

科學教育研究所 書報討論
九十九學年度第二學期

上課時間：每星期四下午1410-1600

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壹、課程設計及方向：

本學期的書報討論內容，著重在認知神經科學的應用、數位（行動）學習及其在科學教育上的應用、科學學習的概念、以及BFLPE等主題。藉由學術演講、專題報告與討論的方式，來熟悉當前與科學教育、認知心理、數位學習相關的研究與最新趨勢。這學期的專題討論除了包含邀請之學術演講外，亦提供研究所學生針對其碩博士論文作專題報告的大好機會，請大家切勿錯過！

貳、課程內容及時間：

| 日期 | 主講人 | 講題 | 主持人 |
|----------|---------------------------|--|------------|
| 02/24/11 | 張俊彥 顏妙璇 | First Meeting and 課程大綱 (A Future University Smart Classroom) (眼動研究) | 張俊彥 顏妙璇 |
| 03/03/11 | 林緯倫(佛光大學心理系) | 區分發散性與收斂性創造力的不同影響因素 —淺談藝術與科學創意的分野 | 顏妙璇 |
| 03/10/11 | 李俊仁(台灣師大心輔系) | 認知科學在閱讀、數學與科學學習的研究 | 顏妙璇 |
| 03/17/11 | 吳嫻(中央大學認知神經科學所) | The interactive magnitude computation underlying numerical,spatial, and temporal processing | 顏妙璇 |
| 03/24/11 | 陳德懷(中央大學網學所) | 數位學習研究與實踐一些想法 | 吳心楷 |
| 03/31/11 | 張葶葶(陽明神經科學研究所) | Notation dependence of symbolic number processing in the human inferior parietal cortex – evidence from functional magnetic resonance imaging study | 顏妙璇 |
| 04/07/11 | NARST | 圖書館資料收集 for the First Assignment 認知神經科學與科學教育 | 顏妙璇 |
| 04/14/11 | 曾志朗院士 (中研院語言所/陽明大學神研所) | TBA (to be announced) | 顏妙璇 |
| 04/21/11 | 宋曜廷(台灣師大心輔系) | 分流政策對學生的影響： 大魚小池和見賢思齊效應的檢驗 | 張俊彥 |
| 04/28/11 | 期中考 | 繳交第一次報告 | 顏妙璇 |
| 05/05/11 | 蔡今中(台科大數位學習與教育研究所) | Conceptions of Learning | 張俊彥 |
| 05/12/11 | 黃國禎(台科大數位學習與教育研究所) | 行動與無所不在學習在科學教育的應用 | 張俊彥 |
| 05/19/11 | 蔡介立(政大心理系) | 語境脈絡在中文閱讀與眼動控制扮演的角色 | 顏妙璇 |
| 05/26/11 | Ecsite annual conference | 圖書館資料收集 for the Second Assignment 數位(或行動)學習與科學教育 | 張俊彥 |
| 06/02/11 | 博士班報告 | 卓益安、吳百興(博士班,1小時) | 張俊彥 |

| 日期 | 主講人 | 講題 | 主持人 |
|----------|--|-------------------------------------|-----|
| 06/07/11 | 碩士論文計畫書發表I 1:30-4:00 註:1.碩士班每位同學分配30分鐘 (20分鐘報告, 10分鐘討論) 2.此為預排報告順序, 實際發表順序將於4月18日正式申請發表截止日後, 再做調整。 | 1.婉女勻 2.建勳 3.冠雲 4.文宏 5.姍姍 | 顏妙璇 |
| 06/16/11 | 碩士論文計畫書發表 II 1:30-4:00 | 1.又亭 2.永在 3.文鑫 4.貞慧 5.湘虎 | 張俊彥 |
| 06/23/11 | 碩士論文計畫書發表III 1:30-4:00 | 1.憶芳 2.雪碧 3.惠伶 4.佩琪 5.堯琮 繳交第二次報告 | 張俊彥 |

參、助理負責事項：

- 一、演講一週前（星期四中午），將演講海報張貼公告。
- 二、演講前應準備好演講者所需之所有視聽設備如投影機、幻燈機、電腦、液晶投影機、麥克風……等，同時負責演講場地相關事宜之安排與準備（包含錄影、演講者茶點、簽演講費收據…）。
- 三、提供在場每人一頁的演講摘要。

肆、學期報告：本學期共兩次報告，應根據演講者的內容與圖書館相關資料的搜尋，針對兩個主題分別寫一篇整合性的心得報告。報告格式請使用APA格式，可參考林天佑教授所寫的APA格式第五版（<http://www1.mcu.edu.tw/Apps/SB/data/20/APA.pdf>），並以不超過5頁為原則。此份作業請以email繳交，第一份作業請繳交給顏老師，第二份作業給張老師。繳交時主旨為「書報討論第一（或二）次報告」與檔名為學號_姓名.doc或學號_姓名.pdf。

伍、學生論文發表注意事項：

- 一、應準備並提供在場每人一頁的論文摘要。
- 二、發表時間共三十分鐘（至少含五至十分鐘的討論與發問時間）。
- 三、記得事先邀請你的指導教授前來指導，以免孤軍奮戰。
- 四、論文口頭發表之建議事項：
 1. 服裝以整齊為原則，短褲拖（涼）鞋是休閒裝扮。
 2. 要勇敢的面對觀眾，別對著投影片、黑板、或地板滔滔不絕。
 3. 事先準備好一頁的講授大綱（投影片或其他媒體），讓聽眾知道你將發表的內容。
 4. 若使用投影片或幻燈片發表，視聽媒體之字的大小宜適中，記得要事前準備妥善。
 5. 圖表及顏色都是引人入勝的要素。
 6. 與發表內容相關的小故事或個人經驗，都是防止打瞌睡的秘密武器。
 7. 事前演練是成功的關鍵！

（亦可參考以下所附之AV SHOWMANSHIP from Heinich, R. al. (2002). *Instructional Media and Technologies for Learning*, 7th Edition, Prentice-Hall; ISBN 01-030536-7. pp. 70-71)

陸、成績評量：

| | |
|-------------------|-----|
| 課堂參與度（請記得簽到） | 30% |
| 課堂發問與討論（請每週值日生紀錄） | 10% |
| 第一份報告 | 30% |
| 第二份報告 | 30% |

AV SHOWMANSHIP Classroom Presentation Skills

GETTING READY

Planning

An effective presentation begins with careful and thorough planning. These guidelines apply to classroom instruction as well as to more formal presentations.

1. *Analyze your learners.* What are their needs, values, backgrounds, knowledge levels, and misconceptions?
2. *Specify your objectives.* What should students do? How much time do you have to present? Limit your objectives and content to the time available.
3. *Specify benefits and rationale for the learners.* Why is the message important for them? If you cannot answer this question, perhaps you should not give the presentation.
4. *Identify the key points to cover.* Brainstorm the main ideas. Put them on note cards or stick-on notes. Most presentations will have from five to nine main points.
5. *Identify the subpoints and supporting details.* Again use note cards or stick-on notes. Try to limit yourself to five to nine subpoints for each main point.
6. *Organize the entire presentation in a logical and sequential order.* One organizing strategy is this:

Preview/Overview: Tell them what you are going to tell them.
 Present: Tell them.
 Review: Tell them what you told them.

Rehearsing

1. Use keyword notes, not a script. Print keywords on an index card. Never read from a script; written language is different from spoken language.
2. Mentally run through the presentation to review each idea in sequence.
3. Do a standup rehearsal of your presentation. Try to practice in the room where you will be presenting or one similar to it.
4. Give a simulated presentation, idea for idea (not word for word), using all media. (Note: This is not usually done for classes but for formal presentations.)

5. Practice answers to questions you anticipate from learners.
6. Videotape (or audiotape) yourself or have a colleague sit in on your rehearsal and give you feedback.

Setting Up

1. Check your equipment in advance of your presentation. Change the arrangements, if necessary, to meet your needs. When the equipment is in place, make sure everything operates properly.
2. For slides and video projection, place the screen front and center (Figure A).
3. Place the overhead projector screen or flip chart at a 45-degree angle and near the corner of the room. Place the overhead screen to your right if you are right handed. Place flip chart to your left if you are right handed. Each should be reversed if you are left handed (Figure B).
4. Position objects being studied in the front and center. Remove them when they are no longer being studied.

PRESENTING

Anxiety

1. Nervousness and excitement are normal before and during a presentation. Some anxiety and concern are important for an enthusiastic and dynamic presentation.
2. Proper planning and preparation should reduce your anxiety.
3. Harness your nervous energy and use it positively with body movement, supporting gestures, and voice projection.
4. Breathe slowly and deeply. Your cardiovascular system will slow down and ease the symptoms of anxiety.

Delivery

1. Stand up when presenting. When you stand, you and your message command more attention.
2. Face the learners. Place your feet 10 to 12 inches apart and distribute your weight equally on both feet. Your knees should be unlocked, with hands out of your pockets and

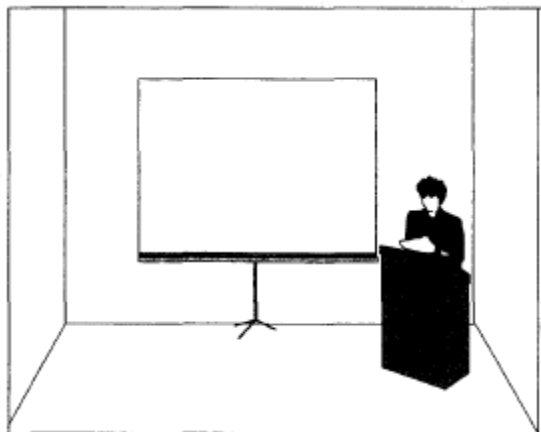


Figure A

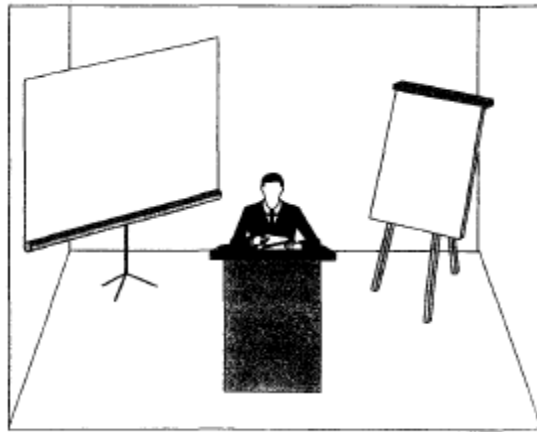


Figure B

- arms at your side. Facing the learners gives you eye contact with them and allows them to see your facial expressions.
- When using chalkboards or wall charts, don't talk with your back to the learners. In this position you lose eye contact and may not be heard as well. Write on the chalkboard, then talk (Figure C).
 - Stand to one side of the lectern (if you must use one). Stepping to the side or in front of it places you on more personal terms with the learners. It allows you to be seen and to be more natural.
 - Move while you speak. Instructors who stand in one spot and never gesture experience tension. Move and gesture, but don't overdo it.

Voice

- Use a natural, conversational style. Relate to your learners in a direct and personal manner.
- Don't read your presentation. Don't read from your overheads or handouts. If part of your presentation is just information transfer, give the students a copy and let them read it.
- Use vocal variety. A monotone is usually caused by anxiety (rehearsal should help this). Relax with upper and lower body movements.
- Use a comfortable pace. When you are anxious, your rate of speaking usually increases. Relax and speak in a conversational tone.
- Speak up so you can be heard in the back of the room. If you speak up, your rate will slow down—solving two problems! Ask people in the back row if your volume is appropriate.
- A pause (silence) after a key point is an excellent way to emphasize it. The more important the idea, the more important it is for you to pause and let the words sink in before going on to the next idea.

Eye Contact

- Don't speak until you have established eye contact with your audience. Eye contact will make your presentation similar to a one-on-one conversation.

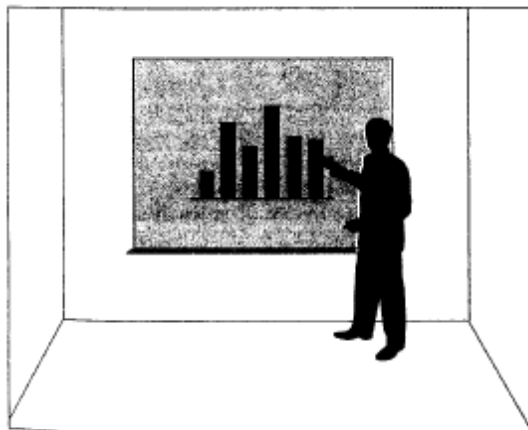


Figure C

- An excellent way to keep your learners' attention is to look eye to eye at each person for at least three seconds. Don't quickly scan the learners or look at the back wall, screen, or notes for long periods of time.
- Maintain eye contact with your learners. If you must write something on a flip chart, overhead, or chalkboard, stop talking while you write.

Gestures

- Use natural gestures. Learn to gesture in front of a class as you would if you were having an animated conversation with a friend.
- Don't put your hands in your pockets. Don't clasp your hands behind your back. Don't wring your hands nervously. Don't play with a pen or other object.

Visuals

- Visuals help to attract and hold learners' interest. People like to see keywords, diagrams, and drawings.
- Reinforce and clarify verbal concepts with visuals. A picture is worth a thousand words.
- Make key points memorable, and help the listener remember your message. Most people remember visuals longer than they remember words and numbers.
- Visuals lose their effectiveness if overused. A guideline is to use about one visual per minute.
- In designing visuals:
 - Use headlines only.
 - Eliminate unnecessary words.
 - Write large so words can be read from the back of the room.
 - Use drawings and diagrams whenever possible.
 - Limit to 36 words per visual (6 lines of 6 words each).
- After using visuals, redirect learners' attention back to you:
 - Shut off the overhead projector when there is a lengthy explanation and there is no need for the audience to see the transparency. Don't turn the machine off and on so frequently that it becomes distracting (30 seconds is a guideline).
 - Turn a flip chart page to a blank one when you are finished referring to it. If the flip chart pages have been prepared in advance, leave blank pages between each prepared sheet so the next prepared page will not show through.
 - Erase any writing on the chalkboard or whiteboard when you no longer need it.
 - Break up slide presentations by inserting a black or translucent slide at points where an explanation is needed or where questions will be asked or answered.
 - Show or demonstrate an object by revealing it when needed and covering it when it is no longer in use. Otherwise, your audience will look at the object and be distracted from your presentation. Avoid passing an object around the audience. Instead, walk around the audience and show the object to everyone briefly and make it available at the end of the presentation.