pronunciation without the intervention of any explicit information. This approach crucially uses repeated pronunciation drills, which are supposed to enhance word and tone memorization. Sometimes, music is used to facilitate tone acquisition. The problem with this approach is that it focuses on lexical tones. Post-lexical or syntactic tones, on the other hand, are rarely taught.

The Proficiency Oriented (PO) strategy proposed by Kotey (1995) teaches post-lexical tones with materials that are not tone-marked; instructor supplies the tones in context and students learn tones intuitively. To effectively implement this strategy, the following are required: (i) native speaker instructor, (ii) L2 learner must have the ability to parrot, and (iii) daily classroom activity involving interactive conversation exercises. The PO strategy is the better than NT and CS because it teaches conversation (lexical and post-lexical) tones in a natural way. That is, adult learners, like children acquiring L1, learn tones using tone-marked free materials. As natural as this approach is, three problems arise for its implementation in America.

The first problem is that most Yoruba language programs in the US are not designed to allow daily classroom conversational interaction with the instructor. Second, there are no toneless instructional materials. Existing textbooks are tone-marked and instructors would rather not acquire the additional responsibility of generating toneless materials required for adopting the PO strategy. The third problem is how to overcome the problems which hinder adult L2 learners from parroting Yoruba tones like children (first language interference, narrow pitch range of American learners, age, and incentive for learning).

4.2 Proposed solution

How can we overcome the problems identified in the previous section? First, instructors must be native or near native Yoruba speakers so that they can provide learners accurate guidance for pronouncing Yoruba tones. Instructors must be knowledgeable in the workings of Yoruba tones, phonologically and syntactically, and they must be aware of L2 Yoruba tone acquisition patterns and problems discussed in this paper.

Second, the first year in the language curriculum should be a nurturing time acquisition-wise. During this first year of learning (especially the first semester), learners should be introduced to the Yoruba language and tones using rhythmic language, the traditional strategy employed by Yoruba mothers. The approach that I use involves memorization through chants and songs, critical thinking and group discussion. We begin by chanting or singing theme-oriented songs. For example, from the following songs, we learn about respect and its accompanying body language such as kneeling, prostrating, falling down in supplication:[8]

(4) Honoring mothers
    ìyá ni wúra iyebíye tí a kò le fowó rà
    ó lóyún mi fóṣù mésànán
    ó pòn mí fódún méta
    ìyá ni wúra iyebíye tí a kò le fowó rà

'Mother is like precious gold, she cannot be purchased with money; she carried my pregnancy for nine months; she carried me strapped on her back for three years; mother is like precious gold, she cannot be purchased with money.'

(5) Honoring parents
    ẹ bá mi kí bàbá kú iṣẹ́
    baba, bàbá, bàbá kú iṣẹ́ o
    ẹ bá mi kí màmá kú iṣẹ́
    mama, màmá, màmá kú iṣẹ́ o

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[8] These songs are commonly sung during festive occasions such as weddings, special school events such as graduations, and so on.

'Everybody join me in saying 'well done, good job' to father and mother'

(6) Honoring elders
    ẹ wólè fágbà o
    àgbà ní ń gbani lójó ̏ịṣòro

'Everybody fall before elders in supplication, elders provide refuge in times of difficulties'

The class as a whole learns the songs first and then we break into groups of twos or threes to practice. After that, each group presents a performance of the songs. Next, we discuss the meaning of the songs, focusing on vocabulary and grammar acquisition. The benefits of this strategy include, tone pronunciation improvement, vocabulary and grammar growth, confidence in speaking (since learners work together in groups) and understanding the appropriate use of culture-based body language.
If there is a Yoruba community around, the instructor should involve learners in Yoruba community-based activities such as weddings and naming ceremonies. Learning in this way will enrich and strengthen learners' knowledge of the language and culture.[9]

Third, once learners have gained some amount of confidence in using tones using the rhythmic language approach, conversation exercises should follow in the second half of the first semester. Instructors should meet learners at least two to three times a week. Simple sentences should be used in introducing learners to lexical and post-lexical tones. Lexical and post-lexical tones should be taught as different conjugations. For example:

(7) L tone verbs in different syntactic contexts
Imperative   Verb + short pro   Verb + long pro   Verb + obj. noun
a. gbà!   gbà mí   gba èmi   gba owó
'take; take me; take me emphatic; take money'

In teaching variation in tones, the role of tone should be likened to the conjugational function of affixes in Romance languages such as French or Spanish so that learners will know that tone variation is driven by grammatical considerations. For example, in (7), a verb retains a L tone if the verb is used as an imperative or if it is followed by a monosyllabic object pronoun. If a L tone verb is followed by a disyllabic object pronoun or a noun, it becomes a M tone. Most current Yoruba textbooks do not provide information on post-lexical tones. Instructors must be ready to fill-in these gaps. As discourse (lexical and post-lexical) tones are introduced, the instructors should remember the specific problems posed by M-tones for English-speaking learners.

In summary, as argued, tone can be taught with tone-marked materials. In the proposed model, learners are initially taught through rhythmic language in the first half of the semester, then, simple lexical and post-lexical tones are introduced through conversational exercises. The materials used for the exercises have lexical tone markings. Post lexical tones are supplied by the instructor. Once the learners are well grounded in tone use through rhythmic language, they will be more interested in learning tone by listening than learning through reading tone markings.

5. Conclusion

Tone has always been a challenge for L2 teaching and learning. Why is it the case that tone seems not to be a challenge for children in L1 acquisition in spite of the fact that children are learning from the scratch? Why is tone acquisition a daunting task for adults even though they have experienced language learning in acquiring their L1?

As shown in the preceding discussion, the issues and challenges in L2 acquisition of Yoruba tones by L2 American learners include (1) first language interference, (2) narrow pitch range, (3) age, (4) learners' motivation for L2 acquisition and (5) tone teaching strategies. To overcome these challenges,

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[9] Sometimes, dialectal variation may cause comprehension complications to arise, for example, if a learner encounters a speaker of a non-Standard variety. Therefore, learners should be aware of this potential problem.

first, as argued, instructors must be native or near native Yoruba speakers so that they can provide learners accurate guidance for pronouncing Yoruba tones. Instructors must be knowledgeable in the workings of Yoruba tones, phonologically and syntactically, and they must be aware of L2 Yoruba tone acquisition patterns and problems discussed in this paper. Secondly, introducing tone through the rhythmic language approach provides an L1-based nurturing context for L2 learners to learn Yoruba tones. Learners should also be exposed to tone use in natural discourse through participation in Yoruba community-based activities. Third, teaching lexical and post-lexical tones as conjugations derived from the same root or lexical item helps learners to see why a lexical tone may change based on its syntactic function. Put together, these strategies will enable the learner to develop a tone system that will form a solid basis in developing tone intuition which will enhance proficiency in listening, speaking, reading and writing skills.

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Selected Proceedings of the 36th Annual Conference on African Linguistics: Shifting the Center of Africanism in Language Politics and Economic Globalization

edited by Olaoba F. Arasanyin
and Michael A. Pemberton

Cascadilla Proceedings Project   Somerville, MA   2006

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Orie, Ọlanikẹ Ọla. 2006. L2 Acquisition and Yoruba Tones: Issues and Challenges. In *Selected Proceedings of the 36th Annual Conference on African Linguistics*, ed. Olaoba F. Arasanyin and Michael A. Pemberton, 121-128. Somerville, MA: Cascadilla Proceedings Project.

or:

Orie, Ọlanikẹ Ọla. 2006. L2 Acquisition and Yoruba Tones: Issues and Challenges. In *Selected Proceedings of the 36th Annual Conference on African Linguistics*, ed. Olaoba F. Arasanyin and Michael A. Pemberton, 121-128. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #1415.