

國立清華大學 臺灣語言研究與教學研究所

106 學年第二學期 語言與大腦 課程大綱

● 課程簡述

本課程旨在引導學生比較以 ERP 所進行的語言運作實驗之溯源分析。課程內容包含雙語運作、年老與不同性別、詞彙語意處理、詞彙感知與再認、語句統整五個課題。

● 課程說明

本課程所涵蓋的內容由五部分組成：

- (a) 雙語運作的腦；
- (b) 年老與不同性別的腦；
- (c) 進行詞彙語意處理的腦；
- (d) 進行詞彙感知與再認的腦；
- (e) 進行語句統整的腦。

● 課程評量方式

- (a) 每週課前閱讀研究文獻中有關大腦處理部分 (30%)
- (b) 參與討論 (20%)
- (c) 期末報告 (完成一個 ERP 實驗數據進行溯源之分析) (50%)

- 每週上課前必須讀完（該篇文中提到的大腦相關部位）的文章
（課程中將於該週上課時進行隨堂測驗，以檢視閱讀成效）

(1) 雙語運作的腦

Week 1:

Native vs. second language discrimination in the modulation of the N400/N400m

作者: Anurova, Irina; Immonen, Perttu

EUROPEAN JOURNAL OF NEUROSCIENCE 卷: 45 期: 10

頁碼: 1289-1299 出版日期: MAY 2017

Week 2:

Semantic relatedness and first-second language effects in the bilingual brain: a brain mapping study

作者: Khateb, Asaid; Pegna, Alan J.; Michel, Christoph M.; 等.

BILINGUALISM-LANGUAGE AND COGNITION 卷: 19 期: 2

頁碼: 311-330 出版日期: MAR 2016

(2) 年老與不同性別的腦

Week 3:

Brain source localization of MMN, P300 and N400: Aging and gender differences

作者: Tsolaki, Anthoula; Kosmidou, Vasiliki; Hadjileontiadis, Leontios; 等.

BRAIN RESEARCH 卷: 1603 頁碼: 32-49 出版日期: APR 7 2015

(3) 進行詞彙語意處理的腦

Week 4:

Hemispheric differences in strong versus weak semantic priming: Evidence from event-related brain potentials

作者: Frishkoff, Gwen A.

BRAIN AND LANGUAGE 卷: 100 期: 1 頁碼: 23-43

出版日期: JAN 2007

Week 5:

N400 during lexical decision tasks: a current source localization study

作者: Silva-Pereyra, J; Rivera-Gaxiola, M; Aubert, E; 等.

CLINICAL NEUROPHYSIOLOGY 卷: 114 期: 12 頁碼: 2469-2486

出版日期: DEC 2003

Week 6:

N400 Effect When a Semantic Anomaly is Detected in Action Representation. A

Source Localization Analysis

作者: Balconi, Michela; Vitaloni, Silvia

JOURNAL OF CLINICAL NEUROPHYSIOLOGY 卷: 31 期: 1

頁碼: 58-64 出版日期: FEB 2014

Week 7:

Is the N400 category-specific? A face and language processing study

作者: Caldara, R; Jermann, F; Arango, GL; 等.

NEUROREPORT 卷: 15 期: 17 頁碼: 2589-2593

出版日期: DEC 3 2004

Week 8:

Frontal and posterior sources of event-related potentials in semantic comprehension

作者: Frishkoff, GA; Tucker, DM; Davey, C; 等.

COGNITIVE BRAIN RESEARCH 卷: 20 期: 3 頁碼: 329-354

出版日期: AUG 2004

Week 9:

A Large N400 but No BOLD Effect - Comparing Source Activations of Semantic Priming in Simultaneous EEG-fMRI

作者: Geukes, Sebastian; Huster, Rene J.; Wollbrink, Andreas; 等.

PLOS ONE 卷: 8 期: 12 文獻號碼: e84029

出版日期: DEC 31 2013

Week 10:

Parametric analysis of event-related potentials in semantic comprehension: evidence for parallel brain mechanisms

作者: Dien, J; Frishkoff, GA; Cerbone, A; 等.

COGNITIVE BRAIN RESEARCH 卷: 15 期: 2 頁碼: 137-153

Week 11:

Spatiotemporal Signatures of Lexical-Semantic Prediction

作者: Lau, Ellen F.; Weber, Kirsten; Gramfort, Alexandre; 等.

CEREBRAL CORTEX 卷: 26 期: 4 頁碼: 1377-1387

出版日期: APR 2016

Week 12:

ERP correlates of superordinate category activation

作者: Schumacher, Rahel; Wirth, Miranka; Perrig, Walter J.; 等.

INTERNATIONAL JOURNAL OF PSYCHOPHYSIOLOGY 卷: 72 期: 2

頁碼: 134-144 出版日期: MAY 2009

(4) 進行詞彙感知與再認的腦

Week 13-1:

From Perception to Recognition Memory: Time Course and Lateralization of Neural Substrates of Word and Abstract Picture Processing

作者: Maillard, Louis; Barbeau, Emmanuel J.; Baumann, Cedric; 等.

JOURNAL OF COGNITIVE NEUROSCIENCE 卷: 23 期: 4 頁碼: 782-

800 出版日期: APR 2011

Week 13-2:

Phonological aspects of word recognition as revealed by high resolution spatio-temporal brain mapping

作者: Connolly, JF; Service, E; D'Arcy, RCN; 等.

NEUROREPORT 卷: 12 期: 2 頁碼: 237-243

出版日期: FEB 12 2001

Week 14-1:

Separating phonological and semantic processing in auditory sentence processing: a high-resolution event-related brain potential study

作者: D'Arcy, RCN; Connolly, JF; Service, E; 等.

HUMAN BRAIN MAPPING 卷: 22 期: 1 頁碼: 40-51

出版日期: MAY 2004

Week 14-2:

Cortical processing of phonetic and emotional information in speech: A cross-modal priming study

作者: Diamond, Erin; Zhang, Yang

NEUROPSYCHOLOGIA 卷: 82 頁碼: 110-122

出版日期: FEB 2016

Week 15-1:

Rhyme processing in the brain: An ERP mapping study

作者: Khateb, Asaid; Pegna, Alan J.; Landis, Theodor; 等.

INTERNATIONAL JOURNAL OF PSYCHOPHYSIOLOGY 卷: 63

期: 3 頁碼: 240-250 出版日期: MAR 2007

Week 15-2:

Differential Phonological and Semantic Modulation of Neurophysiological Responses to Visual Word Recognition

作者: Drakesmith, Mark; El-Deredy, Wael; Welbourne, Stephen

NEUROPSYCHOBIOLOGY 卷: 72 期: 1 頁碼: 46-56

出版日期: 2015

(5) 進行語句統整的腦

Week 16-1:

Separating the visual sentence N400 effect from the P400 sequential expectancy effect: Cognitive and neuroanatomical implications

作者: Dien, Joseph; Michelson, Charles A.; Franklin, Michael S.

BRAIN RESEARCH 卷: 1355 頁碼: 126-140 出版日期: OCT 8

2010

Week 16-2:

Sentence integration processes: An ERP study of Chinese sentence comprehension with relative clauses

作者: Yang, Chin Lung; Perfetti, Charles A.; Liu, Ying

BRAIN AND LANGUAGE 卷: 112 期: 2 頁碼: 85-100

出版日期: FEB 2010

Week 17-1:

Neural activity associated with metaphor comprehension: spatial analysis

作者: Sotillo, M; Carretie, L; Hinojosa, JA; 等.

NEUROSCIENCE LETTERS 卷: 373 期: 1 頁碼: 5-9 出版日期:
期: JAN 3 2005

Week 17-2:

Localization of syntactic and semantic brain responses using
magnetoencephalography

作者: Service, Elisabet; Helenius, Paeivi; Maury, Sini; 等.

JOURNAL OF COGNITIVE NEUROSCIENCE 卷: 19 期: 7 頁碼:
1193-1205 出版日期: JUL 2007