

出國報告（出國類別：其他國外會議）

**出席(ACLL 2013 & ACTC 2013)2013  
亞洲語言學習與課室科技國際學術研  
討會議**

服務機關：國立聯合大學

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出國期間：102 年 4 月 23 日~102 年 4 月 29 日

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## 摘要 (200-300 字)

第三屆亞洲語言學習(The Third Asian Conference on Language Learning 簡稱 ACLL)及第三屆亞洲課室科技(The Third Asian Conference on Technology in the classroom 簡稱 ACTC)研討會由[國際學術論壇學會](The International Academic Forum 簡稱 IAFOR)主辦，研討會地點是日本大阪。此次研討會主題是[轉移範例:知性回應] (Shifting Paradigms: Informed Responses) 和[創新影響:科技和你](The Impact of Innovation: Technology and You)。爲使研討會內容豐富且符合主題，主辦單位特別邀請 2 位相關領域的專家學者做了 2 場次的專題演講。10 個時段(10 sessions)，80 場次共 237 篇研究論文的發表，百分之五到十的優秀文章將收錄在 IAFOR 期刊中。本次發表之「學生對課堂上使用即時反饋系統的看法研究」(Student' s perceptions of using immediate response system in class)，研究專題符合大會主題內容且達到教學相長之功效，發表中學者所提意見，對未來教學之改善有極大的幫助。

**關鍵字：**即時反饋系統；語言教學；學習成效

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## 一、目的

此次出國主要目的是發表論文、將自己研究成果與大家分享。除此之外，並聆聽其他發表人的研究成果、心得、經驗及想法，交換意見與心得，作為修正自己將來研究路徑及教學方法的參考，希望增廣見聞將所得知識應用結合在教學上以提升教學成果。參加此次會議發表人主要來自韓國、日本、台灣、菲律賓、新加坡、印度、馬來西亞等亞洲國家，也有少數幾位來自美國及澳洲的發表者。此行除了了解亞洲各國學生學習語言，尤其是學習英語的情形，也了解這些國家將科技應用在語言教學上的普遍性及困難之處。

## 二、過程

4 月 25 日至 4 月 28 日

第三屆亞洲語言學習(ACLL)及第三屆亞洲課室科技(ACTC)研討會，於 4 月 26 至 28 日在 Ramada Osaka 舉行專題演講(Keynote Speech)及併行小組討論會(Parallel Discussions)。主辦單位是[國際學術論壇學會](IAFOR)，此學會成立的主要目的是提供跨領域研究者，例如學術理論家、教育行政工作者、教師、及教育科技工程師等，聚會交換意見的機會，以提升跨文化覺識及擴展國際間教學資訊的交換。今年的研討會主題分成兩大類:分別是[轉移範例:知性回應] (Shifting Paradigms: Informed Responses) 和 [創新影響:科技和你](The Impact of Innovation: Technology and You)。大會主席是 Steve Cornwell 及 Barbara B. Lockee。

研討會第一天及最後一天是大會安排的自費行程—神戶及京都之旅，因為時間安排及經費因素，報告人沒有參加這些行程。第一天 4 月 25 日先查好如何從所下榻的旅館到會議舉辦地點梅田(Ramada) 的路線，先到會議現場查看發表場地及所需設備，估算及準備第二天所需的時間及所需攜帶的東西。

26 日早上參加開幕式，此次研討會有兩位主席，開幕典禮時大會主席 Steve Cornwell 教授，任職於 Osaka Jogakuin University，在大阪市住了 18 年，他表示大阪雖然沒有東京大，但是大阪有美食及著名景點例如 Osaka Castle 可以參觀，首先他歡迎大家來大阪除了參加研討會外，還可以享受美食及了解日本當地文化。另一位主席 Barbara B. Lockee 是 Virginia Technology 的教授，他表示語言教學與科技看起來好像是兩種不相關的東西，實際上我們應該探討他們之間的交集—結合科技與語言教學，以提升教學成效。她歡迎舊雨新知共同參與這個有意義且有趣的活動。主席介紹完歡迎詞之後，緊接著日本鼓表演，鼓聲震耳欲聾、頗能振奮人心、激勵大家精神。

26 日早上有兩場 Keynote speeches:

- (1) Considerations for Implementing Technology in Language Education 主講人 Thomas Robb  
[使用科技在語言教學上的省思] (演講內容如下)
- (2) YouTube Use in Colleges in Japan and USA: A Comparative Look 主講人 Insung Jung

(3) [日本與美國大學使用 You Tube 內容教學的看法比較] (演講內容如下)

26 日下午分成兩個發表時段(Session I & II)，每一時段有 8 場次同時進行，每場次 3 個發表人。論文分成五大主題：跨領域語言學習(ACLL-Interdisciplinary)，語言學習-語言教育(ACLL-Language Education)，跨領域課室科技(ACTC-Interdisciplinary)，跨領域語言或課室科技(ACLL/ACTC-Interdisciplinary)，課室科技-使用平板電腦或手機學習(ACTC-Mobile Learning)。

27 日有三個發表時段、一個研習營時段及一個海報時段，每一時段有 8 場次同時進行，每場次 3 個發表人。論文分成七大主題：跨領域語言學習(ACLL-Interdisciplinary)，語言學習-跨文化溝通(ACLL-Cross-Cultural Communication)，跨領域課室科技(ACTC-Interdisciplinary)，跨領域語言學習或課室科技(ACLL/ACTC-Interdisciplinary)，語言學習-語言學(ACLL-Linguistics)，語言學習-語言教育(ACLL-Language Education)，課室科技-創新的語言教學法(ACTC-Innovative Language Teaching and Learning Methodologies)。

兩場研習活動主題為：語言學習-跨文化溝通(ACLL-Cross-Cultural Communication) 及課室科技-將電子教學融入課堂語言教學(ACTC-Integrating E-learning in Classroom Based Language Teaching)。

海報時段以跨領域語言學習或課室科技(ACLL/ACTC-Interdisciplinary)為主題。

28 日有四個發表時段，每一時段有 7 場次同時進行，每場次 2-3 個發表人。論文分成十二大主題：跨領域課室科技(ACTC-Interdisciplinary)，語言學習-學習策略(ACLL-Learning Strategies)，課室科技-創新的語言教學法(ACTC-Innovative Language Teaching and Learning Methodologies)，語言學習-雙語論(ACLL-Bilingualism)，語言學習-個別差異(ACLL-Individual Differences)，語言學習-語言教育(ACLL-Language Education)，課室科技-多媒體(ACTC-Multimedia)，跨領域課室科技(ACTC-Interdisciplinary)，跨領域語言學習(ACLL-Interdisciplinary)，跨領域語言學習或課室科技(ACLL/ACTC-Interdisciplinary)，語言學習-世界英語(ACLL-World Englishes)，語言學習-第一語言習得(ACLL-First Language Acquisition)。

以下是報告人聆聽的場次內容摘要及心得，以語言學習為主，分成三大部分：專題演講、小組討論、報告人口頭報告：

(I) 專題演講：

(1)首場 ACLL 的專題演講，講題是[使用科技在語言教學上的省思] (Considerations for Implementing Technology in Language Education)由 Kyoto Sangyo University 的英文系主任 Thomas Robb 主講，Robb 教授投注在電腦輔助語言教學有 40 年之久。他認為數位設備可以有效運用在課堂教學上，但是使用網路教學前必須考慮到下列因素：學

校的科技設備、可以使用的軟體程式、追蹤使用情形的能力、校內的人際互動、以及校方科技技術的支援等。他自己是使用網路資源 Yahoo 網頁自學中文成功的例子。但是他表示使用網路資源學習，學習者的學習意願強弱是學習成功與否的主要關鍵。本專題演講可做為聯合大學新校區設置語言教學設備之參考，更可提供聯合大學在運用科技與網路資源輔助語言教學之重要參考，對此次之參與受益良多。

(2)第二場次 ACTC 的專題演講由 International Christian University 的 Insung Jung 教授主講 [日本與美國大學使用 YouTube 內容教學的看法比較] (YouTube Use in Colleges in Japan and USA: A Comparative Look)，YouTube 的快速成長已經改變一個人如何使用及上傳 YouTube 的影音內容。這些 YouTube 上的資訊對學生及教育者的生活影響非常廣泛，但很少研究者研究如何有效地把 YouTube 上的知識內容應用在教學情境中。他研究發現學生與教師使用 YouTube 的方式及目的不盡相同，不同文化背景的人對創造及使用 YouTube 作為教學內容的看法也不一樣。國內對於使用網路資源大都僅限於取用而很少回饋，藉由該場專題演講對於使用 YouTube 資源在兩個國家使用看法的比較，可做為國內使用之參考，提昇取用及回饋之意願，達到更有效之網路資源使用達到協助語言教學之成效。

(II) 小組發表 (Parallel Sessions) 主題都與語言教學(ACLL)有關:

(1) [大學生的寫作挑戰] (Writing Challenges for the Undergraduates: A performance Analysis and a Literature Review on SIL domains)，發表人 Boon Yih Mah 來自馬來西亞，他表示對馬來西亞大學生來說英文寫作確實是一大挑戰，鮮少學生能用英文清楚正確地重述文學作品的內容及含意。

(2)[直接教學法到沉浸式教學法對成年人學習第二語言的影響] (From Direct Method to Immersion in Adult L2 Learning: Hidden Aspects)發表人來自 Canada 的 Natalia Dankova，其研究發現教學方法只是影響成年人學好第二語言的因素之一，個人的學習方式、態度及需求性可能也是影響學習成效的重要因素。

(3)[外語學習中可以教學的時刻] (A teachable Moment for Unexpected Errors in ESL/EFL Contexts) 發表人 Shinian Wu 任職於 美國 Grand Valley State University，是我研究所同學，20 幾年不見這次碰面倍感親切。他曾擔任過美國 ETS 考題撰寫工作多年，經驗告訴他學生常犯的錯誤經常成為 ETS 考題的一部份。所以，他強烈建議在教學過程中老師隨時都該提醒學生所遇到的任何錯誤。他認為錯誤是可以隨時隨地教的，不應該侷限在課堂上。

(4)[外語學習問卷開發](The Development of the Conceptions of Foreign Language Learning Inventory)發表人來自台灣仁德專科學校應外系主任 Yu-Fang Yang，他描述外語學習問卷開發的過程及分類。

- (5)[日本 Tsukuba 大學圖書館資訊系大學生對課堂外使用英文的動機及態度研究](Motivation and Attitudes Toward Learning and Using English Outside the Classroom Environment: A Study of the Library and Information Science Undergraduates at the University of Tsukuba) 發表人 Patrick Lo 以問卷方式詢問學生學習英文的動機，其研究發現學生課堂外使用英文的機會不多，相對地學習動機也不強。
- (6)[解開教學科技之謎](Demystifying the Transformative Use of Technology in the Classroom) 發表人馬來西亞檳城 Sains 大學的教授 Rozhan M. Idrus，他認為科技是傳遞遠距跨國界訊息的工具，線上同步課程可以提供多方面、跨領域、或跨國界的影音資料，我們應該借助科技改變課堂學習環境。
- (7)[內容為主的批判意識教學](Content Based Instruction for Critical Consciousness: An Authentic Response to Wicked Global Problems)發表人 Lisa Donohoe Luscombe 是美國加州 Monterey Institute of International Studies 的課程設計師，他認為教學除了教語言形式及意思之外，更應教學生如何使用真實合宜的知識處理現實世界中棘手的問題。換句話說，教學除了教語文之外，更應重視內容的傳遞與批判思維的建立。其研究發現以內容為主的教學(Content-based Instruction)，學生比較有動機學習新知、所學到的知識可以記得比較長久一點、專業知識考試的得分比較高、而且也比较有就業機會。更重要的是他們對世界上棘手的問題比較有批判意識，比較能提出合適的解決方法。
- (8)[英文為外語的學習者對字彙學習的後設認知策略](Metacognitive Strategies of ESL Learners in Vocabulary Learning) 發表人 Zaleha Esa 任教於馬來西亞國立伊斯蘭大學，其研究發現 ESL 學習者學習單字會先跟母語做意思連結，決定其重要性與否，然後在記上下文關係及用法。
- (9)[我喜歡的學習型態是什麼] (What is My Learning Style Preference?) 發表人馬來西亞 University Malaysia Sabah 的老師 Sabariah Abd Rahim，他的研究發現大部分馬來西亞學生最喜歡的學習型態是使用網路資源的跨國學生互動學習，最不喜歡的是傳統的文法翻譯。因為學生認為與其他國家的學生互動非常有趣，他們可以學到書本之外的東西或是文化習俗。
- (10)[英語母語人士的優勢:世界英語及 NEST/NNEST 二分法](The Propriety of the Native Speaker: World Englishes and the NEST/NNEST Dichotomy) 發表人 Kevin Kato，任教於日本 Kinjo Gakuin University，他認為依據學生對使用科技產品的喜好度，及世界英語的學習環境，學習資源及內容快速增加，可惜的是語言準確度也相對降低。Wi-Fi 及智慧型手機的普及，若能有效提升學生學習的意願及主動性，外語學習成果將因科技輔助有大幅度提升。

### (III)報告人論文發表:

題目[學生對課堂上使用即時反饋系統的看法研究] (Student' s Perceptions of Using Immediate Response System in Class) ,

#### 論文摘要

學習動機、熱誠及努力是語言學習成功的主要因素。頻繁的師生互動可以吸引學生注意力及鼓舞學習熱誠。因此如何有效地激勵學生學習動機是教學上很重要的一環。本研究主要探討學生對使用及時反饋系統輔助教學以提升教學成效的看法。九十位台灣北部某一科技大學二三年級的學生分成兩組，其中一組，實驗組使用及時反饋系統教學，使得師生互動增加，另一組控制組接受傳統教師講授方式上課。學期初及學期末所有參與者都接受前後測考試，學期末施以問卷詢問學生看法，結果顯示學生喜歡課堂上使用及時反饋系統教學，前後測成績也有顯著差異。學生表示使用及時反饋系統教學因為有答題時間限制，雖然有壓力但相對地使他們更專心於課堂上所做的活動及上課內容，也因為老師可以及時提供正確答案，使他們能更清楚地記住老師所教的東西，而得到更好的學習成果。

為了使發表過程生動活潑，報告人帶了 IRS 機器準備展示給大家看，只可惜因為電腦與執行程式不相容無法操作，只好口頭說明如何在課堂上使用 IRS 教學。聽眾約有 30 人左右，大家都對課堂上使用即時反饋系統感興趣，反應相當熱烈，只可惜無法當場給聽眾使用，實屬美中不足。討論時有聽眾反應目前大部分學生都使用智慧型手機，如果廠商可以修改一下程式，讓學生直接使用手機操作答案，除了可以降低添購設備的經費外，也比較方便攜帶不容易遺失。

29 日回台灣結束此次旅程。

### 三、心得及建議事項

2003 年在曼谷 Asia CALL 的國際研討會上首次碰到 Thomas Rodd，當時他談到如何利用線上資料學習中文。這次他應邀作專題演講，談論網路資訊如何運用在語言教學上。而他自己的中文也進步很多，他謙虛的表示這一切都得歸功於網路資源。然而沒有強烈的企圖心及毅力只依靠網路資源要精進一種外語實非易事。以科技設備而言台灣學生真的非常有福氣，有機會使用最新最快速的設備，真的應該好好珍惜。

此行最大的感受是日本人的英文溝通能力實在有待加強。加上日本沒有路標所以找路買車票找到目的地就浪費掉很多時間及精力。相較之下台灣的國際化比日本好多了。學生的英文溝通能力也比日本學生強，日本學生只要聽到我們說英文馬上飛奔離開。所以日本行學會說簡單幾句日文是需要的。學生學習英文的動機普遍不高，以日本而言因為翻譯本短短兩三星期就可上市，雖然價格比原版貴兩倍以上，學生還是選擇買翻譯本。這種情形跟國內是一樣的，雖然買了原文課本但是學生鮮少閱讀，沒有大量且廣泛的閱讀要提升語文能力是行不通的。至於使用科技輔助語言學習，台灣不會輸

其他國家只是大家都覺得效果都不如預期的佳。就以 IRS 來說，中東國家已經使用智慧型手機作為學生輸入選項的遙控器。使學生可以隨時上網做英文考題增加接觸機會，這方面的技術台灣尚在開發中，這項功能應該是我們將來增添設備時必須要列入考慮的因素之一。

#### 四、攜回資料名稱

大會手冊及論文摘要





from Japan  
to Britain in 2013  
Why not join us?

Friday Session 2: 15:15-16:45

Friday Session 2: 15:15-16:45

Room: Sakura A

ACLL - Interdisciplinary

Session Chair: Stephen Dalton

0099 – 15:15-15:45

*The Latent Effects of Subtle Racism: A Case Series on Language-Delayed Bicultural Children and their Immigrant Mothers in Taiwan*

Sa-hui Fan, National Taichung University of Education, Taiwan

Hao-pai Ni, Da-chien General Hospital, Taiwan

0391 – 15:45-16:15

*Intercultural Training in Foreign Language Education: Using Video to Develop Cultural Awareness and Cultural Self-awareness of Japanese College Students*

Nonko Nakagawa, Ryutsu Kagaku University, Japan

0477 – 16:15-16:45

*More than just Volunteering: How Service Learning Can Create Cross-Cultural Communities*

Stephen Dalton, Osaka Gakuin University, Japan



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Friday Session 2: 15:15-16:45

Room: Sakura B

ACLU/ACTC - Interdisciplinary

Session Chair: Patrick Lo

0408 – 15:15-15:45

*Student's Perceptions of Using Immediate Response System in Class*

Hsiao-fang Cheng, National United University, Taiwan

Nina Chiulan Lin, Takming University of Science and Technology, Taiwan

0359 – 15:45-16:15

*The Development of the Conceptions of Foreign Language Learning Inventory*

Yu-Fang Yang, Jen-Teh College of Medicine, Nursing and Management, Taiwan

Chin-Chung Tsai, National Taiwan University of Science and Technology, Taiwan

0037 – 16:15-16:45

*Motivation and Attitudes Towards Learning and Using English Outside the Classroom Environment: A Study of the Library and Information Science Undergraduates at the University of Tsukuba*

Patrick Lo, University of Tsukuba, Japan

Friday Session 2: 15:15-16:45

Room: Kashi

ACTC - Mobile Learning

Session Chair: Doiron Gilles

0252 – 15:15-15:45

*College EFL Learners' Interaction with the Smart Applications and its Implication for Designing Future Mobile-Assisted Language Learning*

Yeonhee Kwon, Chung-Ang University, Korea

0224 – 15:45-16:15

*The Development of an Integrated Mobile Learning Model with Collaborative Problem-solving Method to Enhance Undergraduate Student's Inquiring Mind*

Kotchakorn Saisuwat, Chulalongkorn University, Thailand

0234 – 16:15-16:45

*ipads in the University Classroom: Educational Change in The United Arab Emirates*

Doiron Gilles, Zayed University, UAE

Tamim Rana, Zayed University, UAE

Colburn Linda, Zayed University, UAE

Attallah Fida, Zayed University, UAE

Dada Robin, Zayed University, UAE

## **Student's Perceptions of Using Immediate Response System in Class**

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### **Abstract**

Motivation, enthusiasm, and diligence might lead to successful learning outcome. Frequent teacher-student interactions in class attract student's attention to what has been taught, and at the same time, motivate their learning enthusiasm. Therefore, how to motivate learners to work hard and efficiently has become an important issue in teaching. In this study, the latest electronic gadgetry – Immediate Response System (IRS) is employed to facilitate learning. The purpose of this study is to investigate student's perceptions of using IRS to facilitate learning. Ninety students from a university in Taiwan participated in this study. They were divided into two groups, instructed with both IRS and traditional method but in reverse order. All the participants received a pretest and a posttest. At the end of the study, a survey was conducted to explore students' perceptions of the two different teaching methods. The results showed that all the participants enjoyed using IRS in class because they could interact more with the teacher and their peers. However, they felt pressurized and competitive in IRS classes, which forced them indirectly to pay more attention to what has been taught. Because of the immediate feedback, they could memorize the newly learned information more easily and longer, resulting in better learning outcome. Based on the results, some pedagogical implications are suggested.

### **Introduction**

Using technology to facilitate teaching and enhance student's learning outcome has become increasingly pervasive in Taiwan. Every classroom is equipped with at least a computer, an overhead projector, a broadcasting system, and most important of all, a wireless internet access. How much do technologies facilitate teaching and how much do students benefit from it? Does the use of technology in class substantially enhance student's learning outcome? In theory, current students with the application of Wi-Fi access and smart phones

ought to outperform those of ten years ago. However, in practice, a high percentage of students do not attend to lectures and hardly participate in classroom discussions. They can look up the related information right away in class; therefore, the majority of students do not read the assignments thoroughly before attending classes. As a result, a significant proportion of students perform poorly on tests based on material taught during a given semester. It is an important issue worth researching and pondering.

In view of the above-mentioned problem and the authors' concern about student academic achievement, an instructional strategy with the application of Immediate Response System (IRS) was designed to improve learning. The strategy is based on learning theory of contingency management presumably applicable to classroom instruction (Sulzer & Mayer, 1972). In this paper, a newly-developed computer program together with a cellphone-like gadget, IRS, is used to provide immediate feedback so as to increase teacher-student and student-student interactions in class. It is hoped that students will perform better with the help of IRS in terms of interactions and overall learning gains. Two research questions will be addressed:

- (1) Does the new gadget-- IRS significantly promote student's learning performance?
- (2) What do student's perceptions of using IRS in class?

It is hoped that the research results can be used as a reference for teachers who plan to integrate technologies into their teaching.

## **Literature Review**

Skinner (1958) maintained that teachers should use immediate reinforcement procedures to teach academic skills. He believed that it is important to use the confirmation of the student's correct responses as positive reinforcement in a considerable research supporting the idea that living organisms learn better and faster when their behavior is properly reinforced than otherwise. In other words, feedback plays a pivotal role in improving performance in a variety of situations.

The results of previous studies with reference to immediate feedback showed that providing feedback had positive effects on learning performance. However, not only the timing of providing feedback but also the way of providing feedback might significantly influence the retention of the correct answers. Haemmerlie (1985) found that an after-each-item feedback condition more negatively affected performance, preference, and recall than did feedback provided after the examination. O'Neill, Rasor, and Bartz (1976) divided their participants into four groups: (1) no feedback, (2) feedback after the test had been completed, (3) immediate feedback after each item and (4) immediate feedback after each item with the student searching for the correct answer until it was found. After the completion of a 50-item

intelligence-type test, the student immediately took the same test again to assess retention. The three feedback groups improved on the retest more than no feedback group. Comparison of the three feedback groups showed differences in degree of improvement, the group having feedback after test completion doing better than the two groups with immediate feedback after each item. Such finding was striking to most teachers who assume that students might perform better when giving the feedback immediately.

Applied studies using actual classroom quizzes and real learning materials have usually found immediate feedback to be more effective than delayed. Dibattista, Mitterer, & Gosse (2004) used the Immediate Feedback Assessment Technique, a commercially available answer form for multiple-choice testing, to provide immediate feedback for each item in an answer-until-correct format and permit the earning of partial credit when the student's initial response is incorrect. Reaction to this system was extremely positive. Students said that it was easy to use and contributed to their learning and they indicated a strong desire to use the technique for all MC tests. The study done by Epstein & Brosvic (2002) also illustrated that students tested with this new technique showed significantly greater retention than did students tested with traditional forms. They indicated that immediate feedback during testing caused significantly higher anxiety and resulted in significantly higher listening scores than in the control group, which had no feedback. However, repeated feedback did not affect the test anxiety and listening scores.

Drawing on the results of the previous studies, it is necessary to look at the results of using IRS to help students retain correct answers. The present study was undertaken as an initial study in a series designed to assess retest effects. The increase in test scores usually found on retest would seem to be greatest if we could retest subjects immediately after the initial test. Such a possibility is impractical and undesirable in a clinic setting and would also be unduely fatiguing for most young children; however, colleges students who could concentrate and persist on learning, would produce better outcome. Therefore, in this study the IRS system will be employed to investigate if the student's learning outcome improved substantially, i.e., if the use of IRS affects the retention of the correct answers. Furthermore, student's perceptions of using this new gadget would also be explored.

Drawing on the results of the previous studies, it is necessary to look at the results of using IRS to help students retain correct answers. Therefore, in this study the IRS system will be applied to investigate if the participant's learning effects rise substantially.

The purpose of this study is to investigate if the type of feedback, after-each-item feedback or after-the-exam feedback, together with the use of IRS system or a paper-and-pencil method given to the participants during or after a multiple-choice test would affect the retention of the correct answers.

The present study was undertaken as an initial study in a series designed to assess retest effects. The increase in test scores usually found on retest would seem to be greatest if we could retest subjects immediately after the initial test. Such a possibility is impractical and undesirable in a clinic setting and would also be unduely fatiguing for most young children; however, colleges students, we could concentrate and persist on learning, would produce better outcome.

## **Method**

### **Participants**

Ninety students from Takming University of Science and Technology, participated in this study. They were divided into two groups, Group A and B, each containing 45 students with similar language abilities. The course they took is Meeting, Incentives, Conferences, and Exhibition (MICE).

### **Procedures**

Table 1 counterbalanced design

	Test 1	Test 2
Group A	Paper& pencil	IRS
Group B	IRS	Paper & pencil

The two tests were pilot-studied by a group of similar abilities and found of the same difficulty level. In Test 1, Group A received a traditional paper-and-pencil test, whereas Group B took the test by using IRS. Right after completing all the test questions, the teacher checked and explained the test questions. Before class was dismissed, the participants took the test again. While taking Test 2, Group A took the IRS test but Group B took the traditional paper-pencil test. Right after the second test, all participants completed a survey concerning their viewpoints on using IRS in class. The test result was calculated with SPSS and a paired-*t* test was conducted to see if the types of tests would significantly affect the retention of the correct answers.

### **Results**

Based on classroom observations and discussions, it was hypothesized that the immediate positive reinforcement of each student's correct responses in classroom discussions might have a significant effect on his/her posttest scores. The results could be interpreted in two parts: statistical results and survey results.

Paired-*t* test revealed that the mean score for IRS is 25.86 whereas that of traditional

paper-pencil test is 21.87. Pearson's coefficient factor lies in -0.162. When  $p < 0.1$ , the two-tailed paired- $t$  value is 0.109, showing that the effects of using IRS and traditional method is slightly different. Looking at the gain scores, no matter what kind of teaching method is used in class, students did learn knowledge to a certain level. Even though students gained more while using IRS, but the effect did not reach the significant level. In terms of learning performance and knowledge retention, participants did perform slightly better in the IRS class. That's the responsibility of teachers, working hard to find ways to improve student's learning outcome. As long as students want to learn, they can learn anywhere. However, 7 participants performed negatively in either IRS or traditional posttest.

Table 2 Negative Learning Gains in the Posttest

Nickname	IRS gains	Traditional gains	Opinions
A	-10	+20	Talkative, absent-minded, usually missing first period of the two-hour classes
B	-14	+52	Shy, like to think, probably cheating
C	-10	+36	Usually missing the first period of the two-hour classes
			Shy, like to think, probably cheating
D	+20	-12	Outgoing, challenging, like to take risks-- Guessing
E	+52	-16	Outgoing, challenging, like to take risks-- Guessing
F	+16	-8	Shy but attentive
G	+16	-26	Shy but attentive
H	+36	-4	Outgoing, challenging, like to take risks-- Guessing

A one-one-one interview was conducted right after the data were calculated. Three students, A, B and C, scored negatively in the IRS posttest, but earned extremely high points in the traditional posttests. Students A and C explained that they were late for class and failed to attend the first period of the two-hour class. Worse than that, most of the time they talked with their classmates in class without paying attention to the teacher's explanation. They confessed that it was easier to cheat in a traditional test than in a time-constraint IRS test. Therefore, they earned negative points in the IRS posttest but substantially high points in the traditional test. Student B explained that she preferred to read questions on paper instead of monitor. She was not used to answering questions in a limited period of time. She liked to read and answer questions at her own speed. Therefore, she scored substantially high in the traditional posttest.

Another 5 students gained negative scores in the traditional posttest but performed extremely well in the IRS posttest. Students D, E, and H stated that they were outgoing, responsive, and challenging. They enjoyed competing in a pressurized learning environment and showing off

themselves, which indirectly forced them to be more concentrated on and attentive to what had been taught. Student F and G were introvert and focused on learning new things. Through interaction, they could learn better and the sense of success promoted their learning motivation. They did not like to take paper-and-pencil tests because they felt bored and impatient easily. In other words, they could not persist in learning new things in a longer period of time. Consequently, they outperformed in the IRS test.

In addition to the statistical results on student's learning achievements and one-on-one posttest interviews, the student's perceptions concerning using IRS in MICE class are also examined. The survey results could be categorized into five factors: learning performance, interaction, preference, retention and motivation. More than 70% of the participants stated that they became more attentive, concentrated, and motivated in IRS classes, resulting in better learning effects and higher achievements. They preferred IRS because it provided more interaction between teachers and their peers, leading to a better memory and understanding. Through interaction, they clarified the difficult parts and memorized the key points well. They preferred item-after-item explanation to explanation after the completion of the whole test. When asked if they preview the lessons before attending the class, half of the participants said they would preview the lessons no matter what kind of method would be used in class. They would feel under pressure no matter what kind of teaching method was adapted. To summarize, the overall trend for IRS classes is positive and definite in terms of learning performance, interaction, motivation, knowledge retention and preference.

## **Conclusion**

In a EFL learning situation, cooperative learning activities or group discussions sometimes might lead to chaos and out of control. However, in a class using IRS learning situation becomes a student-centered and teacher-controlled learning environment. Teachers can monitor student's learning performance and control the length of time and the period for a transition. Based on the result of this study, IRS actively engages learners in the correction of initially inaccurate responses. It plays a crucial role in the acquisition of information, aids incorporation of accurate information into cognitive processes, and permits retrieval of correct answers during retention tests. Students evaluated in traditional method have significantly lower retention and repeat more initial mistakes on subsequent examinations than students tested initially with the IRS system. Students scored somewhat higher on scales measuring ease of understanding and ease of completing response requirements, perceived fairness of and preference for an immediate response procedure, and enhanced involvement in the test-taking process.

Participants indicated that the display of reports did not lower debilitating effect of anxiety

but enhanced students' intrapersonal anxiety and probably improved their attention during the tests. In other words, immediate result might help learners to increase attention and involvement in the learning process.

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## Appendix

### Survey results

Item	Question	Mean
1	I feel more attentive to the teacher's explanations in class when using IRS to show the answers in the retest.	3.3
2	I usually preview the lessons in order to do better in an IRS exam situation.	2.4
3	In order to choose the correct answer before the teacher displayed her answer, I feel more concentrated in class.	3.2
4	I think the after-each-item explanations and discussions can promote teacher-student interaction.	3.3
5	I think the after-each-item feedback makes me memorize the key points better.	3.4
6	I think showing the percentage of students who answer the question correctly will drive me to be more competitive in my class.	3.2
7	I think knowing the percentage of students who answer the question correctly	2.1

	will not affect my learning motivation.	
8	I think after-the-exam discussions or explanations will make me memorize the key points better.	3.0
9	I think showing the test results and ranking immediately right after the exam gives me a lot of pressure.	2.1
10	I think providing immediate feedback can promote my learning motivation.	3.2
11	I think providing immediate feedback can increase my learning outcome.	3.2
12	I think a paper-and-pencil test will yield better learning outcome.	2.0
13	I think explanations right after the paper-and-pencil exam will make me memorize the key points more clearly.	2.1
14	I prefer after-each-item immediate feedback.	3.3
15	I prefer after-the-exam immediate feedback.	1.9
16	I prefer paper-and-pencil test, because I don't need to interact with others and none of my classmates will know how well I did on the exam.	3.3
17	I have never previewed any lessons before attending the classes.	3.6