### Topic 4: Factors affecting L2 learning

#### Conceptual objective:
The students will be able to enumerate those factors connected to L2 learning success.

#### Procedural objective:
The students will explore those factors that have promoted their success as language learners, making a chart and comparing it with other people.

#### Attitudinal objective:
The students will develop a critical attitude towards the causal correlations between factors and learning success.

#### Attitudinal objective:
The students will realize the need for further research.

A. Internal/ Individual

1. Age
2. Aptitude
3. Motivation and Attitude
4. Personality
5. Cognitive Style
6. Hemisphere specialisation
7. Learning Strategies

B. External

a. 1. Learning and Teaching Contexts
   2. Teaching a second language: Effects
      2.1. Input and interaction: How these elements affect learning

#### A.1. AGE AND L2 LEARNING

- **Effects of age on RATE of second language learning**

  KAdults are superior to children in rate of acquisition
  KOlder children learn more rapidly than younger children
  KW ith regards to morphology and syntax, the adolescents do best, followed by the adults and then the children
  KGrammar differences diminish over time, and children begin to catch up, but adults outperform children in the short term
  KWhere pronunciation is concerned, adults do not always progress more rapidly than children do

Thus: adults learn faster than children, and this is more applicable to grammar than pronunciation, although in the case of formal learning situations adults seem to do better even in the pronunciation area. It is not clear when children start to catch up.
• **Effects of age on the acquisition of native speaker proficiency**

Confictive results:
Some people say that under the right conditions adults can achieve native-like proficiency in pronunciation.
Other people believe that even very advanced learners lack some of the linguistic abilities of native speakers.
Thus: it is possible that under ideal circumstances learners who start after puberty can learn to produce speech and writing that cannot easily be distinguished from that of native speakers.
In fact starting early is no guarantee that native-speaker abilities will be achieved, even in the most favourable learning situations.

• **Effects of age on learners’ second language achievement**

KAge has very little (if any) effect on the process of acquisition.
The effect may be a minimal one in the case of grammar – remember Interlanguage developmental stages-, but perhaps a little bit more significant in the case of pronunciation.
KIn naturalistic settings, learners who start as children achieve more native-like accent than those who start as teenagers or adults.
KIn formal contexts this does not happen, perhaps because the amount of exposure needed for the age advantage of young learners to emerge is not enough.
KEven if younger is better in the long run, it does not apply to the acquisition of English literacy skills: older is better, as they benefit from prior literacy experience (learners who already know how to read and write in their first language).

• **Conclusions**

1. adults have an initial advantage where rate of learning is concerned, particularly in grammar. They will eventually be overtaken by children who receive enough exposure to the L2. Though this is less likely to happen in formal/instructional contexts (!!).
2. Only child learners are capable of acquiring native accent in informal contexts, even though some children who receive enough exposure still do not achieve a native-like accent.
3. The critical period for grammar is around 15 years. Under this period learners may acquire native grammatical competence.
4. Children are more likely to reach higher levels of attainment in both pronunciation and grammar than adults.
5. The process of acquiring a L2 grammar is not substantially affected by age, but pronunciation may be.

<table>
<thead>
<tr>
<th>INTERNAL TO LEARNER</th>
<th>AGE &amp; OTHER FACTORS (success is more probable if age is connected to other factors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTITUDE</td>
<td>(also applies to L2 ctxs)</td>
</tr>
<tr>
<td>MOTIVATION</td>
<td>(also applies to L2 ctxs)</td>
</tr>
<tr>
<td>SEX</td>
<td>• Girls are better, particularly if early arrivals</td>
</tr>
<tr>
<td></td>
<td>• No effect found yet</td>
</tr>
<tr>
<td>EXTERNAL TO LEARNER</td>
<td></td>
</tr>
<tr>
<td>TEACHING</td>
<td>• Formal teaching is recommended to avoid fossilization</td>
</tr>
<tr>
<td></td>
<td>• Supra-segmental and segmental training</td>
</tr>
<tr>
<td></td>
<td>• Authentic input and phonological feedback</td>
</tr>
<tr>
<td></td>
<td>• Input enhancement techniques</td>
</tr>
<tr>
<td></td>
<td>• Focus-on-form teaching</td>
</tr>
<tr>
<td></td>
<td>• Having developed L1 literacy skills</td>
</tr>
<tr>
<td>L1 LITERACY</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: summary of how age influences different learning aspects in L2 and foreign language contexts.
So which would be the perfect age?

**WHY?**
(Different explanations for age-related differences)

1. Sensory acuity (ability to perceive and segment sounds)
2. Neurological (lateralization and cerebral maturation)
3. Affective-Motivational factors (children more strongly motivated and perhaps less anxious about communicating)
4. Cognitive factors (adult rely on inductive learning abilities while children use their LAD)

   1. Input (??)(Lgg input received by children is superior (?) to that of adults, but the latter ones experience more negotiation of meaning)

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**Table 2: some cues for teaching to different ages**

<table>
<thead>
<tr>
<th>Teaching children (Small doesn't mean simple)</th>
<th>Teaching Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use gesture, intonation, demonstration, actions and facial expressions</td>
<td>• Use gesture, intonation, demonstration, actions and facial expressions</td>
</tr>
<tr>
<td>• Use children's communicative needs to provide language and play games</td>
<td>• Use tasks, either real or invented</td>
</tr>
<tr>
<td>• Use real tasks</td>
<td>• Play games (without provoking embarrassment)</td>
</tr>
<tr>
<td>• Introduce narratives</td>
<td>• Introduce narratives and other types of discourse</td>
</tr>
<tr>
<td>• Foster their imagination and creativity</td>
<td>• Foster diverse groupings</td>
</tr>
<tr>
<td>• Foster interaction and talk</td>
<td></td>
</tr>
<tr>
<td>• Organize teaching around themes</td>
<td></td>
</tr>
<tr>
<td>• Formal grammar teaching might not prove beneficial</td>
<td>• Formal grammatical analysis is useful</td>
</tr>
<tr>
<td></td>
<td>• Deductive grammatical patterns promote faster learning</td>
</tr>
<tr>
<td></td>
<td>• Focus-on-form teaching is recommended</td>
</tr>
<tr>
<td>• Introduce indirect phonetic teaching</td>
<td>• Encourage phonetic analysis and reflection</td>
</tr>
<tr>
<td>• Provide phonetic feedback</td>
<td>• Provide frequent phonetic feedback</td>
</tr>
</tbody>
</table>
A2. APTITUDE
Not very much research, because it is something Teachers are powerless to alter.

It consists of four sub-components (according to Carroll, 1991)

- **a. phonetic coding ability**
  (capacity for sound discrimination and to code foreign sounds in such a way that they can be later recalled)
  it varies between individuals, but this variation does not correlate with language learning success.

- **b. Associative memory**
  (ability to make links or connections between stimuli and responses, for example native language words and foreign language equivalents, and to develop the strength of such bonds).
  Nowadays associative memory is not so important, and the capacity to memorize more auditorily complex material and the capacity to impose organization and structure on the material are more powerful predictors of lgg learning success

- **c. Grammatical sensitivity**
  (ability to understand the contribution that words make in sentences. It emphasizes recognition of function, rather than explicit representation)

- **d. Inductive language analytic ability**
  (ability to examine a corpus of language material and from this to notice and identify patterns of correspondence and relationships. Ability to identify pattern, particularly in verbal material, whether this involves implicit or explicit rule representation)

Three sub-components (according to Skehan, 1998)

- **a. auditory ability**
- **b. linguistic ability**
- **c. memory ability**

**a. Phonemic coding ability**
Important at beginning levels of language learning: converting acoustic input into what might be termed processable input, failure in this area may mean no input to deal with.
The more phonemic coding abilities succeed with the acoustic stimulus that the learner is presented with, the richer the corpus of material that will be available for subsequent analysis.

b. Language analytic ability

Central stage of information processing: capacity to infer rules of language and make linguistic generalizations or extrapolations. Here it is where rules develop and restructuring occurs.

c. Memory

Concerned with acquisition of new information, with retrieval, and with the way the elements are stored, probably redundantly and formulaically. This component correlates strongly with language learning success.

<table>
<thead>
<tr>
<th>Aptitude factor</th>
<th>Stage</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic coding ability</td>
<td>Input</td>
<td>Noticing</td>
</tr>
<tr>
<td>Language analytic ability</td>
<td>Central Processing</td>
<td>Pattern identification Generalization Restructuring Dual-code organization</td>
</tr>
<tr>
<td>Memory</td>
<td>Output</td>
<td>Retrieval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-computed performance -exemplar-based perform.</td>
</tr>
</tbody>
</table>

General assumptions:

- Aptitude is a specific talent for language, different from general intelligence: Aptitude has a high correlation to language learning success, while intelligence does not.
- Everyone does not have an aptitude for languages: there are exceptionally talented learners (very high aptitude): Outstanding language learners are those who do not have a very high IQ, but do have very high ‘marks’ on the memory part of language aptitude. They exceed at assimilating new material: capable of dealing with large quantities of material to be memorized quickly and easily. Exceptional learners are also those who: (???)
  - have twins in the family
  - there are left-handed members in their family
  - problems in their immune system, leading to eczema, allergies, and so on
  - weak areas, frequently mathematical and spatial abilities
- possible schizophrenia (in the family)
- possible homosexuality (in the family)

Exceptional learners do not seem to be exceptional in two of the three areas which have emerged from aptitude research (phonemic coding ability and language analytic ability), but seem to ‘confine’ their exceptional nature to the third.

However, very weak learners usually lack input skills principally (phonemic code ability)
• It is stable and relatively untrainable

Pedagogical Implications:

Research study: students were categorized according to aptitude profile. One group was identified as having particularly good memory abilities (relative to other abilities), and another group was identified as being high in verbal analytical abilities. Some members of these groups were matched with appropriate methodologies (for the strengths concerned), and others were mismatched. Matched students did disproportionally better, and mismatched students worse. In addition, the mismatched students were unhappy about the type of instruction they were receiving.

A.3. SOCIAL-PSYCHOLOGICAL FACTORS

A.3.i. MOTIVATION
- Integrative
- Instrumental
- Resultative
- (Machiavelian)

A.3.ii. ATTITUDE
- L2 contexts: +attitude correlates with SLA success
- FL contexts: weak correlations
  within these contexts:
  Longer time studying correlates with +attitudes
  (in a sense they have less prejudices and stereotypes than beginning students)

Resultative hypothesis:
The longer the time studying, and the higher the success the more positive the attitude that results. (early attitudes do not correlate with SLA success, but later attitudes do)

1) Parents’ attitudes
2) Peers attitudes
3) Learning situation (learners can hold negative attitudes towards the learning situation if the teacher’s agenda is very different from the students’ one
4) Teachers (degree of expectations // attitude towards origin)
5) Ethnicity (Giles’s Social Accomodation: native origin: convergence/divergence) (Immersion programs: shift of attitudes)

Summary of Social-Psychological factors:

Gardner: Variance in attitudes
Variance in motivation
Variance in L2 proficiency

Oller and Perkins: Variance in L2 proficiency
Variance in attitudes

Le Mahieu: Variance in attitudes
Variance in L2 proficiency
A.4. PERSONALITY FACTORS

A.4.1. SELF-ESTEEM: Feeling of self-worth the individual possesses.
   Three types: overall self-assessment
   - Specific self-esteem
   - Task self-esteem

   Students’ performance correlated significantly with the three levels, but specifically for task self-esteem.

II. EXTROVERSION: Folk wisdom conclusions??
   Negative correlation between pronunciation and extroversion
   Introverts: higher scores on reading and grammar components
   Extroversion does not lead to L2 success, but it may be a trait that encourages people to continue with their study, which in turn promotes SLA.
   In general, no conclusions.

III. ANXIETY: two kinds, debilitating and facilitating anxiety. (not a trait, but a state: strength of anxiety one is feeling at one specific moment)

IV. RISK-TAKING: willingness to take risks.
   Good language learners: willing to guess, to appear foolish in order to communicate, and to use what knowledge they do have of the TL in order to create novel utterances.
   But: Threshold level.

V. SENSITIVITY TO REJECTION: antithesis of risk-taking behaviour.
   No significant relationship was found.

VI. EMPATHY: ability to put oneself in another’s place. Conflictive results: perhaps a + correlation between empathy and pronunciation.
   Guiora: permeability of language ego boundaries

VII. INHIBITION:
   - alcohol
   - hypnosis
   - benzodiazepine (Valium)
VIII. TOLERANCE OF AMBIGUITY:
Significant correlations: a language learner is confronted with many stimuli, many of which are ambiguous: persons with a low tolerance of ambiguity experience frustration and diminished performance. They make frequent appeals to authority.

In general: for some of the traits the ideal is a point in the middle. Also, the personality variables are traits, not states.

<table>
<thead>
<tr>
<th>Personality variable</th>
<th>Definition</th>
<th>Connections with SLA success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>Feeling of self-worth of the individual Types: overall self-assessment / specific self-esteem / task self-esteem</td>
<td>+++ connections with basic interpersonal skills + connections with reading and grammar skills</td>
</tr>
<tr>
<td>Extroversion-introversion</td>
<td>Extroverts are sociable, risk-taking, lively and active Introverts are quiet and prefer non-social activities</td>
<td>+ connections if moderate risk-taking behavior for testing hypothesis about language</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>Willingness to take risks</td>
<td>+ connections with listening comprehension skills</td>
</tr>
<tr>
<td>Empathy</td>
<td>Ability to put oneself in another's place</td>
<td></td>
</tr>
<tr>
<td>Inhibition</td>
<td>Extent to which individuals build defenses to protect their egos</td>
<td></td>
</tr>
<tr>
<td>Tolerance of ambiguity</td>
<td>Ability to deal with ambiguous stimuli</td>
<td>+ connections with listening comprehension skills</td>
</tr>
</tbody>
</table>

Summary of personality variables and their connection with SLA success. A + indicates a weak correlation, whereas +++ shows very strong connections.
A.5. COGNITIVE/LEARNING STYLE: Preferred way in which individuals process information or approach a task. It is a tendency, but those individuals favouring one style may switch to another in some circumstances.

Conformists
- authority oriented learners
- classroom dependent
- visual

Convergers
- analytic learners
- solitary
- independent
- ‘about’ language

Concrete learners
- classroom oriented
- games, groups
- people-oriented

Communicative Learners
- prefer out-of-class
- prefer out-of-class
- integrated skills

Holistic

Convergers: (field independent active) analytical learners who, when processing material, are able to focus on the component parts of such material and their interrelationship. Solitary learners that avoid groups. Independent and confident of their own judgments, and willing to impose their own structures on learning. Likely to regard language as an object, not as something which enables personal values to be expressed. Drawn towards learning ‘about’ language, not language use. Value efficiency, and tend to be cool, pragmatic and detached.

Conformists: (field-independent passive) Analytic view of language, preferring to emphasize learning ‘about language’ and regarding language learning as a task susceptible to systematic, logical, and organized work. But they rely on the organization of others, and are dependent on those they perceive as having authority. They are not so confident about their own judgments, so that they are happy to function in non-communicative classrooms by doing what they are told, following textbooks, frequently preferring a visual mode of organization for their learning, and taking an impersonal approach to learning. Such learners prefer well-organized
teachers who provide structure, in the sense of classroom organization and plans.

Concrete learners: (field dependent passive) They too like classrooms and the imposed organization and authority that this can provide. But they enjoy the sociable aspects of classrooms. They like to learn from direct experience, and are interested in language use and language as communication, rather than simply knowing about a system. They are people-oriented. Their preferred activities in the classroom are organized games and group work, and a wide range of skills-based and communicative activities.

Communicative Learners: (field dependent active) They are language-as-use oriented, but holistic in orientation. They are comfortable out of class, showing a degree of social independence and confidence as well as a willingness to take risks. Happy to engage in communication in real-life situations, without the support of a teacher. They are not interested in an analytic approach, or in learning separately the different elements of a language.

*Most learners do not fall neatly into one or other quadrant (as they are sort of like caricatures).

<table>
<thead>
<tr>
<th>ACTIVE</th>
<th>ANALYTICAL - ABSTRACT</th>
<th>HOLISTIC - CONCRETE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Convergers</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Solitary, do not like group-work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Able to perceive parts of whole and the relationship between elements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Language as an object of study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Like knowing 'about' language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Analytic learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Independent</td>
<td></td>
</tr>
<tr>
<td>PASSIVE-REFLECTIVE</td>
<td><strong>Conformists</strong></td>
<td><strong>Communicative</strong></td>
</tr>
<tr>
<td></td>
<td>• Visual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Authority oriented learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Classroom dependent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Learning as a logic systematic and organized task</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Depend on others for organizing their learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prefer out of class learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Integrated skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Independent learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Take risks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Classroom oriented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Like games and groups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• People-oriented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Like to communicate rather than to know about the language</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Learning style features according to an action approach. Taxonomy adapted to L2 learning

- But see previous classifications of style:
- Category width: broad categorizers: errors of generalization. Narrow categorizers: make more rules than necessary
- Reflectivity/impulsivity: no conclusions
- Aural/Visual: important to adapt teaching situation to those who have a preferred style (25%)

<table>
<thead>
<tr>
<th></th>
<th>Analytical-abstract</th>
<th>Holistic-Concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convergers</td>
<td>Good at interactive instructions using computers, classroom diaries, portfolios</td>
<td>Active participants</td>
</tr>
<tr>
<td></td>
<td>Like focus-on-form teaching</td>
<td>Like any technique that allows independent discovery</td>
</tr>
<tr>
<td></td>
<td>Like individual pen-and-paper work in which analysis is involved</td>
<td>Inductive learners who like to deduce or infer rules</td>
</tr>
<tr>
<td></td>
<td>Like reflecting about language</td>
<td>These are the students who will ask difficult and shrewd questions</td>
</tr>
<tr>
<td>Conformists</td>
<td>Like to be pointed out the objectives of the session</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Like the use of visual materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Visual orientation for learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reference guides and hand-outs which can be read are very useful for them</td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td>Reading method with demonstration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Like workshops, interactive tutorials with quick responses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good at group-work cooperation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Like games</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Like to use the language in communication or to 'see' it used</td>
<td></td>
</tr>
</tbody>
</table>

**A.5. Hemisphere Specialization.**

- Each hemisphere has different functions, but the differences are continuous, it is not a dichotomy, so that both h. Are involved in language.
- The dominant h. Is the one opposite to the hand we use, so that if we are right-handed, our dominant h. Is the left one.
Language functions within the brain

<table>
<thead>
<tr>
<th>LEFT HEMISPHERE</th>
<th>CORPUS CALLOSUM</th>
<th>RIGHT HEMISPHERE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech</td>
<td>Holistic processing</td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>Stereognosis</td>
<td></td>
</tr>
<tr>
<td>Temporal-order judgments</td>
<td>Nonverbal environmental sounds</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>Visuospatial skills</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>Nonverbal ideation</td>
<td></td>
</tr>
<tr>
<td>Associative thought</td>
<td>Recognition and memory of</td>
<td></td>
</tr>
<tr>
<td>Calculation</td>
<td>melodies</td>
<td></td>
</tr>
<tr>
<td>Analytic processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right visual field</td>
<td>Left visual field</td>
<td></td>
</tr>
</tbody>
</table>

TESTS OF H. FUNCTIONING:

- Wada’s test: Injection of anaesthetic in opposite part of body (throat, then thigh). It produces total paralysis of opposite part of body. Most right-handed people have the left h. As dominant for language. Most left-handed people have both h. As dominant and in only a minor part of the cases they have the right h. As dominant.
  Conclusions of this test: If damage to any h. Is soon enough, the other h. Can fulfil all the functions.
- Comisurotomy: conclusions: the dominant h. Is able to produce verbal responses, but the non-dominant h. Is able to carry out some specific linguistic functions.
- Extraction of one h. (because of very serious problems).
  Conclusions: in adults, linguistic abilities very affected, in particular verbal production and writing. Reading and comprehension not so affected. Before five years old, gradual recovery of all linguistic abilities, but if dominant h. Cut out, then syntactical ability is very affected, though phonetic and semantic abilities all right.
- Dichotic listening:
  Conclusions: Auditive stimuli presented to opposite ear (dominant h.) is better recalled, faster and less error-prone. Left
hemisphere better and faster at both aural and written tasks, also analysing meaningless words and spoken language. Right h. Better at musical stimuli and non-linguistic human sounds.

Functions of non-dominant h.

Patients with right h. Damages can work all-right in phonetic, vocabulary and syntax functions. Problems to recall story order, find out moral in a story or make inferences. Also problems in ambiguous terms and metaphors, which they interpret in a literal sense (i.e. broken heart). Also problems for intonation and stress.

Some other tests (non-invasive ones) to see which part of brain fulfils which function:

- Electroencefalograma
- Potenciales evocados (latency and strength of response)
- Regional cerebral blood flow
- Tomografía por emision de positrones

Conclusions: see photocopy –figure 2.15 and figure 2.16-

Take into account: Research has only dealt with language processing, but not with language learning. Studies usually oversimplified, forming part of popular press (but not these ones above!).
A.6. OTHER FACTORS:
   Sex. See Photocopy, related to hemisphere specialization

   *Brain Differences in men and women’s linguistic processing (I)*

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*VIVE LA DIFFÉRENCE!*

Se ha observado que hombres y mujeres realizan determinadas pruebas de forma distinta. Doreen Kimura (1992) señala que las mujeres tienden a puntuar más alto que los hombres en pruebas relacionadas con las capacidades lingüísticas. Los hombres parecen tener una ligera ventaja en ciertas pruebas de índole esparcial.

La afasia aparece más a menudo en hombres que en mujeres, tras una lesión del hemisferio izquierdo, y las mujeres tienden a una mejor progresión que los hombres en su recuperación de ésta, sin importar qué hemisferio fue el dañado y qué condujo a la incapacidad lingüística. Esta observación ha llevado a los investigadores a postular que las capacidades lingüísticas están representadas de un modo más bilateral en las mujeres que en los hombres (cf. Levy, 1972). Esta interpretación está sustentada por un fundamento anatómico: las mujeres parecen tener conexiones interhemisféricas más extensas que los hombres a través del cuerpo calloso (cf. Allen, Richey, Chai y Gorski, 1991).

Recientemente, investigaciones con resonancia magnética funcional (RMF) para obtener imágenes del flujo sanguíneo cerebral de un modo más preciso que con la TEP (Shaywitz *et al.*, 1995), ofrecen un mayor respaldo a la idea de que la organización lingüística de los cerebros masculino y femenino es de algún modo distinta. Cuando hombres y mujeres realizaban una prueba de evaluación de la rimada, los patrones de flujo sanguíneo eran diferentes. Los sujetos tenían que determinar si rimaaban dos cadenas de palabras sin sentido, como «lete» y «jete». Los investigadores utilizaron un proceso de sustracción similar al utilizado en el estudio de Posner *et al.* y encontraron que la circunvolución frontal inferior (aproximadamente equivalente a las áreas 44 y 45 de Brodmann) (cf. Figura 2.9) presentaba una activación lateralizada a la izquierda en los hombres pero bilateral en la mayoría de las mujeres que realizaron la prueba (cf. Figura 2.18). El estudio de Shaywitz *et al.* es el primero que demuestra la existencia de diferencias funcionales consistentes entre sujetos masculinos y femeninos en una prueba lingüística.

(Orr Dingwall, 1999: 100)
Brain Differences in men and women’s linguistic processing (II)

Birth order
Prior Experience
Memory (see aptitude studies)

CONCLUSIONS???

BASIC BIBLIOGRAPHY

COMPLEMENTARY BIBLIOGRAPHY
Topic 4. B. External Factors

Conceptual objective: the students will be able to identify different teaching situations and their probable outcomes for learning
Procedural objective: the students will be able to apply the teaching features that compensate for the context in which the process takes place
Attitudinal objective: the students will develop a less negative attitude towards foreign language teaching

Natural/informal versus educational/formal contexts
(The continuum of natural and educational contexts)
Is the natural context better for language learning?

Natural versus Educational contexts

- Crude distinction
- There is no necessary connection between setting and type of learning, which depends on pedagogical approach
- The process and stages of acquisition are the same in both contexts.
- Do natural contexts lead to higher proficiency??

Thus, let us see specific learning contexts in connection with successful language learning
A. Natural Contexts (in general, more fluent but also more grammatical mistakes) (If learners receive formal instruction, acquisition speed is improved, though it depends on type of instruction)

A. 1. Majority language contexts:

   Competence determined by length of stay, but beyond 2 years it is overridden by other factors (contact leisure time, age of arrival, professional training….)

   \[
   \begin{cases}
   \text{Subtractive bilingualism} \\
   \text{Additive bilingualism}
   \end{cases}
   \]

   (Minorities reach higher level of proficiency in majority contexts than majorities reach in the language of the minority)

A.2. L2 learning in official language contexts

(i.e. Latin in the middle ages, English in India)
Social and economic advancement depends on learning language, so big instrumental motivation. Nevertheless, many learners reach up to a point, only, not native-like proficiency.
If perceived as a replacement of any native language, lot of resistance (India)
If perceived as ‘additional language’, or common language to communicate within multilingual communities, no resistance (not associated with any indigenous group, i.e. Zambia, Nigeria)
Existence of official language: threatens those in rural areas who do not speak it, it isolates non-speakers, it threatens cultural values of original people. It also fosters development of new standard L2 varieties (i.e. South African English)

A.3. Second Language Learning in international contexts:

   It involves functional simplification (and not formal simplification, as IL) Used to perform only a restricted set of functions, a limited set of formulas and a limited lexicon. I.e. Airspeak, Seaspeak.
B. Educational Contexts

B.1. Segregation
B.2. Mother tongue maintenance
B.3. Submersion
B.4. Immersion
B.5. Foreign Language Classrooms

B.1. Immigrant workers educated in special schools or units specially designed to cater for their language needs.
Poor results (limited proficiency),
But sometimes beneficial effects (i.e. short-term programmes for refugee populations). Help them adjust socially, affectively, and linguistically. Also good as all have same level (possible to tailor input) and facilitates ‘survival skills’ in the L2

B.2. Two forms:
Weaker form: pupils given class in their mother tongue, directed at developing formal language skills (full literacy)
Stronger form: pupils educated through the medium of their mother tongue.

Results: positive ones: it leads to additive bilingualism. Considerable educational success. Linguistic, perceptual and intellectual advantages. Support of importance of L1 academic skills as a basis for successful development of L2 CALP. (L1 proficiency also benefits L2 proficiency).

B.3. Linguistic minority children with a low status mother tongue are forced to accept instruction through the medium of a foreign majority language with high status. (Usually in United States and England).
Results: Low academic performance. Painful experience for children. Do not facilitate success in L2 (unless L1 literacy skills are also promoted and the teacher is bilingual)

B.4. (i.e. Alto Castillo). Total immersion better results than partial immersion. Early immersion better than late.
Results: a pidgin can emerge. In general very effective, as ethnic identity is not threatened, input is tailored to learners’ level.

B.5. Language Classroom

(See Summary, Table 6.2.)
B.5. (Again) (If combined with stays in foreign country, learning speed is increased, communicative aspects improved and more fluency) (More benefits if going abroad –according to research studies- if low proficiency level)

Teachability hypothesis (Pienemann): instruction can speed up learning process only if learner is ready for acquiring that particular element being taught, but it cannot change sequences.

Influences on success in classroom teaching:
Teacher! High proficiency level, high knowledge of methodological issues, materials and new technologies. Highly motivated (?), good communicator, abilities to be a group leader, empathy, be accepted by group and be congruent.
Socio-Economic group and family (its attitudes and values)
Literacy level

Summary of research studies:
1. A focus on form approach may facilitate acquisition
2. if a focus on form approach is adopted, this is more likely to succeed if:
   - rules are presented explicitly and supported by examples
   - the instruction is aimed at developing explicit knowledge through consciousness raising activities
   - the instruction is directed at enabling learners to establish form-meaning connections during comprehension
   - the instruction provides students opportunities to produce the target structure in similar circumstances to those that prevail in normal communication

   (focus-on-form teaching: task based syllabus with a focus on specific linguistic properties in the course of carrying out communicative activities).

3. The instructional method must be matched to individual learners’ preferred approach to learning
Conclusions:

**Benefits of formal instruction**
Formal instruction results in increased accuracy and accelerates progress through developmental sequences. Its effects are, in some cases, durable. F.I. should be seen as facilitating natural language development rather than offering an alternative mode of learning.

**Constraints on formal instruction**
Does formal instruction work? It depends on learner’s stage of development, form-function transparency, difficulty of language to be learnt, matching to learner’s preferred cognitive style…

**Types of formal instruction**
…

**Summary of formal instruction effects and results**

(…) Summarise findings from experimental and quasi-experimental investigations into the effectiveness of L2 Instruction published between 1980 and 1998 (…) indicated that focused L2 instruction results in large target-oriented gains, that explicit types of instruction are more effective than implicit types, and that Focus on Form and Focus on Forms interventions result in equivalent and large effects. Further finding suggest that the effectiveness of L2 instruction is durable and that the type of outcome measures used in individual studies likely affects the magnitude of observed instructional effectiveness (…)

(Norris & Ortega, 2000: 417)

B. 5. 1. Input and interaction: How these elements affect learning.

{i} Input and L2 acquisition

i. Non-grammatical adjustments
ii. Linguistic adjustments (see table 5.2.)
iii. Conversational adjustments (see table 5.2.)
Research Results

A. Non-linguistic input // comprehension and acquisition
   (See results on pair-work NNS-NS and NNS-NNS)
B. Linguistic input // comprehension
C. Linguistic input // acquisition
D. Interactionally modified input // comprehension
E. Interactionally modified input // acquisition

Questions to reflect

- What are the methodological implications of these results for becoming an effective teacher?
- What is the relative importance of input in connection with learning?
- Do students learn what they are taught?

Basic Bibliography

Complementary Bibliography