This is Your Brain on Hebrew: What you have to know about how people of all ages learn languages

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> "Learning French is trivial: the word for horse is *cheval,* and everything else follows in the same way."
> — Alan J. Perlis

1   Goals

(1)   What we'd like to know:

- What can we teach?
- When should we teach it?
- How should we teach it?
- How do we assess success?

(2)   Avoiding Folk Nonsense:

- Only children can learn a language (wrong).
- It's always better to teach a language early (wrong).
- Etc.

2 Background

2.1 Which Language?

2.1.1 First Language

2.1.2 Second Language

2.2 Which Part of the Language?

2.2.1 Reading

(3) Reading is discerning the *meaning* in written words.

(4) Children have to learn what writing is before they can learn to read.

2.2.2 Writing

(5) Writing is creating meaningful written words.

2.2.3 Accent

(6) Accent involves complex and subtle pronunciation rules.

(7) Generally, only children can learn an accurate accent.

2.2.4 Vocabulary

(8) Learning vocabulary means associating meaning and grammar with words.

2.2.5 Grammar

(9) **Phonology** includes how sounds are assembled.

(10) **Morphology** includes how words are assembled.

(11) **Syntax** includes how phrases are assembled.

(12) Avoiding the "woe is I" syndrome.

2.3 What's not a language

(13) Pattern recognition (e.g., "reading" but not understanding.)

(14) Pure repetition/memorization.

3 Basics of 1st Language Acquisition

(15) "Then a miracle happens."

(16) Language is learned in order.

(17) For example, English grammar (Brown 1973 and de Villiers 1973):

  (a) *-ing* (gerund).
  (b) *-s* (plural noun).
  (c) irregular ("suppletive") past, e.g., "ran."
  (d) copula ("is" etc.)
  (e) regular past, e.g., "walked."
  (f) *-s* (singular verb).
  (g) auxiliary *be,* e.g, "he **is** running."

4 Second Language Acquisition

(18) L2 vocabulary (Ellis *et al.* 2006) and syntax (Suh *et al.* 2007) are physiologically different than L1.

(19) Bad pronunciation does not necessarily impede acquisition (Altenberg 2005). (Think *chaf* and *chet* in Hebrew.)

(20) Klein and Purdue (1993) show that some patterns in second language acquisition are independent of the first language the learners already speak.

(21) Plausible meaning is more important than grammar for L2 understanding. (E.g., VanPatten 2004.)

(22) Pienemann (1988) shows that, at least for some aspects of a second language, students must learn in order.

(23) For example, L2 English grammar (Krashen 1977):

    (a) *-ing*
    (b) auxiliary
    (c) irregular (suppletive) past
    (d) regular past

4.1 Morphology

(24) Goldschneider and DeKeyser (2001) show that the following make morphemes easier to learn:

- Salience
- Linguistic simplicity
- Semantic transparency
- Similarity to the learner's first language
- Frequency

(25) Also: (Mochizuki & Aizawa 2000)

- Loan words
- Nature of instruction
- Frequency of affixes
- Mono- or poly-functionality of affixes

(26) Pure morphology instruction produces short-lived positive test results but little real knowledge. (Lightbown 1983a)

4.2 Vocabulary

(27) *"Ex omrim b'anglit karborator?"* ("How do you say *karborator* in English?")

(28) Reading for pleasure builds vocabulary (Krashen 1989) but it's hard to learn new words from context. (Laufer 1992)

(29) Clustering is bad! (Higa 1963, Tinkham 1993, Tinkham 1997, Waring 1997, Nation 2000; reviewed by Nation 2001:303)

5   The Student

(30) Vocabulary-acquisition facility may be hard-wired into the brain. (Breitenstein *et al.* 2005)

(31) Dyslexia in one alphabet correlates with dyslexia in another. (Oren & Breznitz 2005)

(32) Almost all children can achieve native proficiency in a second language but adults' second-language aptitude forms a bell curve. (Patkowski 1980)

(33) Even weak students can learn to speak a new language when they are children (Genesee 1976) but when adults learn a foreign language, it's an academic task. (DeKeyser 2000)

(34) Motivation is important (Crookes & Schmidt 1991) but not sufficient.

(35) Students may not know how they learn, but they usually know how they want to be taught.

6   Student Age

(36) "Critical Period Hypothesis" (CPH) — mostly relevant for accent and native proficiency.

(37) "Head-Start"-type programs can backfire later. (Burstall 1975)

(38) Adolescents may make the fastest progress in the first few months of learning a language. (Snow & Hoefnagel-Hohle 1978)

7   Classroom Learning

(39) The focus in the classroom may be on the language, not on the messages carried by the language.

(40) Errors are corrected.

(41) The student encounters (what the teacher thinks is) easier language before harder language.

(42) Students may use meta-linguistic skills that bypass the language as a short-cut to teacher approval.

8 Results

(43) Differentiate between native and non-native proficiency. What is the goal?

(44) Ideal age of initial education depends on the goal.

(45) Correct answers may demonstrate nothing, or even a lack of understanding!

(46) Zone of Proximal Development ("ZPD") (Vygotsky 1978)

(47) Vocabulary:

- is easier to learn if it's useful.
- is easier to learn if it sounds like English.
- should not be presented in semantic groups.
- should be presented in a variety of contexts. (But cf. Dempster 1987.)

(48) Morphology: [Remember (24) and (25)?]

- should be taught in order. (What is the right order?)
- should proceed from easy to hard.
- should be taught to older students.

(49) (Hebrew morphology is *very hard*.)

(50) Passive Hebrew syntax is easy for English speakers.

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