Traditional methods of both first and second language teaching have commonly relied on simplification, restricting the range of language forms and functions to be learned and then practicing those forms to achieve mastery. These methods, however, fail to consider seriously the questions of how language develops in natural contexts, what language proficiency consists of, and whether simplification facilities proficiency. Jim Cummins (1981, 1989) has argued that two variables, context and cognitive demand, may be used to describe various kinds of language proficiency. He distinguishes between conversational proficiency, which is context-embedded and cognitively-undemanding language, and academic proficiency, which involves context-reduced and cognitively-demanding language. His research has shown that it takes immigrant students about 2 years to develop conversational proficiency in a new language, but 5 to 7 years to achieve academic proficiency. From this view of the development of language and the nature of language proficiency, attempts at simplification make learning more difficult. (MDM)
WHAT'S SIMPLE IN SIMPLIFIED LANGUAGE?

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Introduction

Various methods for teaching second language have been based on the assumption that learning is made easier by somehow simplifying what it is the student must learn. In the audio-lingual method (ALM), for example, dialogues are carefully constructed to contain only certain verb tenses and specific syntactic structures. In Suggestopedia each session focuses on particular vocabulary items. In notional-functional approaches, the language in a particular lesson may be limited to forms used for apologies or greetings. While the basis for simplification is different in each case, the underlying assumption is the same: language is easier to learn if the teacher or materials writer limits some aspect of the language for the learner.

Simplification is not unique to second language methods and materials. The programs designed to teach school literacy are also limited in the hope that narrowing what the student must learn will make the task of learning easier. The clearest case of materials simplification occurs with basal reading programs. In these programs, stories are often written to contain a restricted range of vocabulary or syntactic structures (Goodman, Shannon, Freeman and Murphy, 1988).

Those who develop methods or materials that simplify language often justify the limitations by observing that children developing their first language or people learning a second language produce what appear to be simplified language forms. For example, children starting to write often use one letter to represent a whole word or, later, a whole syllable. In the same way, children beginning to speak their first language, as well as students of a second language, may omit function words and rely on nouns and verbs, leaving off inflections.

Although the language children and second language learners produce differs from conventional adult forms, this does not imply that these learners have simplified the language. Simplification involves having a full command of the language and then choosing to limit the forms or functions to be used. Simplification is what materials developers and methods writers do. It is not what children and second language learners do. Furthermore, one must know a great deal about language to make it simpler without making it artificial, inauthentic, and
harder to make sense of. The process of simplification often makes learning harder and creates misconceptions about language.

Language develops from whole to part. Learners begin with a sense of the whole and gradually differentiate out the parts as they build a sense of the structure. This helps account for early spelling or speech production that is limited, spellings where one letter represents a whole word, or speech in which one word represents a whole idea. Over time, children and second language learners are able to attend to and represent more details. In writing, children use more letters for each word, and in speech, language learners use progressively more words to present an idea. During this process, what learners need is an enriched context that supports their efforts to make sense out of what they are learning. Teachers can support learning by keeping students engaged with functional language and helping them see that language can make sense.

The Goodmans have elaborated an important dichotomy in learning, particularly language learning. Invention, personal construction of language and concepts, is the creative force in all learning. Learners invent rules, grammars, concepts, schema, and ways of organizing new experiences and seeing their world. But they do this within a social world that provides conventions for these same functions. As the personal inventions encounter social conventions, a tension develops which eventually results in an equilibrium, and learning advances. And in a broader sense all social conventions start with personal inventions, and all inventions draw on the resources of the conventions of the social community (Goodman, 1991).

Second language learners' inventions show the influence of their first language and primary culture, that is, they use these as resources in inventing the language and culture they are moving into. But they must experience whole second language texts in authentic contexts to experience fully the conventions of the new language and culture. Presenting children struggling to become literate in their first language with simplified, artificial texts or presenting second language learners with inauthentic, simplified language is not helpful. In both cases we need to encourage invention and help our pupils to test their inventions against real language conventions, not distorted ones we create in the name of simplification.

When teachers organize classrooms and adopt practices that present authentic language in rich contexts, learning the conventions of language becomes easier. In the sections that follow, we consider in more detail the effects of an enriched context on the acquisition of conventional language.
Cummins View of Language Proficiency

Simplification of texts or tasks is generally designed to promote the development of language proficiency and academic achievement. Two important questions, then, are "What is the nature of language proficiency?" and "Does simplification lead to higher levels of proficiency?" Cummins (1981, 1989) has differentiated between two kinds of language proficiency. Conversational proficiency is the ability to use language in face to face communication while academic proficiency is the ability to carry out school related literacy tasks. To explain the difference between academic and conversational proficiency, Cummins developed a theoretical framework that places any instance of language into one of the four quadrants of the chart presented here as Figure 1.

Cummins found that it took immigrant students about two years to develop conversational proficiency (quadrant A) but five to seven years to reach grade level norms in academic tasks (quadrant D). A closer examination of the two scales Cummins uses to define language proficiency provides useful insights into questions of the effects of simplification on increasing proficiency.

Figure 1 (Cummins, 1981, p. 12)
Context-embedded and Context-reduced Language

In Figure 1 the horizontal scale places instances of language use along a continuum from context-embedded to context-reduced. Cummins describes context-embedded communication as deriving from "interpersonal involvement in a shared reality that reduces the need for explicit linguistic elaboration of the message" (1981, p. 11). In context-reduced communication, on the other hand, "that shared reality can not be assumed and thus linguistic messages must be elaborated precisely and explicitly" (p. 11). Cummins’ continuum of context-embedded to context-reduced reflects the range from conversational language to academic language, which requires "the ability to make complex meanings explicit in either oral or written modalities by means of language itself rather than by means of paralinguistic cues" (Cummins, 1980, p. 30).

Cummins emphasizes that in order to facilitate the development of academic proficiency, teachers must begin by providing context-embedded instruction: "academic growth will be fostered by context-embedded instruction that validates students’ background experiences by encouraging them to express, share and amplify these experiences" (p. 29). Rather than simplifying language, then, Cummins suggests that the role of the teacher is to embed language in meaningful context, that is, to provide authentic language events.

Providing Context to Support Language Development

One way to embed language in context is to provide the kind of extralinguistic support found in authentic language use. For example, if two children on the playground are talking about who is going to use the swing first, their conversation is embedded in the situational context. The extralinguistic cues include objects such as the swing and actions such as pointing as well as gestures and intonation cues.

Second language teachers know that the greater the contextual support provided by objects and actions, the lower the necessity for students to rely solely on their new language itself. In traditional language classes teachers frequently provide extralinguistic cues by developing lessons around things and people found in the classroom including the teacher and students themselves. Further, teachers may bring objects from home into the classroom or ask students to bring things in to talk about. "Show and tell" is popular in both mainstream and ESL classrooms with good reason.
When conversations are about things or people that are not present, teachers can still provide context by bringing in pictures that show people and places outside the classroom. If they are reading to students, they may use big books that contain illustrations all the students can see. Acting out situations that do not occur naturally in the classroom is another way teachers can provide context. Such role play allows students to communicate without having to rely solely on the words that are spoken. Further, teachers may use gestures, such as holding a hand to their ear to mimic talking on the telephone, and, in this way, use gestures to enrich the context.

In some cases the only context available is linguistic. Cummins uses the term "context-reduced" rather than "decontextualized" to describe cases in which the primary source of context is the language itself. He recognizes that language offers a range of possible contextual support. The more cohesive and coherent the language is, the easier it is to understand. Unadapted stories are usually easier to understand than simplified texts. When texts are simplified by using readability formulas that measure word or sentence lengths, words that connect ideas are often omitted to produce shorter sentences. As a result, attempts at simplification actually make texts more difficult to read by making them less cohesive and providing readers with fewer cues.

An expository text or a lecture is easier to follow if there is an introduction that outlines the main points. Stories are easier to comprehend if they follow a familiar pattern. Children who have heard many stories learn these patterns. Often stories begin with "Once upon a time...", a problem arises and usually there is a resolution with a happy ending. This intertextuality makes each subsequent text more predictable. Stories that are simplified violate text structures and are less predictable.

Teachers of second language students may also use the students' first language to provide contextual support for the second language. Bilingual teachers often use a method called preview, view, and review. In the first phase, they preview the lesson in the students' first language. This helps ensure that the students understand the big picture. It helps them follow the "view", the actual lesson conducted in their second language. Finally, the teacher may provide additional context for the lesson by reviewing the main concepts again in the first language.

A summary of the kinds of possible contextual support for communication is represented in Figure 2.
Language

<table>
<thead>
<tr>
<th>Context-embedded</th>
<th>Context-reduced</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extralinguistic cues</strong>&lt;br&gt;provided by situation, objects or actions.</td>
<td><strong>Linguistic cues</strong>&lt;br&gt;provided by use of cohesive, coherent language.</td>
</tr>
<tr>
<td>Teacher uses role play realia, or pictures, and gestures.</td>
<td>Teacher uses stories with predictable patterns, outlines, and story maps.</td>
</tr>
<tr>
<td>Teacher supports students’ first language</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2

This figure suggests that teachers facilitate language learning when they keep authentic language in context by providing either extralinguistic or linguistic cues. Simplification, on the other hand, only serves to reduce the context, and this makes learning more difficult. The importance of the role of context in developing language proficiency becomes more apparent when we examine the way in which context is related to cognitive demand.

Cognitively Demanding Language

The second dimension Cummins uses in Figure 1 to define language proficiency is a continuum from cognitively-undemanding to cognitively-demanding. Cummins explains that this continuum "is intended to address the developmental aspects of communicative competence in terms of the degree of active cognitive involvement in the task or activity" (p. 12). At an early stage, an activity may require a high level of cognitive involvement. Over time, as the task is mastered, the activity becomes more automatic, and the cognitive demand lessens. The scale is intended to be developmental in that a task that is demanding at one stage becomes less demanding at a later stage. For example, certain aspects of phonology or syntax are very demanding for a three year old but relatively undemanding for a six year old. In the same way, when a person acquires a second language, tasks that are at first cognitively demanding are later less demanding.
Cummins equates cognitive demand with the amount of conscious attention required by a task. This aspect of proficiency is developmental in that familiarity with a task makes it less demanding. For example, when learning to drive a car, a person must focus a great deal of conscious attention on details such as steering, engaging the clutch, and shifting. Fairly soon, these tasks become automatic, and the driver’s mind is freed to concentrate on other matters. After a long trip, we might arrive at our destination having solved a complex academic problem and realize that we can scarcely remember any of the actual details of driving the car. Because we drive frequently, driving occupies little conscious attention.

Although performing a task frequently may reduce cognitive demand, this should not suggest that we can simplify learning through use of repetitive tasks with simplified materials. We learn to drive a car by actually driving a car, and if we drive frequently, we do so because driving serves a real function for us. Cummins, in his later work, argues strongly against programs such as Distar which rely heavily on repetition. His use of the terms "automatic" and "mastery" in discussion of the difference between cognitively-undemanding and cognitively-demanding tasks is not based on a belief in a connectionist model of learning. While Cummins rejects such neo-behaviorist views, many second language teachers still follow practices consistent with connectionism. These practices often utilize simplified materials and drilling to achieve mastery.

Connectionism has its basis in Thorndike’s laws of learning, grounded in behavioral psychology. In connectionist learning theory it is argued that the degree of association varies directly with the vividness of the experience, its frequency, its duration and its recency to the retention test. Associative bonds are built up through practice. The bonds (stimulus-response connections) are strengthened when the stimulus is vivid, when there is a greater number of practices, and when each practice event lasts longer. The results of learning will fade over time, so the strength of association will show up most clearly when the test of retention is close to the practice session.

Simplification of language in second language methods follows from connectionist theories of learning. Reducing the scope of the language to be learned is seen as a way to make the stimulus more vivid. A good example of a method of teaching reading based on connectionist theory is provided by Gaskins (Gaskins, Gaskins, & Gaskins, 1991): "The program is teacher-directed and grounded in an explicit instruction model. Each day teachers clearly tell students what they are going to teach, why it is important, when it can be used, and how to use it. The teachers then model the process. After that there is group and individual guided
practice with teacher feedback. The program keeps both the teacher and students involved for every minute of the 20 minute lesson. All activities are designed for every-pupil response and teacher feedback to students* (p. 215).

Second language teaching methods also reflect an underlying belief in connectionist learning theory. Brumfit (Brumfit, 1979) has described traditional second language teaching as a three step process that follows this model: present -> drill -> practice in context. Shifts towards a more communicative methodology have rearranged this sequence by beginning with more authentic communication, but the presentation, drill, and practice-in-context sequence generally follows any attempts at real communication in most classes. The assumption is that greater amounts of practice will make aspects of language more automatic. Practice is facilitated by simplifying and carefully sequencing the aspects of language to be mastered.

While much current teaching practice reflects a belief in a connectionist model of learning, recent research in cognitive psychology has called this model into question. Pinkard and Prince attempted a computer simulation of human learning based on the assumption that humans learn as the result of forming associations among stimuli. This connectionist model was tested on the learning of the past tense form for verbs. The researchers found that the computer could not generate the kinds of rules about past tense that children create: The computer "couldn't represent some past tense words, it couldn't learn many of the rules children learn, and it could learn rules that no child would learn" (Murphy, 1991, p.201-2).

This research in cognitive psychology fails to support the idea that language learning is the result of forming associative bonds. Nevertheless, we must still explain the common experience that many aspects of language acquisition that we struggle with at first become much less demanding later. One way to account for the developmental nature of language acquisition is to consider more carefully the relationship between Cummins' ideas of cognitive demand and context.

The Relationship Between Context and Cognitive Demand

Context is often viewed as something external to the learner. However, if the concept of context can include both external context (the swings on the playground) and internal context (previous experience or background knowledge), then the relationship between Cummins' ideas of context-embedded language and cognitively-demanding language becomes clearer. Our previous experience or
background knowledge serves as a context for each subsequent instance of language use. We can use background to make sense of new ideas, so we find those ideas less cognitively demanding. Even when there is no external contextual support, if we can make use of an internal support system developed through previous experience, tasks demand less conscious attention.

This helps explain why certain subjects are not, in themselves, necessarily more cognitively demanding than other subjects. It is true that some subjects are more complex than others. Calculus is harder than algebra. Further, in order to study some topics it is helpful to study other topics first. However, while different topics have different potentials for the demands they might put on a person, the demand a particular topic makes depends as well on a person's previous experiences with that topic. The closer the topic to the individual's personal experiences, the less demanding that topic. In other words, background knowledge is an intervening variable mediating cognitive demand. To a mathematician, both algebra and calculus may seem quite easy.

Consider the following example of how previous experience interacts with cognitive demand. If we have lived all our lives in a country such as the U.S. where temperatures are given in Fahrenheit, it is not cognitively demanding for us to decide what to wear when someone reports that the temperature outside is 22 degrees. However, if we travel to Canada and someone reports that the temperature is 22, we have more mental work to do. We have to make some connection between the Fahrenheit scale and Celsius scale to relate our past experiences. We can figure out what to wear, but the task is more cognitively demanding because we lack the necessary background, and schema.

In Cummins' framework shown in Figure 1 there are two scales. This suggests that context and cognitive demand are independent variables. Wald (1984), who has suggested that Cummins' framework does not adequately address sociolinguistic factors associated with the development of language proficiency, notes that the framework "weds the seemingly social concept of context-embedding with the psychological concept of cognitive demand" (p. 62). Whole language approaches to literacy are frequently labelled "socio-psycholinguistic" because there is the recognition that individual psychological processes always occur in a social context. If Cummins' horizontal scale may be thought to reflect social factors and the vertical scale embodies psychological factors, as Wald suggests, it should be possible to collapse the two axes into a single scale. Our background knowledge helps determine how cognitively demanding a subject is, and background knowledge can be considered as part of the context, so language that is context-
embedded is less cognitively demanding than language which is context-reduced, and the two concepts may be represented as shown in Figure 3.

Figure 3

Figure 3 suggests that as we learn something, whether it is a new language or a new subject, we rely at first on external cues. Over time, presented with similar settings or texts, we learn which features to attend to - we discover the conventional patterns. Eventually, we grow less dependent on the external context. We have built an internal context, our background knowledge, which helps us make sense of new things we see or hear or read. We are better able to make sense of new information by relating it to things we already know. To the degree that we can use information from the external situation or from our internal background knowledge, language is relatively context-embedded and, as a result, relatively cognitively undemanding. Simplifying language or tasks limits the range of cues available to provide context and build background. On the other hand, providing greater context facilitates learning.

Stephen Krashen (1982) has hypothesized that we acquire a language when we receive comprehensible input, which he defines as messages that we understand. We only understand messages in a new language when the cognitive demand is below a certain threshold. Second language teachers make input comprehensible by embedding it at first in a rich extralinguistic context. Over time, students begin to build an internal representation of the language they are studying, a specialized background knowledge, that allows them to make sense of messages even when they are not context-embedded. Making input comprehensible by increasing extralinguistic context is different from simplification of the linguistic cues. Because simplification reduces the range of cues available, the process makes it more difficult for students to develop the background knowledge needed to understand the full range of natural language.
Goodman (1984) argues that much of learning involves making predictions. We use all available cues to reduce our uncertainty and confirm our predictions. Here again, there is a connection between context and cognitive demand. The more cues that are available, internal or external, the less uncertainty there is to reduce and the less cognitively demanding is the task. It is easier to make successful predictions when we have adequate background knowledge. Our individual inventions reach an equilibrium with social conventions.

For example, my knowledge of English phonotactics makes it fairly easy for me to predict which word can be formed by unscrambling the letters "h, c, l, a, k." I know that the normal pattern for English words is CVC, so I place the "a" in the middle. Further, I know that there are only certain consonant clusters that can begin and end words. Words often end in "ck" and few English words begin with "kl." Even though phonotactic knowledge helps me unscramble "chalk," the task is still context-reduced because I am dealing with a word in isolation. It would be easier to predict the word if it appeared in a story as part of the line, "The teacher picked up the _____ and wrote on the blackboard." In fact, I don't really need the letter cues to make an accurate prediction in this context because the sentence reduces my uncertainty and allows easy prediction. This example demonstrates keeping language in authentic context is more effective than simplifying the language for making input comprehensible.

Conclusion

Traditional methods of both first and second language teaching have commonly relied on simplification. Simplification involves restricting the range of language forms and functions to be learned and then practicing those forms to achieve mastery. Methods that rely on simplification and practice for mastery are based on connectionist theories of learning. They fail to consider seriously the questions of how language develops in natural contexts, what language proficiency consists of, and whether simplification facilitates proficiency.

Jim Cummins has argued that two variables, context and cognitive demand, may be used to describe various kinds of language proficiency. He distinguishes between conversational proficiency, which is context-embedded and cognitively-undemanding language, and academic proficiency, which involves context-reduced and cognitively-demanding language. His research has shown that it takes immigrant students about two years to develop conversational proficiency in a new language but five to seven years to achieve academic proficiency.
Cummins (1989) argues that the best way for students to develop academic proficiency is through activities that involve authentic language, not through exercises with context-reduced language. In this respect, simplification of language, which serves to reduce context, would not be called for. Wald (1984) suggests that the two dimensions of language proficiency in Cummins' framework represent psychological and social aspects of language. He argues that social factors are extremely important in the process of language development.

Much current research in literacy is based on a socio-psycholinguistic model of learning and development. There is the recognition that all psychological processes occur in social contexts and it is the tension between individual invention and social convention that leads to learning. Cummins' two scales, representing the social and the psychological, may be reduced to a single scale by considering that background knowledge or previous experience forms an internal context. Learners use both internal and external contextual cues to develop concepts in a process of using cues to make and confirm predictions. From this view of the development of language and the nature of language proficiency, attempts at simplification make learning more difficult. Students develop both linguistic and academic proficiency more easily when teachers provide authentic language in context so that students can test their individual inventions against the social conventions of the full range of natural language.

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