The study investigates sound change of low level tone in Hai-lu Hakka, one of the Hakka dialects spoken in Taiwan, and makes a cross-linguistic comparison with a similar tonal merger in Cantonese (Mok & Wong, 2010) and Taiwanese (Yeh & Tu, 2010). Low level tone is found to merge into a low-falling tone in these Chinese languages, and language attrition and phonetic similarity are proposed to be a determining factor (Yeh & Tu, 2010; Yeh, 2011). Yeh (2011) explains that decrease of use frequency triggers language attrition among younger speakers, and the attrition causes mismatch between mental representation and phonetic implementation of low level tone. Low level tone and low-falling tone share low pitch height, so the similar phonetic feature determines the tonal change. In addition, Cantonese and Taiwanese participants show an asymmetric behavior between production and perception tasks: they pronounce low level tone mostly as a low-falling category, but they seldom misperceive low level tone as a low-falling one. Yeh (2011) shows that Hakka participants also tend to pronounce low level tone as a low-falling one, but the Hakka results do not include perceptual data. The effect of language attrition and phonetic similarity will be examined, and the production-perception asymmetry will also be considered. Three perceptual tasks, an AXB discrimination task, a tonal identification task, and a lexical task, and one production task are conducted on 32 Hakka participants in Taiwan, and they are classified into three groups in terms of age, use frequency, and language experience. The results show that Hakka speakers, across the three groups, merge low level tone into low-falling one not only in the production task, but also in the perception. Hakka tonal merger seems different from the Cantonese and Taiwanese cases, and the effect of language attrition and phonetic similarity cannot simply account for the cross-linguistic difference. The Hakka results are further analyzed, and the Hakka tonal merger seems to involve some other factors such as homonymy and co-articulation. In some cases, low level tone and low-falling tone can define two homonyms, which can be derived from historical changes. For example, the word 傅 fù22 ‘master’ is pronounced as a low level tone, but has a low-falling homonym 傅 fù31 ‘surname’. In other cases, low-level tone is co-articulated as low-falling tone in non-final position, which behaves like tone sandhi. For example, low-level word 護 fù22 ‘to protect’ is pronounced as low-level tone in final position as in 保護 po22-fù22 ‘to protect’, and is pronounced as low-falling tone in non-final position as in 護士 fù31-sì22 ‘nurse’. The homonym and co-articulation factors exacerbate the perceptual difficulty, and then may account for the Hakka tonal confusion in the perception results.