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Making Input Comprehensible through Accessibility: Connecting Krashen's Comprehensibility Hypothesis to Universal Design for Learning

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Abstract

Krashen's (1981, 1982) concept of comprehensible input being necessary for new language acquisition has not been discussed specifically from a lens of accessibility, particularly related to individuals with visual impairments. When considering the needs for instruction and materials for English language learners (ELLs) with visual impairments (VI), the universal design for learning (UDL) principle of representation, guidelines of perception and language and symbols, recommend that learners be offered options how information is displayed and provided and multiple media, including alternatives to visual information (CAST, 2024a). A qualitative descriptive study conducted with postsecondary English instructors of ELLs with visual impairments related to their use of inclusive materials and accommodations found that participants reported using inclusive materials and accommodations to be enabling and helpful to their students in accessing learning, and challenges in making effective accommodations led to lack of learning (Quiñones, 2025). In the study results, accessibility, as outlined by UDL principles and guidelines was noted as a necessary part of defining comprehensibility when considering input for ELLs with visual impairments. Proposal of an expanded definition of "comprehensible input" is made. Future research incorporating this new formal definition of "comprehensible input" including accessibility as a key component is recommended.

Keywords: accessibility, comprehensible input, English language learner, universal design for learning, visual impairment

1. Introduction

English language learners (ELLs) face many challenges in acquiring the language. One of these challenges is their ability to comprehend information in the target language. A key principle for second language acquisition for access and comprehension of content at a level suitable to assist learners in the learning process has been Krashen's (1981, 1982) comprehensible input (CI) hypothesis. However, for ELLs with disabilities, namely visual

impairments (VI), the concept of what might be considered comprehensible input requires further consideration beyond merely the level of input presented to learners. Notably, this consideration may include Universal Design for Learning (UDL). UDL provides principles and guidelines as "a set of concrete suggestions that can be applied to any discipline or domain to ensure that all learners can access and participate in meaningful, challenging learning opportunities" (CAST, 2024b, para. 1). In a qualitative descriptive study, Krashen's CI hypothesis and UDL were utilized as theoretical frameworks for research into "examining how instructors described the influence of their use of inclusive materials and classroom accommodations on comprehension and learning barriers for [postsecondary] ELLs with visual impairments" (Quiñones, 2025). In analyzing the results, the need to expand CI's definition to include accessibility emerged as a connection to a portion of the resulting themes. Here, the case is made for adopting this expanded definition of CI.

1.1 Theoretical Foundations

In the quantitative descriptive study of postsecondary instructors' perceptions of the influence of inclusive materials and classroom accommodations for ELLs with VI, framing the research in theories of language acquisition and those related to education for all was a necessary step. Krashen's (1981, 1982) comprehensible input hypothesis and the universal design for learning framework (CAST, 2024a) provided the frameworks upon which the study results were compared for students with these intersecting identities and their linguistic and disability-related learning barriers. The frameworks provided insight into the past influence of materials and accommodations on comprehension and barriers along with a basis for determining whether these continued to be relevant.

1.2 Comprehensible Input Hypothesis

Krashen, in his comprehensible input hypothesis, part of the monitor model, which debuted in 1981 and was officially named in 1982, proposed that language acquisition and literacy develop through comprehension or comprehensibility of messages or input that are provided via reading material or spoken input at an appropriate reading level relative to a learner's knowledge of vocabulary, which allows them to find success in understanding a text's main idea. Krashen (1981) emphasized that, for the greatest effect on acquisition, input must be understood or comprehended. That input primarily took aural or written forms but could include images or realia for beginners (Krashen, 1982). Krashen (1981) felt that comprehensibility could be achieved by providing input at a level slightly more complex than the learner's current level of acquisition, which he referred to as "i + 1" (p. 103). De la Garza and Harris (2017), in examining foreign language vocabulary acquisition, affirmed the importance of the level of input in assisting learners' language acquisition using a contextual approach and found that when input is too far beyond a learner's competence, their ability to acquire and retain that information diminishes. For Quiñones' (2025) study, further consideration of aural and written forms of input, as well as the connections of the CI hypothesis to the study's target population were vital.

1.2.1 Comprehensible Aural Input. Beginning with aural input, according to the CI hypothesis, to comprehend a message, the learner must focus on meaning over form (Krashen, 1982). Thus, it is unnecessary to comprehend every word of input as long as the basic message is understood. According to Krashen (1982) CI takes many forms, but a language learner can progress in their language acquisition, particularly with acquiring new vocabulary and pathways to oral production, when spoken input is provided at a level sufficient to facilitate a successfully conveyed message, Krashen (1982) cites caretaker speech and native-to-foreigner speech adjustments as evidence of this. Mason et al. (2009) confirmed that beginner adult language learners can acquire vocabulary through listening to

stories. Krashen's research (2013) later highlighted the value of reading aloud and storytelling instead of explicit vocabulary instruction for acquisition because of the exposure to vocabulary, grammar, and cultural information as well as learners' enthusiasm for these forms of input. Mason and Krashen (2018) found that listening to stories increased students' vocabularies. For output, Xu (2011) found that listening comprehension development is a significant precursor of oral language production. Thus, the case for comprehensible aural input is well-established.

1.2.2 Comprehensible Written Input. In addition to aural input, in the CI hypothesis, written input is also vital. Krashen (1989) discovered that one of the primary means for learners to acquire vocabulary and spelling is reading, and he advocates for free reading as an instructional tool. Vespoor and Winitz (1997) supported Krashen's views on a lexical approach to input, where the findings showed that CI is a successful and effective instructional strategy, particularly for intermediate language learners when lexical knowledge is a considerable part of their language education. Mason and Krashen (2018) also determined that the amount of time engaged in self-selected reading significantly predicted gains on the Test of English for International Communications (TOEIC). Krashen (2004, 2010) later combined the CI hypothesis with the Goodman/Smith reading hypothesis, which claims that "we learn to read by reading" (p. 11), to form the comprehension hypothesis, which added the elements of interest and pleasure to comprehensibility for written input. Comprehensible written input forms a vital aspect of the CI hypothesis.

1.2.3 Comprehensible Input Hypothesis: Connection to ELLs with VI. Applying the CI hypothesis to working with ELLs with VI requires consideration of a format that is comprehensible but also accessible, such as auditory, tactile, large print, or braille. According to Ramos and Krashen (2013), understanding what is heard or read allows the learner to learn grammar, vocabulary, and spelling gradually. Output production in the form of speech and writing results from language acquisition, which occurs mainly due to comprehensible input (Ramos & Krashen, 2013). For instructors of postsecondary ELLs with VI, finding the accessible form of comprehensible input at the appropriate level becomes the primary goal in application of this hypothesis.

Finding an accessible form of applying the CI hypothesis with aural input should consider the types of aural input learners are exposed to when working with ELLs with VI. For English language instructors of postsecondary students with VI, providing understandable auditory input to learners has often been considered a primary means of instruction (Jedynak, 2018). However, since learners with VI rely on auditory input more, along with other sensory input (Fansury et al., 2019), and they cannot simultaneously examine the speaker's facial expressions, gestures, and immediate context, input's comprehensibility may include significantly more explanation and description than is necessary with fully sighted students. Postsecondary English language instructors' perceptions of which inclusive auditory teaching materials and classroom accommodations influence learners' comprehension and learning barriers further illuminate the CI hypothesis and its applicability to ELLs with VI (Quiñones, 2025).

Considerations of aural input also lead to explorations of the concept of literacy for ELLs with VI. For this population, the definition of literacy includes other media in addition to printed text and considerations of level also apply. According to Wang & Said (2014), the four primary media for literacy development for individuals with VI are using standard print enhanced via lighting adaptations and magnification, large print, braille, or auditory materials. For an ELL with VI, literacy involves obtaining access to information, allowing for decoding, or finding the meaning of messages, but varying modes of communication can

facilitate this (Wang & Said, 2014). Guinan (1997) found that for braille users, users' proficiency with braille impacted the level of input required for comprehensibility. Namely, if the ELL with VI were learning to read braille while simultaneously acquiring English, the level of the text might need to be at *i-1* rather than *i+1* to aid in fostering literacy. Conversely, for learners proficient in their primary form of literacy, providing input at the *i+1* level would not, in theory, present issues. Guinan (1997) acknowledged the Krashen's (1982) guidance in the CI hypothesis for the level at which material is presented but proposed that the nature of an ELL's visual impairment could make materials at the *i+1* level impractical. In short, for postsecondary ELLs with VI, how input becomes comprehensible, particularly related to reading, requires considerations of literacy beyond the text's level. Thus, accessibility to comprehensible "written" input requires consideration of multiple formats for ELLs with VI.

1.3 Universal Design for Learning

The case for comprehensible, accessible input is also found in the *Universal Design for Learning Guidelines* (CAST, 2024a). UDL consists of three core principles and nine guidelines. Each guideline has a subset of considerations. For ELLs with VI's instructional and material needs, the most relevant support is found in the principle of designing multiple means of representation, the design options for the guidelines of perception and language and symbols, and their subsequent set of considerations (CAST, 2024a). The UDL considerations for the guideline of perception suggest that instructors "support opportunities to customize the display of information (1.1)", "support multiple ways to perceive information (1.2)," and "represent a diversity of perspectives and identities in authentic ways (1.3)" (CAST, 2024a). The guideline of language and symbols addresses the need for multiple forms of representation being presented to learners (CAST, 2024a), and three of the five considerations are vital for ELLs with VI. A brief background to the model and further explanation of the relevant principle, guidelines, and considerations, along with their relevance to the study (Quiñones, 2025) are discussed in the subsequent sections.

1.3.1 Background to UDL. The UDL guidelines and the three core principles were first developed by Rose, Meyer, and colleagues at the Center for Applied Special Technology (CAST) in the early 2000s. The three core principles are design of multiple means of engagement, representation, and action and expression (CAST, 2024a). Although universal design concepts were previously included in the Assistive Technology Act of 1998, Edyburn (2005) stated that it was not officially defined in federal special education laws until 2004, when the Individuals with Disabilities Education Act (IDEA) was reauthorized. The first official federal legal definition of "universal design for learning" was in the 2008 Higher Education Opportunity Act (Meyer et al., 2014). Throughout the years, UDL has evolved into an internationally recognized framework that benefits all learners but particularly historically underserved populations (Meyer et al., 2014). It is represented as "a tool that offers a set of suggestions that can be applied to reduce barriers, sustain and honor learners' multiple identities, and maximize learning opportunities for every learner" (CAST, 2024b, para. 7). Today, the UDL framework exists as a scaffolded model of the three core principles, guidelines for each principle and considerations for each guideline.

1.3.2 UDL Principle: Design Multiple Means of Representation. The UDL principle of designing multiple means of representation is based on the belief that learners are unique in how they perceive and make meaning from information, and because of this, not every form of representation will work well for every learner (CAST, 2024c). Therefore, it is essential to design different ways of representing information to account for each learner's needs and preferences. The UDL principle of designing multiple means of representation has three

guidelines associated with it: perception, language, and symbols, and comprehension. However, it is primarily the guideline of perception, two of its considerations, and three from the guideline of language and symbols that are relevant to the present discussion.

Under the UDL principle of representation, the first guideline is designing options for perception. This guideline is built on the belief that imperceptible information cannot be learned, and formats requiring additional effort and assistance make learning difficult (CAST, 2024d). Thus, important information must be made equally perceptible to all learners via presenting the same information multimodally or via user-adjustable formats (CAST, 2024d). This guideline emphasizes universal accessibility to information, specifically for those with sensory or perceptual impairments (CAST, 2024d). ELLs with VI fall into this category.

The guideline of designing options for perception consists of three considerations (CAST, 2024a), of which the first two are the most relevant to this discussion. The first consideration is that learners should be offered means of customizing how information is displayed via flexible, adjustable materials (CAST, 2024d). Suggestions for flexible, adjustable materials can include using digital materials that customize the size, contrast, color, volume or speed, layout, or font via which information is presented (CAST, 2024e). The second consideration is that information should be presented to allow for multiple means of perception, not merely visuals, images, graphics, animations, video, text, or sound (CAST, 2024f). Alternatives for each format presented should be available to those who cannot access the original format, which aligns itself with the needs of ELLs with VI.

Under the UDL principle of representation, the second guideline is designing options for language and symbols. This guideline is premised on the idea that learners have differing abilities to use varied forms of representation and inequalities can occur when only one form of representation is utilized (CAST, 2024g). Using multiple representations of information is encouraged to facilitate not only "accessibility, but [also] clarity, comprehensibility, and creating a shared understanding for all learners" (CAST, 2024g, para. 1). This guideline aligns itself with the concept of making input comprehensible for the learner.

The guideline of designing options for language and symbols contains five considerations (CAST 2024g), of which the first, second, and fifth are the most relevant to the present discussion. The first consideration (2.1) is the suggestion that instructors find ways to "clarify vocabulary, symbols, and language structures" (CAST, 2024g). The aspects of this that apply most critically to ELLs with VI would be providing alternative text descriptions and embedded support for vocabulary and symbols (CAST, 2024h). The second consideration (2.2) is that decoding of text, mathematical notation, and symbols should be supported (CAST, 2024g). This can be accomplished through text-to-speech, automatic voicing, and digital text with accompanying voice recordings and multiple representations (CAST, 2024i). The fifth consideration (2.5) is that information should be illustrated through multiple media (CAST, 2024g). This can be accomplished by providing multiple representation formats beyond text alone (CAST, 2024g). ELLs with VI often need these additional options.

1.3.4 UDL Principle of Representation's Connection to ELLs with VI. While all three UDL principles have corresponding guidelines and considerations, for English instruction of postsecondary ELLs with VI, the most relevant is the principle of providing multiple means of representation, related to comprehension and learning barriers. In a study about visually impaired postsecondary students' graphical material access, Butler et al. (2017) highlighted the vital role of UDL guidelines in providing high-quality accessible materials to all learners. The first UDL guideline under the principle of representation, perception, and the second guideline, language and symbols, offer relevant considerations about provision of materials in accessible formats that allow for perception and fostering comprehension through multiple

media (CAST, 2024a). Examples of these considerations include provision of materials in multiple formats such as digital, large print, or braille, and materials that supply additional explanations and representations of content to enable comprehension of the concept being learned. When working with postsecondary ELLs with VI, UDL provides a framework for approaching instruction, and alignment with the concept of making information comprehensible.

2. Materials and Method

For method and design, a qualitative descriptive study was conducted by Quiñones (2025) with postsecondary English instructors (PEIs) in the United States to describe how they perceived the influence of their use of inclusive materials and classroom accommodations on comprehension and learning barriers for ELLs with VI. Qualitative methodology is utilized to address inquiries related to perceptions, definitions, and experiences and encompasses collection, organization, description, and interpretation of information in written, visual, and spoken forms (Hammarberg et al., 2016). The choice of a descriptive design was chosen as a means for describing a phenomenon with thick and rich description from insider perspectives (Bradshaw et al., 2017), specifically English instructors' perspectives. Quiñones'(2025) study addressed inquiries of perceptions and experiences through detailed insider descriptions.

For the qualitative descriptive study, Quiñones' (2025) utilized two research questions. The first research question was "how do [PEIs] describe the influence of their use of inclusive materials on comprehension and learning barriers for ELLs with visual impairments?" (Quiñones, 2025). The second research question was "how do [PEIs] describe the influence of their use of classroom accommodations on comprehension and learning barriers for ELLs with visual impairments?" (Quiñones, 2025). The basis for the first assumption in formulating the research questions was Krashen's (1981) comprehensible input hypothesis: namely, that instructors need to present ELLs with comprehensible input to influence successful language acquisition. The second assumption, based on UDL principles (CAST, 2024a), was that presenting ELLs with VI with comprehensible input is achievable via inclusive materials and accommodations which remove the barriers to accessing input. Thus, the combination of the comprehensible input hypothesis and the UDL framework's principles (CAST, 2024a) helped inform the research with their focus on material and instruction's comprehensibility and accessibility in removing learning barriers.

The target population for Quiñones' (2025) study, referenced in the research questions, consisted of PEIs who had taught ELLs with visual impairments within the United States. The study's data collection consisted of an online questionnaire, artifacts, and semi-structured interviews. A convenience sample of participants were obtained via posts on professional education association message boards and snowball sampling from participant referrals. Data collection began with participants completion of a researcher-designed, field-tested, open-ended electronic questionnaire related to both research questions. Participants were provided the option to submit artifacts of materials they had used on the questionnaire. Participants that completed the questionnaires and provided consent were contacted for individual, semi-structured, follow-up interviews. Data from the questionnaires and interviews was used to answer both research questions.

The qualitative data collected from Quiñones' (2025) study were analyzed via the six phases of thematic analysis (Braun & Clark, 2006). The open-ended questionnaire responses, interview transcripts, and artifact descriptions were coded both deductively and inductively with descriptive codes until the code saturation was reached (Quiñones, 2025). Code saturation was defined as the point at which new issues and codes ceased to be identified

(Hennink et al., 2017). Three main themes and seven subthemes emerged and were refined from the data.

3. Results

The qualitative descriptive study by Quiñones (2025) obtained a total of 24 participants although only 16 fully completed the questionnaire, seven were interviewed, and six artifacts were collected. In terms of participant demographics, two thirds (66%) of the participants had worked with ELLs with VI in urban settings, as opposed to suburban or rural settings and the majority had completed master's degrees related to teaching English. All but one (95%) participant reported having five years or less of experience with teaching ELLs with VI, although the majority of questionnaire participants (87%) had more than six years of general English teaching experience. Interview participants reported working in a variety of contexts including universities, intensive English programs, adult education programs, and vocational rehabilitation.

Moving from questions of demographics to the research questions, 68% of the participants reported using inclusive materials and 78% of participants reported using classroom accommodations with ELLs with VI (Quiñones, 2025). Participants reported using 15 different types of inclusive materials and 13 types of classroom accommodations with ELLs with VI, indicated in Table 1, along with the number of sources they were mentioned in. Participants' descriptions of the perceived influence of these materials and accommodations resulted the first two themes: (1) inclusive materials and classroom accommodations are enabling to comprehension and reduction of learning barriers and (2) inclusive materials and classroom accommodations are helpful for comprehension and reducing learning barriers for postsecondary ELLs with VI (Quiñones, 2025). The third theme, related primarily to using accommodations, was the description of "some attempts to use classroom accommodations as challenging, at instructional, administrative, and individual student levels, for promoting comprehension and reducing learning barriers" (Quiñones, 2025, p. 174). Overall, the study yielded a list of materials and accommodations and three themes related to their use.

Table 1: Types of Materials and Accommodations Used with ELLs with VI reported by Quiñones (2025)

Category of Item	**Type of Item Used with ELLs with VI**	**# of Sources Mentioning Item**
Inclusive Materials	1. Braille materials	13
	2. Digitally accessible files	8
	3. Large print materials	8
	4. Audio files	8
	5. Magnification tools	6
	6. Printed materials	6
	7. Computer screen reader software	6
	8. Slides	4
	9. Flashcards	4
	10. Images - materials	2
	11. Visual aids	2
	12. Accessible websites	2
	13. Realia	2
	14. Font types - materials	1
	15. Double-spaced text	1
Classroom Accommodations	1. Use of large print or braille	12
	2. Ensuring accessibility	7
	3. Use of tactile items	7
	4. Verbal descriptions	6
	5. Instructional style modification	6
	6. Classroom layout and organization	6
	7. Recorded audio	4
	8. Peer partner	3
	9. Testing accommodations	3
	10. Workbook responses	3

	11. Individual support during class	3
	12. Additional time	2
	13. Direct questions	1

4. Discussion

Quiñones' (2025) study yielded results that establish the case for the extension of Krashen's (1981, 1982) comprehensible input definition in combination with UDL principles and guidelines (CAST, 2024a). Krashen's (1981, 1982) comprehensible input hypothesis combined with UDL guidelines (CAST, 2024a) provided the framework for an examining the influence of materials and accommodations on comprehension of materials and general learning barriers for ELLs with VI. The findings by Quiñones (2025) demonstrated strong alignment with the comprehensible input hypothesis (Krashen, 1981, 1982), particularly in the first two themes, and inversely for the third theme. These themes also provided evidence as to the relevance of UDL guidelines in establishing accessibility as an element of comprehensibility. The themes and alignment with theory will be discussed in the subsequent sections.

4.1 First Theme's Alignment with Theoretical Framework

Quiñones' (2025) first theme, which established that access to information enabled comprehension, aligns itself with the CI hypothesis and UDL in both the research questions and results, particularly related to the need to mitigate learning barriers through facilitation of comprehension for ELLs with VI. Informing the research questions, Krashen's (1981) CI hypothesis established the need for input presented to a language learner to be comprehensible in order for acquisition to successfully occur, but the format of CI was not specified. In Krashen (1982), CI was categorized as taking auditory and written forms. Thus, the space for provision of input in at least two media overlaps somewhat with UDL's guidelines and considerations related to designing options for perception as well as language and symbols (CAST, 2024a). These were later compared to the results.

In the results (Quiñones, 2025), the first theme found that English instructors perceived use of inclusive materials and accommodations to be "enabling" to comprehension and reducing learning barriers for postsecondary ELLs with VI. Quiñones (2025) found that inclusive materials used that were most commonly reported to have an "enabling" influence on comprehension and learning barriers included braille materials, large print materials, and digitally accessible files. Use of large print or braille was the most commonly reported classroom accommodation for postsecondary ELLs with VI (Quiñones, 2025). Utilizing these examples alone, the case can be made that use of inclusive materials and classroom accommodations, which align with UDL guidelines (CAST, 2024a) when provided to all learners, provides functional access to information, therefore making comprehension of said information possible for the learner.

Making information accessible for the learner plays a large role in the comprehensibility of input. According to one participant, the availability of braille texts provided a mode of accessing language as it related to reading skills (Quiñones, 2025). While access to information does not guarantee that it will be presented at a comprehensible level, accessibility of information "enables" the learner to potentially comprehend the input. UDL guidelines (CAST, 2024a) provide the means by which input can be made accessible to all learners. In fact, another participant specifically acknowledged that making materials

accessible in multiple formats enriched the learning environment for all the learners, not just the ELL with VI (Quiñones, 2025). While most participants did not make accommodations available to the entire class, a few participants did and highlighted the enabling factor of these actions. The connections with CI and UDL are evident when access to information enables comprehension.

4.2 Second Theme's Alignment with Theoretical Framework

Quiñones' (2025), in the second theme, which established that multiple means of access to information helps learners' comprehension, found that PEIs perceived use of inclusive materials and classroom accommodations as "helpful" for comprehension and reduced learning barriers for ELLs with VI. This theme showed functional alignment with Krashen's (1981, 1982) CI hypothesis and UDL (CAST, 2024a). In finding that inclusive materials and accommodations like providing accessible formats for materials, such as large print, braille, digital, audio, and tactile, were "helpful" for reducing barriers for learning, the implication that accessibility to input is a necessary precursor to comprehension was once more highlighted, thus linking to the CI hypothesis. UDL guidelines (CAST, 2024a), and the Quiñones (2025) results suggest that provision of multiple means of accessing input is helpful to every learner. An example of this came from an interview participant who indicated the benefit of uploading course materials to the online learning management system to make them accessible not only to the ELL with VI but also for the benefit of the entire class (Quiñones, 2025). Thus, helping to make input accessible for one student can help all students in their quest to comprehend the input presented to them.

4.3 Third Theme's Alignment with Theoretical Framework

The third theme from Quiñones (2025) supports the concept of CI from the inverse position, namely that lack of access to input leads to lack of comprehension. The third theme found some English instructors encountered challenges in making accommodations for postsecondary ELLs with VI, which they reported to have had a detrimental effect for students. The unsuccessful attempt at accommodations proved to be a learning barrier that impeded comprehension of input rather than facilitating it. Some examples of these unsuccessful attempts were when braille materials were not produced in time for the lesson they were geared for, when verbal descriptions used vocabulary that the learner did not understand, when the attempt to use tactile objects for an activity failed to properly estimate the difficulty and amount of time needed for the task, and the lack of availability of testing accommodations (Quiñones, 2025). In Quiñones, (2025), one participant noted that instances when class materials were unavailable in an accessible format, such as braille, negatively affected the ELL with VI's ability to participate, engage, and benefit from the lesson. For Quiñones (2025), participants' failure to provide access to the input in a comprehensible format led to a lack of comprehension and ultimately a lack of learning, inversely supporting Krashen's (1981, 1982) CI hypothesis, as well as supporting the need for UDL guidelines (CAST, 2024a).

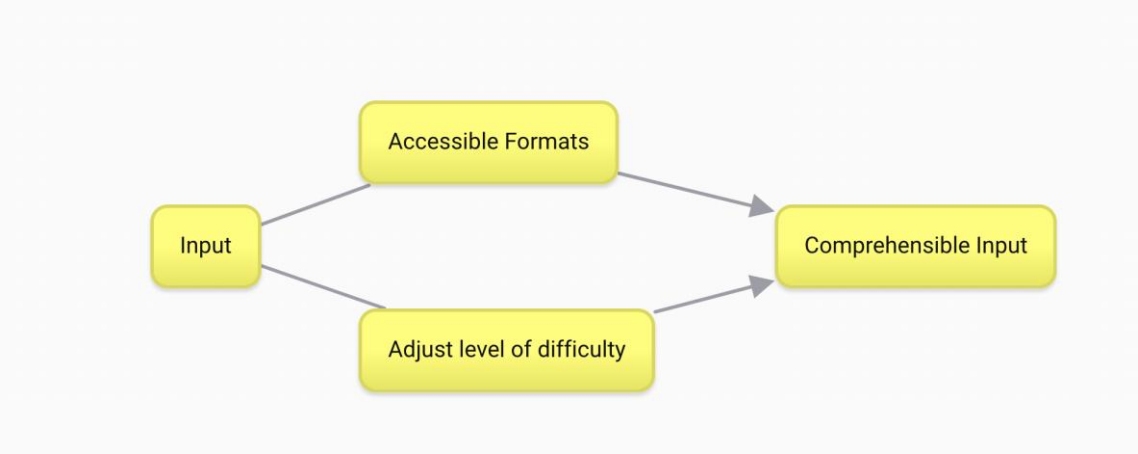
Lack of access to CI prompts reference to a need mentioned by Krashen (1982), that "the comprehension requirement suggests that *the main function of the second language teacher is to help make input comprehensible*, to do for the adult what the 'outside world' cannot or will not do" (p. 64). A way for making input comprehensible for beginners, suggested by Krashen (1982), was using realia and pictures, which have the potential for increasing accessibility for some ELLs with VI. Another way to do what the outside world cannot do in pursuing CI for postsecondary ELLs with VI is to find ways to make information accessible to all learners, which directly links to the principles of UDL.

5. Conclusion

The original CI hypothesis indicated the need for presentation of input, mainly in auditory or written form, to be made comprehensible to the language learner, notably at a level slightly above their level of mastery (Krashen, 1982). UDL principles and guidelines (CAST, 2024a) propose considerations for the many formats that information, or input, can be presented learners so they can access and create meaning from the information in the format that suits them best. While Krashen (1982) did not directly address the issue of access to information in his definition of comprehensibility, his suggestion that language teachers hold responsibility to assist in making input comprehensible, lends itself to suggesting that part of the assistance teachers provide can begin with information in an accessible form, which is a natural connection to how UDL guidelines can inform the definition of CI. Additionally, for Quiñones (2025), the finding that English instructors perceived their use of inclusive materials and accommodations for postsecondary ELLs with VI as "enabling" and "helpful" as well as finding the ineffective use or lack of accommodations to be detrimental to comprehension and reducing learning barriers suggests that access may be just as important as level in fostering comprehension of input.

In considering the ways in which CI can be reasonably connected to UDL, particularly in the context of working with language learners in the intersection of language acquisition and disability, with the findings from Quiñones (2025), the case can be made for expanding the definition of CI to include accessibility. Providing input in a format that is accessible to the learner allows the learner to be able to determine whether that input lies within their range of experience, thus allowing for comprehension to potentially occur. While the level of the input presented to the learner ultimately influences comprehension, lack of access to said input makes comprehension impossible. For example, presentation of a printed text to an individual who has no functional vision makes comprehension an impossibility. However, the presentation of said text in a format, such as audio, braille, or perhaps a digital file which could be converted to audio or read through a braille keyboard, as recommended by UDL guidelines (CAST, 2024a), provides access, which makes it functionally possible for the learner to potentially comprehend the text. Another example would be the presentation of a multi-colored graph or bar chart to a student with colorblindness. The addition of labels, symbols, or other means of distinguishing the significance of each portion of the chart would provide access, which would then facilitate comprehension. Thus, in future considerations of the definition of CI, it is proposed that for language acquisition to occur, input must be presented in a way that is accessible and at a level comprehensible to the learner (see Figure 1). Embracing the UDL guidelines (CAST, 2024a) provides a pathway to accessibility for all language learners as a means of facilitating said comprehension.

Figure 1: From Input to Comprehensible Input



Source: Created with Bubbl.us

5.1 Recommendations for Future Study

Given that an expanded definition of CI for language acquisition would require promoting accessibility as a part of facilitating comprehension, future study should consider how best to make input accessible to all learners, but especially intersectional learners for whom providing access to materials requires additional considerations, for example ELLs with VI. Incorporation of a model of universal inclusion theoretically eliminates the need for individual accommodations (Collins et al., 2019) and applying UDL principles as a general framework to accessibility for language instruction could provide the means for making input comprehensible for all language learners. Instructors should be encouraged to fully embrace and incorporate UDL principles and guidelines (CAST, 2024a) into their instructional practices. Future research should evaluate efforts towards universal inclusion, including an expanded definition of CI, and the effects on comprehension for all student demographics, including those with intersectional identities. Adoption of a fully inclusive model where all students would benefit from the improved access to information, eliminating the barriers to input and allow for the possibility of comprehension is the ideal.

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