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## ABSTRACT

E-learning has been adapted for widespread application in language education. The role of technology is not as an optional tool but required element in learning and teaching; therefore, the evaluation of educational software and websites has become more important. However, studies in the past years were focused on developing e-learning tools for mainstream languages such as English, French or Chinese. Endangered or less commonly taught languages received minor attention. The attempt of this study was to develop a website—the Yami language learning center for the endangered language, through the evaluation of students' perceptions. Also, the research sought to collect the learning needs from different directions to promote and further develop the site. This paper was divided into three stages. (1) In the first stage, two male and five female graduate students were the initial users of the site. The results explored the cultural information that was expected to be provided in the website before they used it. In addition, pictures which heightened the users' attraction were included. Practice exercises were required the most among the users because they could use it effectively to assist their learning. Before the second stage, the feedback from the users' opinions of the first stage were answered and put in action. The site was more developed and more complete than in the previous stage. (2) During this stage, the site was introduced to native speakers of the Yami language. The quantitative inquiry found the website received positive feedback from 116 junior high school students. Furthermore, the second and third grade students showed higher interest in using the website. In the qualitative design, five of these students were invited to use all the functions on the website. The results firstly showed the participants hoped the site would add practice section on word meaning and spelling. Moreover, the students would like to practice speaking skills, so they anticipated the section of "Demonstrate" would produce sound tracks in coordination with the text reading. Finally, the native speaker users expressed the sentiment that the existence of the Yami language learning center was meaningful for them in that they would never forget their own language. (3) Finally, in the third stage, four students participated by using the website to assist Yami learning. Especially, the site was viewed as requiring a preview for the class. It found that students did not adjust to a top-down design but preferred a bottom-up strategy to understand the language elements in a unit. Because website evaluation is time-consuming, the results could not completely reflect the needs of the students. However, it provides lots of useful comments for further developing and fine-tuning the on-going e-learning project. The study suggests other directions and target users for future studies of needs analysis.

## 摘要

電腦輔助教學已在語言教育蔚為風潮，科技的角色不再是個選擇，而必須使用於教學與學習，相繼而來的議題就是教育者要如何評估網站的品質；然而在過去的相關的文獻中，較著重於主流語言，而少數或是瀕危語言的電腦教育發展卻少之又少，此論文研究的目的即從學生的觀點出發，來評估與發展一個專為瀕危語言設計的網站計畫——蘭嶼達悟語學習中心；另外，也希望研究中可經由訪談儘可能蒐集分析學生的學習需求，提供網站修改方向，進而讓此網站達到提供高品質的學習環境。因此，本研究分為三個不同階段：(1) 在第一階段中，網站由七位研究生，以第一批使用者的身分來評估網站，結果發現，學生們在瀏覽網站前，最期待它可以提供文化方面的資訊，另外，圖片和練習遊戲也是學生最大的需求，前者可以引起學生學習的興趣，後者可有效幫助學生複習學過的課程。在進入第二階段之前，學生的需求經過計畫成員的努力過後而美夢成真，網站整體畫面和功能要比之前進步許多。(2) 在第二階段內，計畫成員將改善過後的網站推出了臺灣，朝向外島蘭嶼的當地人邁進，於此，研究分為兩個部份。第一個部份將設計好的量化問卷，由 116 位蘭嶼國中學生回答，結果顯示網站獲得了大部分學生的認同，尤其，二、三年級的學生較一年級的學生，願意使用網站，尤其是字典的部份獲得好評。而第二個階段的另外一個部份，以質化的角度來蒐集更多學生的需求，首先，學生希望網站能增加多一點字義和拼音方面的練習，再者，因為學生喜好放學後練習說雅美語，所以他們希望在“學習示範”裡可以像課文閱讀一樣有聲音示範，最後，這些學生表示，這個網站的存在是相當有意義的，就算他們以後到外地唸書或工作，只要進入這裡，他們就不會忘掉自己的母語。(3) 四位研究生參與了第三階段研究，網站分別被視為複習和預習的功能。首先在複習方面，學生要求網站可以提供更多元的遊戲練習，而不是只有著重於文法上的題目；在預習的角度上，學生發現他們不太習慣網站的自上而下 (top-down) 的編排方式，原因可能是他們喜愛的策略是自下而上 (bottom-up) 的學習，習慣先認識結構或是句型，再來才是整個情境或對話。

網站的評估是極為耗時，所以本研究並無法蒐集全面性的學習需求，但是，它的確提供網站寶貴的意見，在未來的研究上，建議可從本研究尚未著眼的角度，繼續從事需求分析使網站邁向高品質的未來。

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