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Was Krashen right? Forty years later

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The Challenge

Krashen's Monitor Theory first appeared some 40 years ago. Does it belong to the "history of language teaching"? Or do Krashen's ideas still drive second language acquisition research—unacknowledged and under different names—and thus still have relevance for teaching? We argue that they have survived and are still relevant

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Abstract

In the late 1970s and early 1980s, Stephen Krashen developed Monitor Theory—a group of hypotheses explaining second language acquisition with implications for language teaching. As the L2 scholarly community began considering what requirements theories should meet, Monitor Theory was widely criticized and dismissed, along with its teaching implications. What happened to these ideas? We argue that many of them have evolved and are still driving SLA research today—often unacknowledged and under new terminology. In this essay, we focus on three of Krashen's five fundamental hypotheses: The Acquisition-Learning Distinction, The Natural Order Hypothesis, and The Input Hypothesis. We argue that these ideas persist today as the following constructs: implicit versus explicit learning, ordered development, and a central role for communicatively embedded input in all theories of second language acquisition. We conclude with implications for language teaching, including a focus on comprehensible input and communication in the classroom.

KEYWORDS
Communicative Language Teaching, High-Leverage Teaching Practices, Second Language Acquisition

In the late 1970s, Stephen Krashen began articulating a series of ideas about second language (L2) acquisition[1] that were gathered together in what he called the Monitor Model (and later Monitor Theory; see e.g., Krashen, 1982). Monitor Theory was widely criticized for not living up to the requirements of a theory (e.g., not having explanatory adequacy; containing unoperationalizable constructs; inadequate definitions). However, discussions about the adequacy of Monitor Theory helped to launch a debate about what a theory of L2 acquisition should be (i.e., Gregg, 1984; Jordan, 2004; Long, 1990; McLaughlin, 1987; among others). What emerged was a proliferation of hypotheses, theories, and models all seeking to address L2 acquisition in some way (for a variety of mainstream approaches; see VanPatten, Keating, & Wulff, 2020). Many attempts at theory development owe their origins to Krashen's original and early attempt to characterize L2 acquisition.

Despite this intellectual debt, the orthodoxy in most teacher education programs today is to view Krashen's ideas as a set of historic events—if they are reviewed at all (e.g., Shrum & Glisan, 2010).[2] Replacing Krashen's focus on comprehensible input, a concern for proficiency—especially oral proficiency—became central to language teaching in the United States[3]. As the profession moved toward adopting measures such as the American Council on the Teaching of Foreign Languages (ACTFL's) Oral Proficiency Interview and Performance Descriptors, the roles of input, comprehension, and even the communicative classroom in acquisition—along with the research that supported such constructs—were downplayed (e.g., Higgs & Clifford, 1982; Omaggio Hadley, 1986). Instead, the profession moved toward using guidelines and standards to inform teaching practices. Krashen's ideas were seen as incompatible with the push for getting learners to produce language and thus were deemed either irrelevant or simply wrong.

A result of the rejection of Monitor Theory as an account of L2 acquisition was a rejection by many language-teaching professionals of the implications of the theory for language instruction. Krashen, for example, argued that classrooms should be places where instructors provide lots of comprehensible input in an encouraging environment. He also argued that a focus on grammar did not lead to the acquisition of an unconscious linguistic system. Accordingly, a focus on grammar should be limited to those situations in which learners could monitor (i.e., "edit") their output. These situations would include prepared speeches and written compositions, for example, but not spontaneous speech (see Krashen, 1982, chapters 3 and 4).

Although Monitor Theory is no longer regarded among scholars as an adequate theory to account for L2 acquisition, there is a nagging question in language teaching as to whether the

[1]We follow recent convention in scholarship and use "L2 acquisition" to refer to the process of acquisition and the acronym "SLA" to refer to the field of research concerned with that process.

[2]We note for the record that comprehension-based language teaching did not originate with Krashen. In the 1960s and 1970s, there were proponents of programs that pushed for the very ideas that Krashen would articulate later (e.g., Valeri Postovsky, Harris Winitz, James Asher, Leonard Newmark). In fact, comprehension-based ideas for language acquisition have been around for much longer (for some discussion, see Musumeci, 1997).

[3]We are exclusively focused on what has transpired within the context of the United States, without reference to the teaching of English or other languages outside of this country.

baby was thrown out with the bathwater. It may be appropriate to question the adequacy of Monitor Theory as having the explanatory capability in SLA for observable phenomena (e.g., Long, 1990; VanPatten, Keating, & Wulff, 2020), but we might also question whether some of Krashen's central ideas were, in essence, correct. What happened to these ideas once the theory fell out of favor? What does the field of L2 theory and research have to say about these ideas now? The intent of this paper is to review three central aspects of Krashen's theory to see where we are today on the claims embedded in them. Those aspects of the theory are:

- the acquisition/learning distinction,
- the natural order hypothesis,
- the input hypothesis.

Our position is that, in one way or another, these ideas have survived. They may be discussed under different guises, but they have not vanished. That they have not completely disappeared leads us to question some of the prevailing beliefs in language teaching today; that is, once again, we question whether the baby was thrown out with the bathwater. We will begin with the acquisition/learning distinction.

1 | THE ACQUISITION/LEARNING DISTINCTION

1.1 | The original claim

The acquisition/learning distinction is the cornerstone of Monitor Theory. In his 1982 book, Krashen described acquisition and learning as "two distinct and independent ways of developing competence in a second language" (p. 10). Acquisition was defined as follows:

"...language *acquisition* [is] a process similar, if not identical, to the way children develop ability in their first language. Language acquisition is a subconscious process... The result of language acquisition, acquired competence, is also subconscious" (1982, p. 10).

In contrast, language *learning* refers to "conscious knowledge of a second language, knowing the rules, being aware of them, and being able to talk about them... Some synonyms include formal knowledge of a language, or explicit learning" (1982, p. 10).

In an endnote, Krashen notes that the acquisition/learning distinction predates his work: "The acquisition-learning distinction is not new with me... Bialystock and Frohlich (1972) distinguish 'implicit' and 'explicit' learning, and Lawler and Selinker (1971) discuss mechanisms that guide 'automatic' performance and mechanisms that guide 'puzzle and problem solving performance'" (p. 50). Thus, a variety of scholars had proposed a similar distinction between different learning mechanisms, including the most prevalent term today: Implicit versus explicit learning.

1.1.1 | Modifying the claim

Despite its origins in the work of so many scholars, the acquisition/learning distinction came under criticism early on. One criticism focused on the operationalization of "learning" and "acquisition." Gregg (1984) objected to definitions of "acquisition" as a *process* leading to competence, whereas "learning" is a *state* (of being able to verbalize rules). Many noted that it

is difficult to identify particular bits of language knowledge as acquired versus learned (Gregg, 1984; McLaughlin, 1978). McLaughlin (1978) objected that "it is impossible to know whether subjects are actually operating on the basis of 'rule' or 'feel'" (p. 317). Critics reflected on their own language-learning experiences, identifying language "rules" that they were taught explicitly but about which they were nonetheless able to develop intuitions. Newer research has tackled this issue and made considerable progress in identifying whether implicit or explicit knowledge is accessed in given tasks. Ellis (2005) showed that some tests (e.g., untimed grammaticality judgments) tap explicit knowledge, whereas others (e.g., oral narration) tap implicit knowledge. Factors distinguishing these types of tasks included time pressure versus unlimited time and focus on meaning versus form. Rebuschat (2013) added additional methods of verifying whether participants are using explicit knowledge: Retrospective verbal reports, direct versus indirect tests (i.e., a test where participants are directed to use explicit knowledge compared to one where they are not) and subjective measures such as confidence ratings.

Another criticism centered around what was later called the noninterface position, or as Krashen (1982) articulated it, the idea that "Learning Does Not Become Acquisition." Specifically, Krashen argued that consciously taught and learned rules are not later "internalized" in a way that makes them part of the learner's complex, abstract implicit language system. Instead, they become part of the Monitor, usable only for editing output. Krashen acknowledged that this idea conflicts with the widespread "cognitive-code" or "skill-building" view—that learners first consciously learn a rule, and later acquire or internalize it through practice (DeKeyser, 2007; Gregg, 1984; Spolsky, 1985). Introspection was again used to counter Krashen's claims here. For example, Gregg (1984) claimed that he had memorized Japanese grammar paradigms explicitly, which he was then able to acquire "instantaneously," with very little input (p. 81). Gregg was willing to accept Krashen's claim that learning does not *always* become acquisition, but demanded more evidence for the proposition that it *cannot* become acquisition—a point we will return to a bit later in this section.

A third criticism was the amount of evidence presented in favor of the acquisition/learning distinction (McLaughlin, 1978; Spolsky, 1985). It is true that many of Krashen's papers focus on case studies of successful language learners, not on large, controlled studies—and, that he is often content with corroborating evidence rather than causal evidence. For instance, McLaughlin (1978) demanded that evidence be presented for the claim that consciously learned information cannot be used to initiate utterances. Krashen (1979) countered that this idea "is consistent with" various phenomena including morpheme orders, language aptitude, individual variation, and L1 influence. Gregg (1984) wanted evidence for Krashen's claim that acquisition takes time and substantial input, as well as for the claim that conscious knowledge cannot become unconscious and that unconscious knowledge cannot become conscious (Spolsky, 1985).

Those working in linguistic theory were more sympathetic to Krashen's ideas. Schwartz (1986) claimed that Krashen's theory is one of the few compatible with Chomsky's theory of language learning as a special human faculty. It was also compatible with the cognitive science of the time. She rejected the criticism that the inability to determine whether a specific piece of linguistic knowledge arose through learning or through acquisition is problematic. Rather, since this distinction refers to abstract properties of the mind, we should expect the evidence for or against it to be similarly abstract and indirect. Schwartz presented a number of ways that Krashen's theory could be falsified (countering claims that it is unfalsifiable). Some of these include whether learners can correctly judge structures that they have never been taught and whether

principles of Universal Grammar are violated in L2 acquisition. Both of these points, among others, have been well researched within the generative tradition—and, overall, the research supports Krashen's position (e.g., Hawkins, 2019; White, 2003, among many others).

Schwartz (1993) and Zobl (1995), citing new studies on the effects of giving learners explicit positive and negative information, continued to defend Krashen's idea that only comprehensible input can contribute to the growth of a learner's interlanguage system. Schwartz (1993) argued that explicit information contributes to Learned Linguistic Knowledge but not to the developing interlanguage system, which is more closely associated with Universal Grammar. Zobl (1995) presented a number of studies that postdate Krashen's theory but are consistent with its predictions for the results (or lack thereof) of code-focused instruction.

Despite a number of linguists agreeing with Krashen's ideas, many practitioners and pedagogues, along with some researchers, reacted negatively to the implications of the acquisition/learning distinction for teaching. After all, the pedagogy of the time—the cognitive-code approach—rested on a grammatically based syllabus where learners were presented with a grammatical rule, and then asked to practice and produce that rule. The acquisition/learning distinction was rejected because it relegated this type of teaching to playing a very minor role in language acquisition. And as is the case in much of language teaching, many critics were working without with any particular theory of language or of language acquisition (such as the ideas about interlanguage put forth in Selinker, 1972).

While generative theorists continued to work in the background on the implicit nature of competence, the field of psychology resurrected the acquisition/learning distinction under a new name: Implicit versus explicit learning. Cognitive psychologist Reber (1967) began this line of inquiry with experiments on artificial grammar learning. Participants learned sequences of letters generated by a finite-state grammar (for instance, TPTS, VPXXVS) and were able to judge whether new sequences were "grammatical" without being able to articulate any rules. Another contributor to work on implicit/explicit second language learning was Bialystok (1979), who investigated task and learner factors contributing to the use of implicit versus explicit knowledge.

While acquisition and learning are both processes, the terms implicit and explicit can refer to the *learning process*, the resulting *knowledge*, or even the type of *instruction* the learners have experienced (Ellis, 2009). Implicit versus explicit knowledge is probably the most studied of these three constructs. Bialystok (1979) provided an early definition of implicit versus explicit knowledge that is quite similar to Krashen's description of learning versus acquisition: "Those rules which can be consciously entertained by the learner are stored in 'explicit knowledge'; those rules which are honoured without attention to the rule or even an ability to state it are stored in 'implicit knowledge'" (p. 82). Contemporary definitions continue to use the same terminology of consciousness that Krashen used:

"The term implicit learning was first used by Arthur Reber (1967) to describe a process during which subjects acquire knowledge about a complex, rule-governed stimulus environment without intending to and without becoming aware of the knowledge they have acquired. In contrast, the term explicit learning refers to a process during which participants acquire conscious (explicit) knowledge; this is generally associated with intentional learning conditions, e.g., when participants are instructed to look for rules or patterns" (Rebuschat, 2015, p. xiii).

1.1.2 | Where are we today?

If we updated Krashen's acquisition/learning distinction to reflect current thinking, we might say something like the following:

> The complex and abstract mental representation of language is mainly built up through implicit learning processes as learners attempt to comprehend messages directed to them in the language. Explicit learning plays a more minor role in the language acquisition process, contributing to metalinguistic knowledge rather than mental representation of language.

Although implicit versus explicit learning is the leading term used by those studying what Krashen would have called learning versus acquisition, it should be noted that there are other similar constructs as well. Declarative versus procedural memory (Paradis, 1994; Ullman, 2001) has been the basis for a variety of neurolinguistic experiments using explicit and/or implicit training conditions by Kara Morgan-Short and colleagues. Controlled versus automatic processing (recommended as a term all the way back by McLaughlin, 1978) is sometimes used. Terms such as noticing (Schmidt, 1990) refer to the more explicit side of "learning." When it comes to instruction, the 1990s saw terms like "Focus on Meaning" referring to (more) implicit teaching, while "Focus on Form/Focus on FormS" referred to different kinds of an explicit focus on grammatical forms and structures (Long & Robinson, 1998).

As mentioned above, the terms implicit and explicit can be applied to *learning*, *knowledge*, or *instruction*. Implicit versus explicit learning is the true construct of interest for many researchers, but it is impossible to directly access or measure learning processes. Protocols such as think-aloud and retrospective verbal reports have attempted to do this, but imperfectly (e.g., Rebuschat et al., 2015). This leaves us with the options of manipulating the implicit versus explicit instruction that is given to the learners or measuring the resulting implicit versus explicit knowledge (or both). Just manipulating instruction is still problematic, as adult learners (particularly those with prior foreign language study) have an inconvenient tendency to use explicit learning strategies and develop explicit knowledge even when placed in implicit conditions (or, conversely, participants can ignore explicit information). Thus, measuring implicit versus explicit *knowledge* is the most developed research strategy.

Ellis (2005) was the first major study demonstrating task characteristics that could be used to separately tap implicit versus explicit knowledge. Tasks tapping implicit knowledge are meaning-focused, time-pressured, do not require the use of metalinguistic knowledge, encourage the use of "feel" rather than rules, and are often oral. The opposite characteristics (form-focused, not time-pressured, and so on) create tasks tapping explicit knowledge. More recent work by Suzuki (2017) has refined this by identifying tasks that permit the use of speeded-up or automatized explicit knowledge, versus those that are said to access only implicit knowledge. The most implicit tasks include comprehension measures such as visual-world tasks, word-monitoring tasks, and self-paced reading tasks (e.g., Foote, 2011; Granena, 2013; Suzuki, 2017; Tanenhaus & Trueswell, 2006).

Another current issue is that of "explicit versus implicit teaching." It should be noted, first, that this specifically refers to the teaching of grammar—any classroom setting involves the explicit idea that learners are supposed to be learning *something*. Housen and Pierrard (2006, p. 10) describe implicit instruction as being delivered spontaneously in an otherwise communication-oriented activity, unobtrusive (minimal interruption of communication of

meaning occurs), presenting target forms in context, making no use of metalanguage, and encouraging the free use of the target form. Explicit instruction, on the other hand, is planned as the main focus and goal of teaching activity, is obtrusive, presents target forms in isolation, uses metalinguistic terminology (e.g., rule explanation), and involves the controlled practice of the target form. Note that both of these include the idea that there is a "target form" that is the real goal of learning. This is also true of research studies on implicit versus explicit instruction conditions, which target forms such as gender agreement, case marking, transitive/intransitive verb pairs, and others that could easily appear in the table of contents of a grammar-driven textbook. Thus, even research focusing on implicit learning often assumes that the goal is the "same old thing" as that of explicit teaching: Grammatical accuracy in production. And this complicates the research because it is entirely possible that learners assume that the teachers are trying to teach something, thus engaging explicit processes.

This concept—the idea that language learning is the internalization of grammatical rules and forms—is a barrier to truly implicit teaching and research. A newer perspective is that the type of knowledge that learners build while creating a linguistic system is too abstract and complex to be described using rules (VanPatten & Rothman, 2014; VanPatten, 2017, 2019). In other words, learners are building underlying abstract and complex morphosyntactic representations as described by theoretical linguists—quite unlike the rules that are found in grammar textbooks. Even Reber (1993) emphasized that the product of implicit learning is abstract in nature, and not at all related to the "rules" used to generate his strings of letters. In addition, nongenerative approaches such as usage-based approaches concur that what winds up in the learner's head is not what teachers and many researchers think (e.g., Ellis & Wulff, 2015). Indeed, psychologists are converging on the idea that most of language acquisition is implicit. Much of our language use takes place under severe time pressure: Having a conversation requires fast processing of the other interlocutor's utterances and fast formulation of one's own utterances, in a situation where meaning is more important than perfect accuracy—in fact, nearly the exact conditions proposed by Ellis (2005) to create tasks that tap implicit knowledge. For this reason, Ellis (2011) concluded that, although some questions about implicit and explicit learning are still under investigation, "there has been a growing consensus over the last twenty or thirty years that the vast majority of our linguistic processing is unconscious, its operations tuned by the products of our implicit learning" (p. 39).

Finally, there has been growing consensus that, just as Krashen claimed learning cannot turn into acquisition, explicit knowledge cannot turn into implicit knowledge (e.g., Rebuschat, 2015; VanPatten, 2016; VanPatten & Smith, forthcoming). Whether one pulls from a theoretical linguistic perspective, a usage-based perspective, a neuro-linguistic perspective, or some other, no theory has been able to postulate a mechanism internal to the learner that "converts" explicit knowledge into implicit knowledge, echoing Schwartz's claim back in the early 1990s (Schwartz, 1993). They remain separate knowledge systems (the noninterface position, e.g., Rebuschat, 2015). Explicit knowledge develops one way and implicit knowledge develops another way. What is more, they are also viewed as qualitatively different, meaning that the content of explicit knowledge and the content of implicit knowledge do not overlap. This is one of the reasons various theories have posited no mechanism that can convert explicit knowledge to implicit knowledge. The issue of whether explicit knowledge can *influence* the development of implicit knowledge and just how it might do that is another matter and is beyond the scope of the present paper (but see VanPatten and Smith (forthcoming), as well as Abugaber (forthcoming), for some discussion).

2 | THE NATURAL ORDER HYPOTHESIS

2.1 | The original claim

At the time of Krashen's initial thinking about L2 acquisition, morpheme orders constituted a major area of investigation. In the 1960s, Roger Brown had established that children learning English as an L1 showed largely invariant order over time in their "mastery" of a set of bound and unbound morphemes in English (Brown, 1973). These morphemes included such things as noun inflections (e.g., possessive marking, plural marking), verb inflections (e.g., progressive and tense markers), articles, copular (linking) verbs, and others. Inspired by this study, early L2 researchers began to examine morpheme orders in children and adults learning English (e.g., Bailey et al., 1974; Dulay & Burt, 1974; Krashen et al., 1977; Larsen-Freeman, 1975; among many others).

Based on this line of research, by the end of the 1970s, Krashen had claimed there was a "natural order" in language acquisition. To quote from his 1982 book: "...the acquisition of grammatical structures proceeds in a predictable order. Acquirers of a given language tend to acquire certain grammatical structures early, and others later" (Krashen, 1982, p. 12).

2.1.1 | Modifying the claim

To be sure, there was some criticism of the "morpheme studies" as they began to appear. These criticisms centered on concerns about the instruments used to gather data and how researchers classified something as "acquired" (e.g., Porter, 1977; Rosansky, 1976). However, by the mid to late 1980s, dozens of such studies were reported using a variety of methodologies, examining the acquisition of English as an L2 by learners of various age groups and with many different L1s. Criticisms began to fade and morpheme orders have become a fact in L2 acquisition and are no longer disputed (e.g., Hawkins, 2019; Long, 1990). What is disputed is a theoretical explanation for such orders; however, the issues in the theoretical realm are far beyond the scope of the current paper. Our point is that Krashen was correct in asserting a natural order hypothesis by the late 1970s. However, his approach to the orders needed some refinement. Because Roger Brown had looked at a variety of bound and unbound morphemes, L2 researchers did the same. As Krashen attempted to make sense out of some of the slight variations he saw in the L2 orders, he hit upon the idea that rather than ordering individual morphemes, we could order groups of morphemes. That is, three morphemes might be grouped together as "early acquired" and acquired before others, but allowing for some variation as to the exact order for those three morphemes among themselves (see Figure 1). Scholars such as Andersen (1977) and VanPatten (1985), however, claimed that looking at morpheme orders this way made no sense. Instead, morphemes should be sorted by the syntactic function they play. So noun-oriented morphemes should be compared to other noun-oriented morphemes, verb-oriented morphemes should be compared to other verb-oriented morphemes, and so on. When sorted out this way, it was shown that there were invariant and universal morpheme orders according to syntactic function. So the natural order hypothesis was correct, but it needed clarification, if not modification (see the summary, e.g., in Larsen-Freeman & Long, 1991). However, there is more to the story.

Krashen's focus was exclusively on morpheme order research. At about the same time, another line of L2 research began appearing—a line of research also influenced by L1

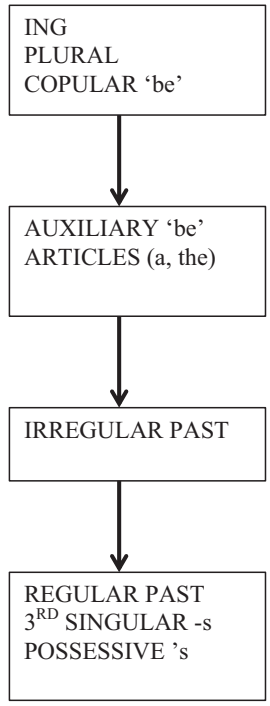

FIGURE 1 Krashen's "average" order of acquisition of grammatical morphemes in English as an L2 (from Krashen, 1982)

acquisition studies. This research was concerned with what can be called "developmental sequences" or "stages of acquisition for a particular structure." Bellugi (1967), for example, examined how children acquired negation in English over time in three stages. As L2 research began to take hold in the 1970s, scholars wondered whether children and adults with English as an L2 also demonstrated developmental sequences in their acquisition, and how these compared to what was being found for L1 learners. As the reader might guess (or might already know), L2 researchers did find such sequences. Developmental sequences for negation and question formation were found for L2 English by researchers such as Henning Wode, John Schumann, Roar Ravem, and a number of others. So, for example, child L1, child L2 and non-child L2 learners of English were all found to create similar stages of development for negation. Those stages looked like this:

Stage 1: Negator + word/phrase: No like this one, no paper.

Stage 2: Subject + negator + verb phrase: I no like this one, He no see.

Stage 3: Negation with modals: I can't do this one, She won't go.

Stage 4: Negation with do: I don't like those, She doesn't live here.

Work on developmental sequences or stages continued well into the 1980s and expanded into other structures and other languages: Most notably Spanish, French, and German using both classroom and nonclassroom learners (e.g., Johnston, 1985; Pienemann, 1998; VanPatten, 1987, 2010). Interestingly, developmental sequences (as well as morpheme orders) appeared to be unaffected by instruction and feedback on grammatical structure (e.g., Ellis, 1989; Lightbown, 1983; Pavesi, 1986; Pica, 1983) and they were found to be the same whether people learned languages in or out of classrooms; that is, with and without instruction.

So what we see at this juncture is that Krashen's idea of the natural order hypothesis was correct, but at the same time, was too narrow in scope. In fact, the research on L2 acquisition was showing more "ordered development" than we'd seen in the 1970s and early 1980s with just morpheme studies. However, once again, there is more to the story.

We turn our attention to three other areas of inquiry. The first concerns what is called U-shaped development. Under U-shaped development, both L1 and L2 learners demonstrate the ability to correctly deploy certain grammatical properties of language only to lose this ability and then regain it later. When graphed over time, the plot for accuracy resembles a U as in Figure 2.

The classic studies on U-shaped behavior focus on past tense markings on verbs—at least in L1 acquisition (e.g., Ervin, 1964). In the early stages, learners correctly produce irregular past tense verbs for those that are most frequent, such as *ate* and *went*. As regular verbs with—*ed* endings begin to appear in their speech, learners seem to regularize the irregulars to create nonnative-like forms such as *eated/ated* and *goed/wented*. As acquisition continues, the correct irregular forms reassert themselves in learner speech. In L2 acquisition, U-shaped behavior has been documented in a variety of domains, especially morphology (e.g., verbal inflections) and lexical–semantic development (e.g., Kellerman, 1983, 1985; Lightbown, 1983)

At about the same time that we began to see research on morpheme orders, developmental sequences, and U-shaped behavior, another line of research emerged. This was research on markedness, especially typological markedness (e.g., Eckman, 1977, 1985; Keenan & Comrie, 1977; VanPatten & Smith, 2019). Markedness in language can be difficult to define, but for the purposes of this paper, we will talk about markedness in terms of prototypicality and underlying features. First, we delineate marked and unmarked (or more marked) aspects of language. Unmarked aspects tend to be prototypical and more frequent, while marked elements are less prototypical and less frequent. In a language like Spanish with a binary gender system, masculine is considered to be unmarked while feminine is marked. Words with masculine gender in Spanish are much more frequent than words with feminine gender. New and borrowed words tend to be assigned masculine gender: *el input, el feedback, el clic(k).* And what we see in acquisition is that masculine gender and agreement is acquired sooner than feminine gender and agreement. We never see the opposite. The same thing is true for singular and plural. Singular is considered unmarked while plural is considered marked. Singular forms are

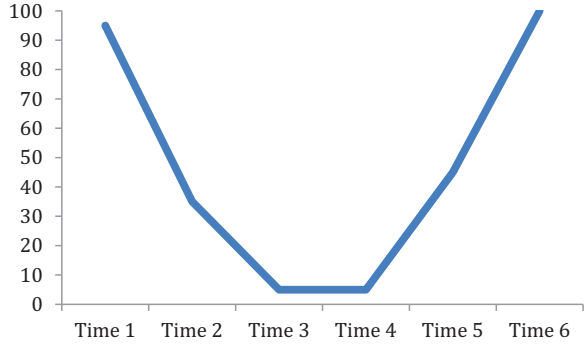

FIGURE 2 Classic U-shaped behavior in language acquisition [Color figure can be viewed at wileyonlinelibrary.com]

acquired before plural forms whether we're talking about nouns, adjective agreement, verb forms, subject-verb agreement, or something else.

What happens with aspects of language that have multiple features? For example, verb endings for person and number in Spanish are unique so that in most tenses, each person–number combination has its own verb form (e.g., the famous *hablo, hablas, habla, hablamos, habláis, hablan* charts that Spanish teachers like to display in class). The data we have on Spanish shows that learners acquire and use verbs with no features first (i.e., *habla*) followed by singular forms (i.e., *hablo, hablas*) followed by plural forms (i.e., *hablan, habláis, hablamos*). In short, when an element of language maps multiple features, it typically is later acquired than forms that map no features or only one feature (e.g., Lardiere, 2007; McCarthy, 2006, 2008). More features mean more marked. More marked means later acquired, in most cases.

Before moving on, a word about data in research is important here. In workshops and talks we have given, we sometimes come across teachers who say "I've never seen those orders or sequences in my students." And this may be true. However, the kind of language production that teachers encourage from students is typically heavily monitored, focused on form, and highly controlled. This kind of production does not form the data for the L2 research that is the focus of this section. Instead, researchers use spontaneous and conversational-type production where the focus is on meaning—or they use other instruments that do not rely on production, such as grammaticality judgments and truth-value tasks. More recently, researchers have employed self-paced reading, eye-tracking, and other methods (see e.g., some of the commentary articles in this collection). So teachers may not see what researchers see, which may contribute to the rejection of ideas such as Krashen's in language teaching circles.

2.1.2 | Where are we today?

The case for something like a natural order hypothesis is actually stronger than it was back in the 1970s and early 1980s. Krashen initially limited his hypothesis to morpheme order studies. However, we have ventured far beyond a handful of morphemes to show that there is order during acquisition, with predictable paths, stages, and so on in a variety of domains of language. In fact, as VanPatten, Smith, and Benati. (2020) describe the current situation, it is more accurate to couch all of these observations under a broader term called *ordered development*. That is, learners acquire language in some ordered fashion and there is, to some degree, universality involved—both at the macro level and the micro level. We might, in a real sense, replace Krashen's more narrow Natural Order Hypothesis with something like the Ordered Development Hypothesis*:*

> *The evolution of the learner's linguistic system occurs in ordered and predictable ways, and is largely impervious to outside influence such as instruction and explicit practice.*

Such a hypothesis would be accepted by most scholars in most theoretical camps, with the exception of perhaps Sociocultural Theory—which is largely a framework applicable to the learning of explicit knowledge (e.g., language as subject matter) and not to the development of a linguistic system (see e.g., the various chapters in VanPatten, Keating, & Wulff, 2020). The stance of most scholars is that learners *create* a linguistic system based on data they are exposed

to and that the evolution of this system is constrained by learner-internal mechanisms coupled with the kind of input data they are exposed to (see Section 3)—although there is apparent disagreement about what those mechanisms are (e.g., language-specific mechanisms in the generative framework and general learning mechanisms in the usage-based approaches). As learners create such systems and as they evolve, we see ordered development in a variety of ways in a variety of domains among a variety of learners and languages and in a variety of contexts.

There is some universality in ordered development (i.e., all learners tend to do the same thing over time regardless of context, L1, motivation, and other nonlinguistic factors), but the research has also shown that there is some influence of the L1 and some individual variation. However, both are constrained. L1 influence seems to be constrained in that even though all learners create the same sequences and stages, learners with one L1 may linger longer in one stage if it resembles their L1 in some way (e.g., Andersen, 1983). For example, learners of Spanish may linger in Stage 2 of the acquisition of negation in English because it looks like Spanish negation, whereas French speakers would not. Individual variation is also confined to stages. Again, all learners seem to go through the same stages but in a given stage, some learners may show preferences for a particular structure. In Stage 2 of English negation, for example, some learners may exclusively use *no* as the negator. Some may prefer *don't* as an unanalyzed chunk as in *He don't like it*. And some may switch back and forth. Yet, they adhere to the "structure" of subject + *negator* + phrase. So there is universality across the developmental sequences, with L1 influence and individual variation appearing within a given stage (for a similar perspective, see Pienemann, 1998).

Along the same lines, the reader may recall that Andersen (1977) and VanPatten (1985) argued for universality in morpheme orders according to syntactic function. Thus, all verb-related morphemes are acquired in the same order, all noun-related morphemes are acquired in the same order, and so on. However, Luk and Shirai (2009) argued that there is some L1 influence on such orders. They showed that with Japanese and Korean learners of English as an L2, all verb-related morphemes were acquired in the same order as in other studies, but there was a slight deviation in the noun-related order: In their account, possessive *'s* is acquired earlier than plural *s*. Assuming this to be true and not a fluke of the data they examined, we can still argue for morpheme orders but with L1 influence. In other words, learners still go about unconsciously acquiring morphemes in particular orders, but universality allows for some L1 influence—and note the use of "some influence." As of this date, only Luk and Shirai have offered any evidence of L1 influence on morpheme orders and only for Japanese and Korean learners of English and only for one reduced area. Even then, not all of the learners exhibited evidence of L1 influence.[4]

One of the implications of Krashen's original hypothesis was that instruction did not affect acquisition orders. Looking at the larger picture of ordered development, that implication is still valid today. As of this writing, we are not aware of research demonstrating that instruction alters ordered development. Earlier, we cited classic research indicating this outcome: Ellis (1989), Lightbown (1983), Pavesi (1986), Pica (1983), Pienemann (1984), and Schumann (1978). This research has stood the test of time. This is not to say that instruction has no effect on

[4]It may also be the case that possessive *'s* and plural *s* are two different kinds of morphemes that are related to nominals in quite different ways. In current analyses, only plural *s* is a true nominal inflection (part of the NP) whereas the possessive is part of a determiner structure occupying a quite different spot in the syntactic tree relative to plurals (see e.g., Radford, 2004). In this case, we are comparing apples to oranges, much as Andersen (1977) and VanPatten (1985) argued.

acquisition in other ways. Our point is that it has no effect on ordered development and seemingly little effect on the paths of developing implicit systems. Something internal to the learner is in control of how language evolves over time.

3 | THE INPUT HYPOTHESIS

3.1 | The original claim

Krashen introduced the input hypothesis saying that it "may be the single most important concept in second language acquisition theory today" (1982, p. 9). He articulates the input hypothesis in four parts:

"(1) The input hypothesis relates to acquisition, not learning. (2) We acquire by understanding language that contains structure a bit beyond our current level of competence ($i + 1$). This is done with the help of context or extra-linguistic information. (3) When communication is successful, when the input is understood and there is enough of it, $i + 1$ will be provided automatically. (4) Production ability emerges. It is not taught directly" (p. 21–22).

Part 2 is the core of the input hypothesis, claiming that understanding comprehensible input is the one and only way that learners acquire language. In other words, comprehensible input is indispensible for L2 acquisition (e.g., Long, 1990; VanPatten, Keating, & Wulff, 2020). Krashen uses *i* to represent the learner's current level of competence. How to characterize *i* was never really articulated—a point which would draw much criticism towards the input hypothesis. Did it refer to where learners were in terms of the acquisition of morphemes (i.e., the "natural order")? Did it refer to where they were in developmental sequences or U-shaped behavior? Did it refer to something else? Similarly, "i + 1" is meant to reference input that is just beyond the learner's current level of competence. However, since *i* is not defined according to any particular scale, $i + 1$ is similarly undefined. The claim is that learners can progress by understanding input that is at the $i + 1$ level but not by understanding input that is too difficult ($i + 5$?) but we have no idea how to measure "+ 1".

Krashen sidesteps this issue with part 3 of the input hypothesis—recommending that input only be "rough-tuned," not fine-tuned, to the level of the learners. Advantages to this type of nontargeted input are that learners may be at all different levels of proficiency; that nontargeted input will provide "review" of many structures rather than an input flood focusing on one structure, and that it allows communication to be more natural.

Finally, part 4 is a reiteration of the idea that comprehension, not production, advances language proficiency. For this reason, Krashen recommends allowing beginning learners a "silent period," similar to the way children learning a second language often choose not to speak for a few months at the beginning of their acquisition process. Allowing this silent period reduces the pressure for learners to rely on the L1 to generate utterances for communication when what they are being pushed to say is beyond their current L2 proficiency.

Although the idea of $i + 1$ is unique to Krashen, the input hypothesis itself was not. The idea that communicative, comprehensible input is necessary for language acquisition was present in much empirical work from the 1970s. Studies on child L2 learning documented both the adults' input and the child's output as part of a conversation. Children acquiring an L2 were shown to produce the types of constructions that were most frequent in their input (Wagner-Gough & Hatch, 1975). Native speakers were shown to modify their speech towards nonnatives in predictable ways—shorter sentences, more repetition, and more comprehension checks (Hatch,

1983). These modifications were a natural part of communication that increased the comprehensibility of the input and maximized interaction for the nonnative speaker (Long, 1981).

3.1.1 | Modifying the claim

Krashen's input hypothesis attracted considerable criticism. As with the acquisition/learning distinction, many objected to the claim that comprehensible input was the only factor driving the growth of language competence. Other factors that critics put forward as contributing to language development included language practice, the learner's own output, the Monitor itself, and of course, explicit grammar instruction (e.g., Gregg, 1984).

Most notably, the inability to operationalize $i + 1$ in research made it an untestable construct. Sometimes Krashen used this construct to refer to the next structure to be acquired; other times, the next stage in the learner's development (Gregg, 1984). Spolsky (1985) pointed out that Krashen did not define what exactly "structure" is in "structure a bit beyond our current level of confidence" and that this makes the $i + 1$ hypothesis untestable. Some threw the baby (communicative input) out with the bathwater ($i + 1$).

Despite this criticism, a gradual shift occurred in most L2 theories and research in favor of the fundamental role of communicatively embedded input in L2 development. Universal Grammar, usage-based approaches, and the declarative/procedural model all hold implicit learning processes and representations as primary (see e.g., the various chapters in VanPatten, Keating, & Wulff, 2020, on these perspectives), thus placing input front and center as the "data source" for acquisition. Even theories that sound like they would contradict the Input Hypothesis—such as the Output Hypothesis and the Noticing Hypothesis—acknowledge the fundamental role of input. In the case of the Output Hypothesis, the original claim was that output facilitates second language learning "sometimes, under some conditions" (e.g., Swain & Lapkin, 1995, p. 371). As for Noticing, the learner must notice items of interest in the input, again underscoring the primacy of input in driving learning (e.g., Schmidt, 1990).

Interest in the role of input fueled interaction research by Michael Long and many others. Interaction was never thought to be absolutely necessary for SLA, and its main role was (and still is) to increase the comprehensibility of input (e.g., Long, 1981, 1985). Paul Nation's work on vocabulary size and the accessibility of reading can also be seen as an offshoot of comprehensibility research (e.g., Hu & Nation, 2000). Nation recommends that learners should know 95%–98% of the vocabulary in a text to benefit most from reading it. This could be seen as an operationalization of the +1 in $i + 1$: The +1 should be no more than 5% of vocabulary that the learner doesn't know.

3.1.2 | Where are we today?

An updated version of the input hypothesis might be simpler than Krashen's version:

> The principal data for the acquisition of language is found in the communicatively embedded comprehensible input that learners receive. Comprehension precedes production in the acquisition process.

Given that all[5] major linguistic, psycholinguistic, and cognitive theories about L2 acquisition posit a fundamental role for input, perhaps Krashen did not oversell the input hypothesis. The observation that "Exposure to input is necessary for SLA" is characterized as just that—an observation about SLA that all theories must explain. It is not a hypothesis (e.g., Long, 1990; VanPatten, Keating, & Wulff, 2020). Generative linguistic theory sees input as triggering language-specific parameter settings as well as the instantiation of underlying principles. Usage-based approaches require a large sample of language in order for learners to associatively learn constructions. The declarative/procedural model emphasizes immersion-like input as the route to L1-like neurocognitive processing.

These theories differ on what they see as the useful data in the input, as well as what the cognitive mechanisms are that make use of the input. For generative linguists, learners' internal mechanisms look for indications of abstract properties of the language being learned, such as whether *wh-* elements move, whether overt subjects or null subjects are required, whether there is verb movement, and how agreement works (if there is agreement). For usage-based approaches, for example, relevant data are found in frequencies of not just individual items but also co-occurrences. The declarative/procedural model considers not just the amount of input, but also the type of input (incidental/immersion-like vs. explicit/instructed) as influencing the resulting representations.

Most theories agree that what the learner gets out of the input is not "rules" or "structures" in the sense in which textbooks present grammar. Instead, mental representation is more abstract and complex. One piece of evidence for this is that learners invariably know things about language that they have never been taught or even exposed to (see e.g., VanPatten, 2019). What is more, learners' mechanisms clearly cull input and filter it, which is why we see ordered development as discussed in the previous section on natural orders.

Because of the rejection of the input hypothesis, many researchers did not focus on "comprehensible input" as fundamental to acquisition. That is, this particular construct fell out of favor. More often than not, just "input" has been used, with the intention that it is somehow comprehensible or that somehow learners make sense of the communicative intent of what they are exposed to. VanPatten (2017) and VanPatten, Smith, and Benati (2020) use the term "communicatively embedded input" to underscore that learners are active interpreters of meaning and are seeking comprehensibility. "Primary linguistic data" has been used by some generative theorists, and in input processing, one sometimes encounters "data that learners are exposed to." Usage-based researchers have used "input data" and "language data." On the other hand, complexity theory has moved away from the idea of input because this term implies that learners are passive recipients of input. The term "affordances" (opportunities for learning from input) is preferred. When the input is present in the environment, the learner may actively process that input if it is interesting or useful.

Despite the absence of the term "comprehensible input" in contemporary research, it is still in wide use among language teachers. From 1990 to the present, the Teaching Proficiency through Reading and Storytelling (TPRS) community of language teachers has promoted both Krashen's theory and the term "comprehensible input." As the TPRS community grew and branched out into new techniques for providing learners with comprehensible input, many teachers started using the acronyms CI for comprehensible input and TCI (teaching with comprehensible input) for the kind of teaching they were doing (e.g., Slavic, 2015).

[5]Theories such as Skill Acquisition Theory (e.g., DeKeyser, 2007) and Sociocultural Theory are not theories about L2 acquisition—they refer to general human learning.

ACTFL, on the other hand, has not promoted the term "comprehensible input," preferring the terminology "interpretive communication" (National Standards in Foreign Language Education Project, 1999-present). On the other hand, the ongoing ACTFL project of carefully describing proficiency levels could perhaps be seen as an echo of the idea of $i + 1$. The Proficiency Guidelines (first published as ACTFL Provisional Proficiency Guidelines, 1982) describe a series of levels starting with novice (broken into sublevels low, mid, and high), intermediate low, mid, and high, advanced low, mid, and high, and superior. Using Krashen's terminology, a student's current proficiency level (e.g., novice mid) could be seen as i, and the next sublevel (novice high) could be seen as $i + 1$. This is not necessarily ACTFL's intention because the proficiency guidelines are more focused on learner output (oral proficiency) than on input, but the proficiency guidelines present yet another example of a very Krashen-like idea that is still being actively discussed using different terminology.

4 | IMPLICATIONS FOR LANGUAGE TEACHING

Given the update of Krashen's basic ideas as outlined above, the question that emerges is this: What are the implications for language teaching? Are they different from what he offered when he first launched the Monitor Model/Theory? As we see it, the implications are largely the same with a few additions. We will outline those implications here.

Because language as mental representation is the result of a complex interaction between communicatively embedded input and learner-internal mechanisms, and because there seems to be consensus that mental representation is the product of implicit processing and learning, two implications are clear. First, *learners need exposure to communicatively embedded input* in order for language to grow in their heads—and as Krashen has stated, this input should be comprehensible for it to be of use to the language-making mechanisms. In other words, learners should be actively engaged in trying to comprehend language and interpret meaning from the outset—but the language they are exposed to must be comprehensible to a large degree so that it is not mere noise. There is no particular prescription for what makes language comprehensible, which is why we use the term *communicatively embedded* input. If the input learners are exposed to is embedded in communicative events (e.g., conversation, storytelling), they and their interlocutors will work toward mutual meaning-making. For example, when learners signal noncomprehension, interlocutors will adjust what they say as they negotiate meaning with learners (e.g., Gass, 1997; Hatch, 1983). This negotiation generally results in more comprehensible input (e.g., Long, 1985). Thus, comprehensible input is a natural by-product of the attempt between learners and their interlocutors to effect communication. It is no different in the classroom. As VanPatten (2017 and elsewhere) has stated, instructors should talk *with* learners, *not at* them, and this is what makes input comprehensible in the long run. So, instead of an instructor stringing five or six sentences together in a beginning classroom, the instructor might engage learners in the content of meaning-making all along the way. We can compare in the following example.

Talking at: Okay, class. We're going to talk about what I did last night. First, I walked my dog for about thirty minutes. Then I prepared dinner. After that, I watched the news. Later, I called my sister, and finally, I read e-mail.

Talking with: Okay, class. We're going to talk about what I did last night. Does everyone know what last night means? [writes it on the board] Raise your hand if you don't know this word. [several students raise their hands]. Okay, last night means____ [gives equivalent in the

students' native language]. Everybody understand? Sure? Let's see. Today is Wednesday. So last night is what? [Tuesday!] Yes, Tuesday. Okay, so what I did last night. First, I walked my dog. Do you remember my dog's name? [Murphy!] Good memory. Yes, his name is Murphy. So, first I walked my dog Murphy. For how long did we walk? [students shrug, one yells out "ten minutes"] No, more than ten minutes. [someone says 30 minutes] Good guess! Yes, we walked for 30 minutes. So last night, first I walked my dog Murphy for 30 minutes. Then I...

A second implication is that *the explicit teaching, learning, and testing of textbook grammar rules and grammatical forms should be minimized*, as it does not lead directly or even indirectly to the development of mental representation that underlies language use (if the program wishes to develop explicit knowledge as a paramount goal and doesn't care about other goals such as communication or fluency, then and only then might explicit instruction play a central role). Instructors need to understand that the explicit learning of surface features and rules of language leads to explicit knowledge of the same, but that this explicit knowledge plays little to no role in language acquisition as normally defined. Explicit knowledge can play a role in learner self-editing, particularly of written compositions, and we leave the development of that topic to the vast literature on the development of compositional abilities and how a focus on "grammar" fits there, if at all (e.g., Bitchner & Ferris, 2012; Hyland & Hyland, 2019; Manchon & Matsuda, 2016). But for the classroom teacher, the time and energy that 20 years ago would have been dedicated to practicing grammar in some way should simply be redirected to whole-language activities where learners understand language and use it to communicate.

4.1 | There is no single methodology that combines communicatively embedded input with little to no explicit teaching of grammar

A variety of approaches incorporate the insights described in this paper, including immersion, content-based instruction, nontargeted CI (nontargeted means that no specific vocabulary or grammar structures/forms are the focus of instruction; rather, a new language to be used in communication is drawn from looking at pictures, movie clips, novellas, and other sources), TPRS, and input-based task-driven classes, among others. Of course, a byproduct of such approaches involves developing different goals and outcome measures, a point that is beyond the scope of the present paper. However, it is worth mentioning here that it is often the case that both instructors and scholars interpret "input-based instruction" to mean "teaching the same old thing a new way." Although one could attempt to teach textbook vocabulary and grammar with communicatively embedded and comprehensible input, this is not at all implicated by the basic findings of L2 research and is not a conclusion to be derived from what we have discussed in this paper. One reason for this position is that what winds up in people's heads bears almost no resemblance to textbook rules and forms—a point we have underscored several times in this paper. Another reason is found in the implications of ordered development, to which we now turn.

As we outlined earlier in this paper, learners come equipped with internal mechanisms that organize and guide language acquisition such that the development of mental representation proceeds in a fashion independent of external attempts to manipulate its development. Certain forms are acquired before others and there is staged development in the acquisition of particular "structures" and forms—just to mention two of the highlights of ordered development. For instructors to try to "implicitly" teach textbook vocabulary and grammar through input-based approaches is as doomed to failure as is explicit teaching and practice of the same.

By "doomed to failure" we mean that instructors will see no advantage to using input as a technique to teach the same old thing: Learners will exhibit ordered development in spite of such external attempts.

On a related note, we sometimes hear from instructors, "Shouldn't we use the natural order of acquisition to organize teaching, then?" The answer is, of course, "no" and the reasons are multiple. First, the natural order of acquisition has given way to a broader, more comprehensive idea—ordered development—as outlined in this paper. So there is no one organizing principle for how linguistic features are acquired over time. What is more, even if we returned to the more reduced concept of a "natural order," we do not have such orders sufficiently developed for all languages, for all structures, for all forms, and so on, to be of any use. Finally, given individual differences in the rate of acquisition, in a given classroom, learners may be at different points in ordered development—leaving the instructor with the vexing question of what to teach to whom and at what point in time. So *learners' "natural order" of acquisition should not be used to structure any kind of class syllabus if the goal is acquisition.*

Another comment regards the relationship between input-based and non-grammar-based approaches to instructed acquisition, on the one hand, and the development of oral proficiency on the other. Because of the negative reaction to Krashen's ideas in the 1980s, a good deal of world language teaching settled on the idea that oral proficiency was the result of some version of presentation + practice (e.g., Omaggio Hadley, 1986). As far as we can tell, this remains the dominant position today in teacher education programs, textbooks, and other sources. As a result, many instructors have been perplexed about how a focus on input (i.e., active listening and reading) could lead to oral proficiency where production is involved. Don't learners need to "practice" oral proficiency? A full discussion of the problems underlying this issue would take us well beyond the present paper, but we can say the following: A focus on input and interaction with that input does not mean that oral proficiency does not develop.

If we stopped for a moment to think about child language acquisition, we would see how this works. Children are actively engaged in interpreting meaning from the input that surrounds them. They interact with their interlocutors using the abilities and language they have at their disposal (i.e., first by babbling, then one-word responses and chunked phrases, then two words, and so on). Oral ability emerges as part of communicative events. This is why we stress input in this paper as *communicatively embedded* input. There is no suggestion in input-based instruction that learners sit passively and do nothing as they listen to an instructor. To be actively engaged means for a learner to indicate comprehension through whatever means that learner has. Just as in child language acquisition, this can be facial expressions, gestures, one-word responses, phrases, and so on. As the research has shown, oral communicative ability grows out of these interactions. *Communication in all of its facets (including productive oral communication) grows out of communicative interactions and events; it doesn't emerge from practice* in the traditional sense of the word (e.g., Day, 1986; Savignon, 1997). So the question, "Don't learners need to practice oral proficiency?" is evidence that what we know about both how the acquisition of language develops and how communicative abilities develop has not trickled down into teacher education programs or into professional development for veteran instructors.

A final comment on instruction regards something we often hear from teachers and curriculum developers alike. It involves the lament that there are only so many contact hours per week with students. Given the limited time, instructors feel the need to "teach all the vocabulary and grammar" so that students "get it." Unpacking this concern reveals two things. First, it suggests that instructors may believe that textbook vocabulary and grammar is what

needs to be learned, which we have repeatedly argued is not the case. Second, this concern of instructors also reveals a belief that acquisition happens or can happen via presentation + practice, another point we have argued is inaccurate. Instead, acquisition proceeds as a complex interplay between mechanisms that learners bring to the task of language acquisition and the kind of communicatively embedded input they are exposed to, as well as how they interact with that input. Research has shown that this process can successfully take place even in situations with extremely limited input; for example, half an hour a week (Cartford et al., 2015). In the end, although we understand instructors' concern regarding limited contact time, we also understand that acquisition is what it is and language is what it is; we can't make them into something they aren't. *Even when instructional time is very limited, communicative, input-based approaches are still the best way to grow learners' mental representation of language.*

Before we conclude, we would like to briefly mention the assessment of learners. There are no direct or even indirect implications for assessment based on the points we have raised here—especially if the point of assessment is to assign a student a grade in a language course. Instead, the implication is that the profession needs to engage in serious discussion about whether traditional grading in institutionalized education is even appropriate for language classes if their goal is to foster the acquisition and promote the development of communicative ability. It is easy to assess and assign grades if language is treated like other subject matter (e.g., an emphasis on explicit learning and the testing of what was learned). It is difficult to imagine how we would assess learners when the focus of the classroom involves an input-rich environment where communicative ability is allowed to evolve, responding to individual differences of learners, and explicit learning is minimized or perhaps absent. Indeed, perhaps new models for language education that are quite different from those for, say, history and math education, are in order; we leave that for the profession to place on an agenda for thoughtful scrutiny.

5 | CONCLUSION

In this paper, we have revisited three of the five major components of Krashen's Monitor Model/Theory: The acquisition/learning distinction, the natural order hypothesis, and the input hypothesis. We have shown that research since the 1970s has not demonstrated that the fundamental ideas involved in these three components are wrong. Where necessary, we have suggested slight modifications based on the accumulated evidence since the early days of L2 research. However, these modifications do not result in any rejection of the components. In a sense, the field has proceeded the way science does, taking the case of atomic theory and atomic structure as an example. Originally, atoms were proposed to be something akin to a miniature solar system with protons and neutrons at the center (e.g., "the sun") and electrons (e.g., "the planets") orbiting around this center. Research has shown that the essence of atoms is still there: Protons and neutrons at the "center" and electrons in the "periphery," but it has refined the structure to show that electronic orbits are not circular or elliptical like those of planets, but instead more erratic. At the same time, protons and neutrons don't just "sit there"; they jostle about and vibrate. What is more, science has gone on to explain quantum forces (and subatomic particles) that we did not know existed at the outset of atomic theory. Yet, the atom still exists. The structure of atoms and the theory about it were modified but the essence of the atom is still there: Protons and neutrons somewhere in the center and electrons in the periphery.

We have also outlined basic implications for language instruction based on not just Monitor Theory, but also on what the research has shown us since the 1970s. The implications are similar to those made by Krashen. We recognize that for many instructors and textbook writers/publishers such implications have seemed outlandish and will seem outlandish still. Yet, the facts are the facts. Our belief is that the basic and fundamental facts about acquisition—facts first hypothesized by Krashen some 40 years ago—seem outlandish only because language acquisition tends to be neglected in both teacher education and professional development. Sometimes science takes a while to catch on.

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