4. TYPES OF KNOWLEDGE

4.1. Implicit vs. Explicit

EXPLICIT KNOWLEDGE

\# accessed only with controlled effort → typically used in tasks that allow for careful planning and monitoring

\# represents consciously held insights about language

\# characteristics:

    anxiety reduces the use of explicit knowledge

    is stored as declarative knowledge

    its quality and use are more prone to individual differences such as WM capacity

    is more prone to decay over time than implicit knowledge

\# Ellis (2004) distinguishes between explicit knowledge as:

    Analyzed knowledge → e.g. error correction

        learners' awareness of grammatical rules and features

        available to consciousness, but they may not be available for verbal report

        measured through tests that require learners to judge the grammaticality of items

    Metalanguage →

        language used to talk about language, which entails the ability to verbalize analyzed knowledge

        knowledge of technical terminology

        measured through tests that require learners to identify parts of speech and/or to verbalize the rules violated in ungrammatical sentences
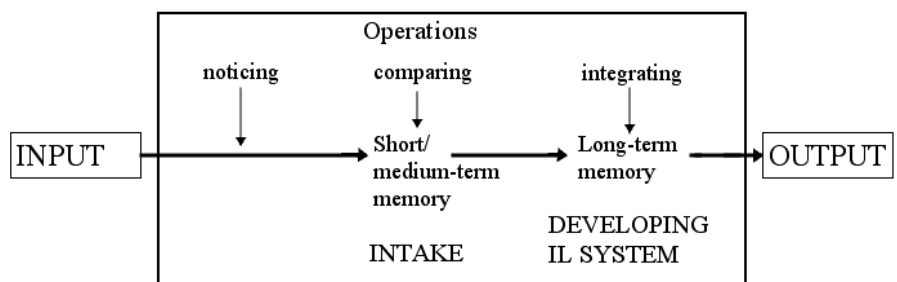
IMPLICIT KNOWLEDGE

\# is intuitive, procedural, automatic, and thus available for use in fluent, unplanned language use

\# is not verbalizable

\# acquisition of implicit knowledge:

    (1) Noticing

    (2) Comparing

    (3) Integrating

Note: The first two processes involve conscious attention; the third process takes place at a very deep level, of which the learner is generally not aware

Ellis (2005)

Criterion	Implicit knowledge	Explicit knowledge
Degree of <u>awareness</u>	Response according to feel	Response using rules
Time available	Time pressure	No time pressure
Focus of attention	Primary focus on meaning	Primary focus on form
Systematicity	Consistent responses	Variable responses
Certainty	High degree of certainty in the correctness/incorrectness of the response	Low degree of certainty in the correctness/incorrectness of the response
Accessibility	Automatic processing	Controlled processing
Metalinguistic knowledge	Metalinguistic knowledge not required	Metalinguistic knowledge required
Use of L2 knowledge	Only evident when learners use it in communication	Used to monitor L2 production
Learnability	Early learning favored	Late, form-focused instruction favored

4.2. Two-dimensional Model

PROCESS OF ANALYSIS

how linguistic knowledge is represented cognitively and how it changes → making explicit, or analyzing, a learner's implicit knowledge

mental representations that were organized around meanings become rearranged into explicit representations that are organized around formal structures → –analyzed to +analyzed

behavioral outcome: the ability to articulate structural principles of organization → new operations become possible, e.g., literacy skills

PROCESS OF CONTROL

#1 relative access the learner has to relevant knowledge, irrespective of its degree of analysis, e.g., writing and speaking → –controlled to +controlled

#2 ability to select, coordinate and integrate relevant information in real time, the key to which is the ability to intentionally focus attention on relevant parts of a problem

  Note: the continual maturation of these two components is credited with proficiency increase
  Note: implied that first and second language acquisition must begin with unanalyzed knowledge

4.3. The Dual-mode System

EXEMPLAR-BASED SYSTEM

is not efficiently organized but rather highly redundant, with multiple representations of the same item in what Skehan called "item bundles"

organized in this way for convenience of use → speakers need to acquire a solid repertoire of formulaic chunks

instance-based theories of fluency → fluent speech is not based on the rapid computation of rules but on the retrieval of ready-made exemplars that require minimal processing capacity

RULE-BASED SYSTEM
language users need to formulate precise and novel propositions → requires a rule-based system when users are not under pressure to perform rapidly online
creativity and flexibility becomes possible
#it is parsimonious

📑 **Note:** the two systems co-exist ; language users can move between these systems

5. INTERFACE OF KNOWLEDGE TYPES

5.1. Non-interface position

implicit and explicit L2 knowledge
      involve different acquisitional mechanisms
      are stored in different parts of the brain
      are accessed for performance by different processes
rejects both the possibility of explicit knowledge transforming directly into implicit knowledge and vice versa
supported by research that suggests explicit and implicit memories are neurologically separate and do not interact with each other
# Krashen stated what has been learned cannot become part of the acquired system → non-interface position leads to a zero grammar approach

5.2. Strong interface

there is a distinction between implicit and explicit knowledge → knowledge gained in explicit form may transform into implicit form with opportunity for plentiful communicative practice
1) grammatical structure is presented explicitly
2) practiced by means of controlled activities
3) practiced by means of free production activities

the possibility of the transfer of implicit knowledge to explicit knowledge through the process of conscious reflection on and analysis of output generated by means of implicit knowledge
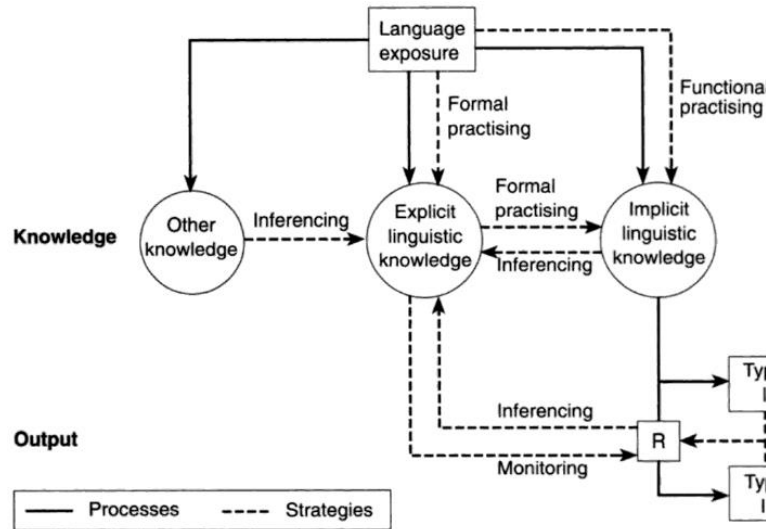
5.3. Weak interface position

explicit knowledge converts into implicit knowledge, but through conditions:

- Pienemann's learnability/teachability hypothesis → when the learner is psycholinguistically ready to acquire the linguistic form
- Explicit knowledge primes a number of key acquisitional processes,
    - o Output derived from explicit knowledge can act as auto-input that triggers learners' implicit learning mechanisms
    - o Explicit knowledge can help learners to **notice** the occurrence of a linguistic feature in the communicative input they receive by making it salient ←→ a kind of advance organizer
    - o Explicit knowledge may help **noticing the gap** → carry out cognitive comparisons, i.e., to compare their own norms with the target norms

the weak interface position provides a basis for *consciousness-raising (C-R) tasks* and *interpretation tasks*

6. THE ROLE OF MEMORY SYSTEMS AND CONSCIOUS LEARNING

6.1. Attention

There are three general stages of information processing at which attention operates:

Information processing	Themes in attentional research	Uses of the concept of attention
Perceptual encoding	Auditory and visual information intake and processing	Selection of information → We pay attention to things as a way of selecting them for further processing
Central processing	Central control and decision-making functions, such as allocation of attention to competing task demands	Capacity of attentional resource → Sometimes we are able to pay a lot of attention to a task, while at other times we are not

		Effort involved in sustaining attention to task goals → We can maintain the level of attention we pay to a task, or attention and performance can decline over time
Responding	Response execution and monitoring via sustained attention	

Attention as selection → A distinction between linguistic input and intake ;   the role of attention in mediating this process?

> the level of attention needed for selecting input for processing;
> whether pedagogic intervention can facilitate switches of attention from meaning to aspects of the form of input which may lack saliency;
> etc.

Attention as capacity → Tasks differ in the demands they make on our attention → distinctions between controlled/explicit and automatic/implicit L2 processing. Explanation:

> capacity limits explain the greater mental load, hence difficulty with controlled processing

Attention as effort → Sustained attention ; in this sense it is a "state" concept referring to energy or activity in the processing system, not to structural processes

Failure to sustain attention effort is caused by: prolonged time on task,
                                                         complexity of the task

three energetic pools have been proposed:

> Perceptual encoding → arousal pool
> Central processing → activation pool
> Responding → effort pool

6.2. Noticing hypothesis

initially, the role played by attention in L2 acquisition was conceptualized in terms of consciousness:
Richard Schmidt (1990)

> *consciousness as awareness*
> > understanding → explicit knowledge
> > noticing → noticing hypothesis
> > perception → subliminal
> *consciousness as intention*
> *consciousness as knowledge*

Schmidt (1994)

> *consciousness as intentionality*
> *consciousness as attention* → noticing hypothesis
> *consciousness as awareness*
> *consciousness as control*

 # Noticing → the process of bringing some stimulus into focal attention = (in)voluntary registration of a form in the input

**Note:** Attention takes place in working memory

Strong form of noticing hypothesis:

learners may perceive elements but will not process them for storage in long-term memory ; there is no learning from input that is not noticed, i.e. learners will not be able to process information for storage in long-term memory => noticing is the necessary and sufficient condition for converting input into intake

Weak form of noticing hypothesis (2001):

more noticing leads to more learning = learning without noticing is possible, but that noticing is beneficial → the initial registration of a feature needs to be with conscious awareness; then, implicit perception can activate this pre-existing representation (*Implicit Tallying Hypothesis*) => people learn about the things they attend to and do not learn *much* about the things they do not attend to

Note: 1994 → learners notice the form
2001 → learners notice form-meaning mappings
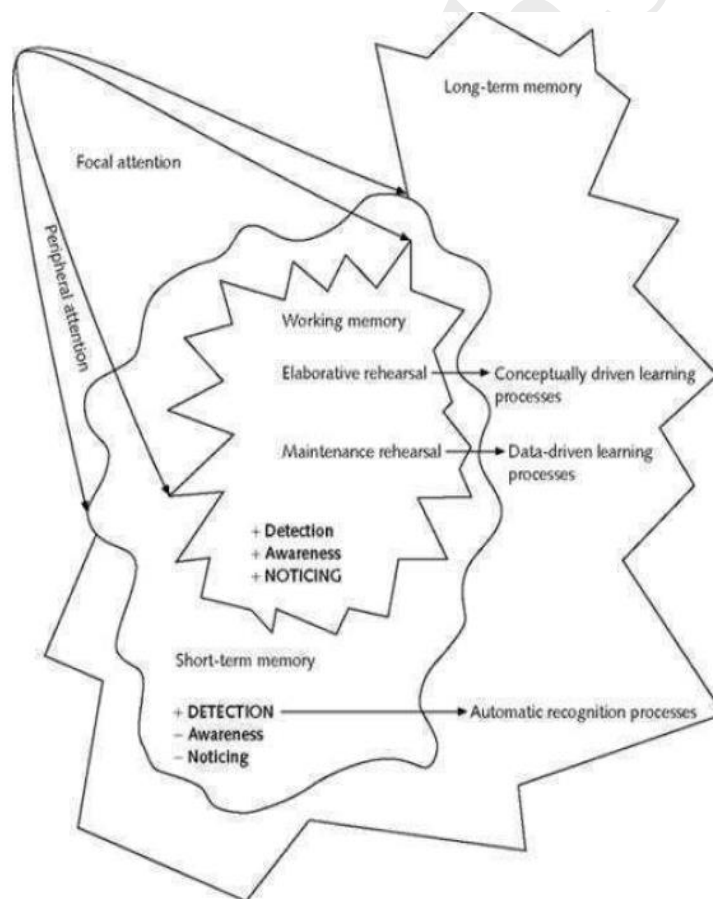
information that enters short-term memory: match what has been attended to with pre-existing knowledge → its function is to strengthen existing categories ; unlikely to lead to modification
detected information is subjected to further processing in WM → changes in long-term memory

Maintenance rehearsal: data-driven, instance-based processing, e.g., *made me go* → provides an opportunity for the cognitive comparison

Elaborative rehearsal: conceptually-driven, schema-based processing, e.g., *made me go* → 'understanding' and explicit learning

6.3. Tomlin and Villa's theory of attention

Tomlin and Villa (1994) presented a very different view of the role of attention in L2 acquisition:

Alertness → a general readiness to deal with incoming stimuli and is closely related to the learner's affective/motivational state

Orientation → the aligning of attention on some specific type or class of sensory information

Detection → the cognitive registration of a particular stimulus without subjective awareness in short-term memory

During this process specific exemplars of language are registered in memory.

Detection allows for the further processing of information.

\# Tomlin and Villa argue that detection is the necessary and sufficient condition for further processing and learning.

6.4. Models of attentional resources and allocation of attention during L2 performance

Trade-off hypothesis (Skehan, 2009)

\# a single limited capacity → speakers must divide their attentional resources between all the processes a task requires, such as input selection, effective information processing, and response actions

\# L2 performance: form or meaning? Learners will need to prioritize form or meaning by accessing either their rule-based system or their exemplar-based system

\# three aspects of language production:

- **Complexity** → learners produce more complex constructions (rule-based system)
- **Accuracy** → learners conform to target language norms (rule-based system)
- **Fluency** → learners speak rapidly without undue pausing (exemplar-based system)

\# learners prioritize one aspect of production over the others:

tension between form (complexity and accuracy) & fluency

within form, tension between complexity & greater accuracy

\# Skehan drew on Levelt's (1989) model of speech production:

- **Conceptualization** → the propositional content of the message that a speaker wishes to convey
- **Formulation** → developing a linguistic plan for encoding the propositional content by accessing lexis and grammar
- **Articulation** → performing the plan

\# in native speakers, these phases occur in parallel ≠ L2 learners engage in more linear processing

talk about a very familiar topic → tap into ready-made chunks → allow more time for formulation → focus more on accuracy

how interlanguage development takes place:

<div align="center">Complexity → Accuracy → Fluency</div>

Cognition hypothesis (Robinson, 2007)
underpinned by two separate models:

Multiple-resource model (Wickens, 1992) → individuals draw their attention from different resource pools when completing different tasks:

processing mechanisms (i.e., encoding or responding)

codes (i.e., spatial or verbal)

modalities (i.e., visual or auditory)

responses (i.e., manual or vocal) that each task requires

📑 **Note:** a competition for attention occurs not between pools but within them

Interference model (e.g., Gopher, 1993; Sanders, 1998) → it is not limitation of capacity but the limited time available to complete a task that hinders processing of multiple sets of information

→ Robinson (2003): individuals have multiple-resource pools of attention and the amount of attention within each pool is unlimited

Robinson proposed the Triadic Componential Framework (TCF) for L2 task classification:

Task complexity
Features of tasks contributing to their intrinsic cognitive demand

Attention-directing dimensions → affect the demands the task can make on the learner's attention and cause the learner to focus on specific linguistic forms (complexity/accuracy) → IL development
task variables that are resource-directing:

(1) reference to events happening in the 'here-and-now' or to those in the past elsewhere

(2) transmission of simple information or provision of reasons for intentions

e.g., [+ intentional reasoning] → cognitive state terms such as 'think', 'wonder' and 'doubt', and the complex syntactic complementation that accompanies their use: 'X wonders if Y', 'X doubts that Y believes Z', etc.

Resource-dispersing variables → govern the procedural demands made on the learners' attentional and memory resources (fluency) → automatic access to linguistic resources
task variables that are resource-dispersing

(1) involving a few or several operations

(2) providing or not providing strategic planning time

e.g., [–planning time] → disperses attentional resources over many dimensions of a given task with no particular linguistic correlates

Task conditions
Features of the tasks affecting demands made on the learners

Participation variables → making interactional demands

      (1) +/- open solution

      (2) +/- one-way

      (3) +/- convergent solution

Participant variables → making interactant demands

      (1) +/- same proficiency level

      (2) +/- familiar topic

      (3) +/- shared cultural knowledge

Task difficulty

Learner factors which affect their perception of the <u>difficulty faced in accomplishing tasks</u>

Ability variables → those relating to the individual learners' ability

      (1) h/l working memory

      (2) h/l reasoning skills

      (3) h/l field dependence

Affective variables

      (1) h/l task motivation

      (2) h/l anxiety

      (3) h/l self-efficacy

6.5. Working Memory

Essential components to the working memory system (Baddeley & Hitch, 1974):

    Short-term memory → concerned with the temporary storage of information

        phonological loop → holds verbal and acoustic information for short periods of time

        visuo-spatial sketchpad → stores and rehearses visual information

        episodic buffer → binds the information from different sub-components of WM

    Central executive → concerned with the control of that information, as required to carry out complex tasks by

      (1) distributing attentional resources between the storage sub-components

      (2) regulating the flow of information between short-term and long-term memory

7. INTERLANGUAGE

7.1. Variationist paradigm

speakers vary their language in accordance with the social context [relationship with addressee] or topic

styles can be arranged along a single dimension, measured by the amount of attention paid to speech → how they monitor their speech in different situations

Labov introduced *variable rules* to describe the extent of the systematic variation, e.g., zero copula occurs when the preceding word ended in a vowel and 'gonna' followed: *He gon' try to get up*

Tarone (1983): L2 learners acquire *a continuum of grammar for the L2* (which she calls *styles*) named *capability continuum*
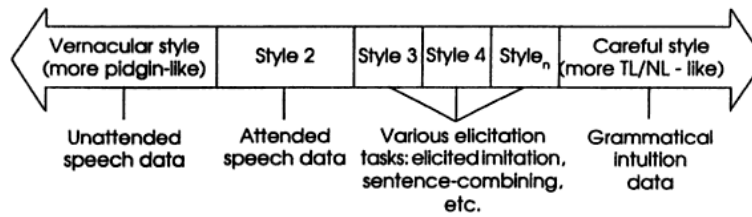
the **subordinate** style is the least target-like, the most internally consistent

the **superordinate** style is more target-like, less internally consistent

categories of variation: linguistic context, psychological processing factors, social context, language function, e.g., *Mary is eating an apple and Sue . . . a banana*

➔ competence is heterogeneous

7.1. Dynamic paradigm

a creole has several varieties/lects – basilect, mesolect, acrolect – constituting a continuum, going from the simplest, most basic variety to the most complex

➔ learners can be placed at different points on a continuum ➔ a speaker may choose to use one lect sometimes and another at other times in accordance with situational factors such as the topic of the discourse ➔ polylectal grammar

8. MOTIVATION

8.1. The social-psychological period (1959–1990)

the role of motivation in language learning in a society that was divided into Anglophone and Francophone communities

foreign language is *not* a socioculturally neutral educational area but is affected by a range of social psychological factors ➔ Gardner and his colleagues' model combined individualistic perspective with social psychological insights

Gardner's motivation theory (1972)

integrative orientation (interpersonal/affective dimension) ➔ associated with positive feelings toward the L2-speaking community

instrumental orientation (practical/utilitarian dimension) ➔ associated with the concrete benefits that language proficiency might bring about, such as career opportunities

criticisms:
- takes no account of the impact that success in learning can have on a learner's motivation
- pays scant regard to the fact that a learner's motivation is not static but dynamic
- is less relevant to monolingual contexts
doesn't recognize learners' agency

Schumann's acculturation/pidginization theory (1976)

social distance ➔ the cognitive and affective proximity of two cultures

possible parameters of social distance:

- *Dominance*. politically, culturally, technically or economically dominant, non-dominant, or subordinate?
- *Integration*. pattern of the L2 group assimilation, acculturation, or preservation?
- *Cohesiveness*. size of the L2 group?
- *Congruence*. cultures of the two groups similar in their value and belief systems?
- *Permanence*. L2 group's intended length of residence in the target language area?

early interlanguages resemble pidgin languages ; L2 acquisition was compared to the complexification of pidgins, and this process was linked to the degree of acculturation of the learners
➔ the greater the social distance between two cultures, the greater the difficulty the learner will have

Acton's (1979) optimal *perceived* social distance ➔ if learners perceived themselves as too close/distant from either the target culture or the native culture, they fell into the category of bad language learners
Lambert: mastery of the foreign language takes place hand in hand with feelings of *anomie* or homelessness
➔ mastery or skillful fluency in a second language (within the second culture) occurs somewhere at the beginning of the third – recovery – stage of acculturation
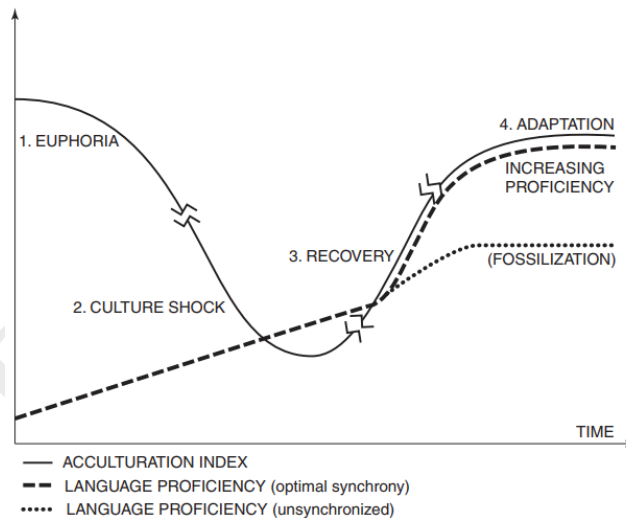
8.2. The cognitive-situated period (the 1990s)
Self-determination theory
Deci and Ryan (1985) focuses on how individuals pursue three core psychological needs:
    autonomy (the feeling of being in control of one's own actions)
    relatedness (the feeling of belonging or being connected to other people)
    competence (the feeling that one is capable)
Noels, Pelletier, Clement, and Vallerand (2000):
    Extrinsic: those actions carried out to achieve some instrumental end
    Intrinsic: motivation to engage in an activity because it is enjoyable and satisfying to do so

Attribution theory

Weiner (1992) views motivation as deriving from the explanations that learners give for their progress in learning a second language:

- **Locus of control:** individual's influence on the attainment of an outcome
  Internal → an outcome is significantly related to the individual's behavior – ability & effort
  External → an outcome is independent of the learner's behavior – task difficulty & luck
- **Stability:** the consistency of the relationship between the causal factor and the outcome

Locus of Control	Success or Failure Attributed to Stability Factors	
	Stable	Unstable
Internal	Ability	Effort
External	Task Difficulty	Luck

  Stable → the relationship is consistent → learners are not inclined to make any further effort as they believe it will make no difference
  Unstable → the relationship is inconsistent → learners are inclined to make further effort as they believe it will make a difference
- **Controllability:** whether the factors influencing success or failure can be controlled
  Controllable → individual has the capability to influence task outcome
  Uncontrollable → individual has limited or no capability to influence task outcome

📝 **Note:** Self-determination theory and attribution theory recognize the dynamic nature of motivation

8.3. The process-oriented/socio-dynamic period (turn of the century to present)

\# the dynamic character of motivation and the temporal variation that can occur
\# how motivation emerges from interaction between individuals and contexts

Dörnyei and Ottó's process model (1998)

\# represented rise and fall of motivation by breaking down the motivational process into several segments
\# initial *wishes* are transformed into *goals* → intentions are *enacted* → the final *evaluation* of the process
\# three phases of the process:

- *Pre-actional phase – Choice motivation.* goal-setting and the formation of an action plan → motivational influences, e.g., expectancy of success
- *Actional stage – Executive motivation.* implementing action plan → motivational influences, e.g., quality of the learning experience
- *Post-actional phase – Motivational retrospection.* evaluating the outcome of the actions undertaken → motivational influences, e.g., attributional factors

The L2 motivational self system

learners have ideas of what they might become—their 'possible selves'—and these function as 'future self-guides' which set the standards the learner hopes to achieve:

- *Ideal L2 Self*. if the person we would like to become speaks an L2, the 'ideal L2 self' is a powerful motivator to learn the L2
- *Ought-to Self*. attributes that one believes one ought to possess to meet expectations and to avoid possible negative outcomes
- *L2 Learning Experience*. executive motives related to the immediate learning environment and experience