

VYGOTSKY S SOCIOCULTURAL THEORY AND THE ROLE OF INPUT AND OUTPUT IN SECOND LANGUAGE ACQUISITION

Gui Min
Wuhan University

Abstract

This paper explores the role of input and output in second language acquisition (SLA) by employing Lev S. Vygotsky's (1896-1934) sociocultural theory, Krashen's input hypothesis (1982, 1985) and Swain's output hypothesis (1985, 1993) hold different and somewhat contradictory viewpoints on the roles of input and output in SLA. The difference might be solved by applying Vygotsky's sociocultural theory, which claims human higher mental functioning is constructed in a social, cultural, historical, and institutional context. This context is a web woven by social interactions, a dialectic unity of input and output. Therefore, according to Vygotsky's approach to the understanding of learning, the interactions between input and output give rise to second language development.

Key words

sociocultural theory ;input ;output ;second language acquisition

1 . Introduction

Second language researchers have not reached an agreement about the roles of input and output in second language acquisition (SLA), although both have been widely studied respectively and separately (Krashen 1989 ;Sole 1994 ;Constantino 1995 ;Krashen 1997 ;Swain &Lapkin 1995 ;Izumi et al .1999 ;Izumi &Bigelow 2000 ;Feng &Huang 2004). Studies on the role of input mainly used Krashen's input hypothesis (1982 ,1985) as their theoretical frameworks , whereas studies on that of output typically based their research on Swain's output hypothesis (1985 ,1993). These two hypotheses ,however ,hold different viewpoints about the roles of input and output in SLA . Krashen (1982 ,1985)claimed that only comprehensible input causes language acquisition , while Swain (1985 ,1993) proposed that through output ,either speaking or writing ,language acquisition might occur too . Their discrepant views about the roles of input and output leave language teachers and learners in a dilemma . Should teachers maximize comprehensible input by providing students with lectures ,reading programs ,and listening opportunities , as Krashen suggested ,or to arrange considerable speaking and writing opportunities for students to practice as Swain implied ?The time in class or the time for learning a new language is limited ,and more time and effort on input means less time on output .

Some researchers claim that both input and output are essential in language learning . However ,their claim cannot find support from relevant SLA theories . If they cite Krashen's (1982 ,1985) point to support them ,they cannot use Swain's output hypothesis (1985 ,1993) ,because ,logically ,one cannot believe that output does not cause acquisition and output leads to acquisition at the same time .

This paper tentatively applies the sociocultural theory of Vygotsky (1896-1934) ,one of the most influential philosophers and psychologists in the 20th century and a representative of social constructivism ,to explore the roles of input and output in SLA . As an inter-discipline ,SLA has constantly been nourished by theories in the fields of philosophy ,psychology ,and sociology ,as well as linguistics .

In the following sections, Krashen's input hypothesis and Swain's output hypothesis are introduced and a discrepant and somewhat contradictory claim about the role of input and output is revealed. In the fourth section, Vygotsky's sociocultural theory is presented, and his concept of social interactions is elucidated, followed by an analysis of how Vygotsky's theory might throw light on the understanding of the roles of input and output in SLA. In the closing section, implications for the language class are discussed.

2. Krashen's Input Hypothesis and the Relative Role of Input and Output

In Krashen's view, "humans acquire language in only one way — by understanding messages, or by receiving 'comprehensible input' . . . that contains structures at our next 'stage' — structures that are a bit beyond our current level of competence" (1985 :2). Krashen labeled an individual's current second language competence i , and the next stage $i + 1$. For second language acquisition to happen, "input must contain $i + 1$ " (1982 :21).

Krashen's strong claim of the role of "comprehensible input" in second language acquisition implies a nearly null role of output. In deed, Krashen believed that speaking, or output, plays no direct role in acquisition, and the benefit that output might bring is to elicit additional comprehensible input. Output does not lead directly to language acquisition, but via the functioning of comprehensible input. Therefore input plays an essential and direct role in language acquisition, while output might exhibit an indirect and complementary influence. Krashen's claim of the trivial role of output runs contrary to the common sense and to the practice of either languages teachers or learners. It is widely believed that practice makes perfect, and a language classroom with input only is almost impossible to find nowadays. Language researchers who discredited Krashen's hypothesis are not rare. Gregg (1984) and McLaughlin (1987) are two strong representatives. Language teachers are not satisfied with Krashen's claim of the essential, enough role of input and the trivial, unnecessary role of output. Language researchers and researchers constantly find support from and comfort in Swain's output hypothesis. In the following section, output hypothesis and its implication of the relative role of input and output will be examined.

3. Swain's Output Hypothesis and the Relative Role of Input and Output

Swain (1985) proposed that through producing language, either spoken or written, language acquisition/learning might occur. Contrary to Krashen's input, Swain's output hypothesis believed output might lead directly to language acquisition. Swain (1993) also specified four ways in which output might play a role in the process of second language learning: (a) to develop fluency and automaticity in language use; (b) to let learners notice what they do not know or know only partially; (c) to give learners opportunity to try out new expressions; and (d) to generate feedback which can lead learners to modify their output.

Although she stressed the role of output, Swain wrote: "Just speaking and writing aren't enough" (1993 :158), which implied the importance of input in SLA. However, she did not further elucidate the relative role of output and input.

On the one hand, Krashen claimed that comprehensible input plays an indispensable and essential role, while output does not directly lead to SLA. On the other hand, Swain proposed that language acquisition might arise in output. The decadal disagreement between the two hypotheses has challenging SLA researchers and teachers to conduct further studies and to seek new theories.

4. Vygotsky's Sociocultural Theory

As a preeminent figure of socio-constructivism, Lev S. Vygotsky (1896-1934) claimed that higher human mental functioning (e.g., learning, thinking, voluntary attention, and logic memory) is "inherently situated in a social interactional, cultural, institutional, and historical context" (Wertsch 1991 :86). James Wertsch used the term "sociocultural theory" or "sociocultural approach to mind" to refer to Vygotsky's thoughts. Traditionally, psychological research often assumed individuals might be removed from their social or cultural settings. On the contrary, Vygotsky laid emphasis upon examining the social and cultural context in which research subjects stay. In his view, social and cultural study of individuals' behavior is not an auxiliary or complementary method but a fundamental and essential way

(Vygotsky 1978 :65). Either the origin or the mental development of human mental functioning is embedded in social and cultural interactions . Wertsch elaborated on Vygotsky s main tenet using three interwoven themes :(a) a reliance on genetic or developmental analysis ;(b) a claim that higher mental functioning in the individual derives from social interactions ;and (c) a claim that human activity , on both the social and individual planes , is mediated by tools and signs (1991 :87). In the following parts , the elaboration is focused on the first two themes , since they are more closely related to the topic in question .

4.1 Genetic and Developmental Analysis

Genetic and developmental method constitutes Vygotsky s basic method of studying human mental development . Vygotsky believed “it is possible to understand many aspects of mental processes only by understanding their origin and the transitions they undergo ” (Wertsch 1991 :87). Genetic analysis emphasizes the need to examine the origin and history of mental functions , not only the static products of development . It stresses the interconnectedness between various stages of mental development , not only the static products . For instance , when studying a second language learner s interlanguage level , we may understand the difference between the person s interlanguage and target language deeper if we examine the learner s mother tongue and his or her former learning setting .

The term “genetic ” is not used in its biologic sense but refers to the origins of psychological processes and transformations these processes have experienced .

While the first theme of Vygotsky s sociocultural theory emphasizes the need to examine the origin of human mental functioning , the second theme analyzes the characteristics of the origin and mental developmental context .

4.2 Social Interactions —the Origin of Higher Mental Functioning in the Individual

According to Vygotsky , higher mental functioning is embedded in social interactions , which weave the social , cultural , and historical context in which the individual exists . Individuals knowledge and ability are constructed during the social interactions with people around them . During the early age of one s life , individuals mental development is mainly constructed by interactions with their parents , siblings , relatives , and friends . During one s school years , their mental function is often developed through interactions with their teachers , classmates , and friends out of class . Similarly , in one s later years one s knowledge , ways of thinking , and means of actions are shaped through social interactions with the people they work with , friends , and family members . As Vygotsky wrote :

[Higher mental functions] composition , genetic structure , and means of action —in a word , their whole nature —is social . Even when we turn to mental [i. e. , internal] processes , their nature remains quasisocial . In their private sphere , human beings retain the function of social interactions . (1981 :164)

By emphasizing the role of social interactions , Vygotsky did not assume that mental functioning in the individual is simply a copy of socially organized processes . Instead , Vygotsky asserted that the psychological internalization transforms and changes the structure and function of social interactions , but this internalization happens as a result of social interactions . According to Vygotsky , mental development “first appears on the social plane , and then on the psychological plane ” (1981 :163). Social interactions between people belong to interpsychological category , while the internalization process goes to intrapsychological category . In a word , social interactions underlie all higher mental functions .

Higher mental functions refer to such activities as memorizing , thinking , paying attention , problem solving , and concept formation . Any aspect of learning , including second language learning , demonstrates the form of higher mental functioning . Second language learning involves memorizing new words , understanding listening and reading materials , organizing one s thoughts and finding appropriate oral or written forms to express their ideas . Therefore , Vygotsky s sociocultural theory might also be applicable to the understanding of individuals second language development . In the following part , the concept of social interactions , the core of Vygotsky s sociocultural theory , is employed to explore the role of input and output in SLA .

5 . Social Interactions and Second Language Acquisition

According to Vygotsky ,the learning of a new language is embedded in social interactional ,cultural , institutional ,and historical context .For the overwhelming majority of second language learners ,learning a new language is situated in school ,in the interactions with their teachers ,classmates ,computer aided learning programs ,reading and listening materials ,and sometimes with native speakers outside classrooms .The process of learning cannot be independent from social interactions and relations . Learning is a mutual influential and interactional process between learners and their instructors ,peers , and learning environment . All activities involved in second language learning ,such as teachers explaining difficult points to students ,discussing among students ,students asking questions ,and role play activities ,exhibit social interactional characteristics .Second language learning is embedded in a social interactional context .

In Vygotsky's view ,social interactions not only lay a context for second language learning but also cause second language development .It is social interactions ,neither isolated input nor isolated output , that causes SLA ,because in Vygotsky's world ,there is no pure input or output ,and they are links and loops of social interactions . Input and output cannot be separated but are mutually dependent . Before teachers give input to learners ,teachers often first assess learners present language competence by their output . Output may demonstrate in the form of speaking ,writing ,or test taking . On the basis of learners present output ,teachers also anticipate their potential in order to plan and modify tasks and instructions accordingly .In this way ,the initial input is linked with output .

During the process of learning ,input is often shaped by output . Teachers often rephrase or modify their instruction according to learners response . Input may be simplified if questions and misunderstanding arise .Input may be escalated if meaning checking seldom occurs .Similarly ,output is influenced by input . What learners perform in a learning activity is guided by input ,or teachers instruction . When they cannot fulfill a learning task ,learners are often assisted and scaffolded by input from teachers or more advanced learners . Moreover ,learners mistakes and trouble spots are usually identified and pointed out by teachers and expert peers . Learners may receive models or recasts from their interlocutors and thus improve their output .In Vygotsky's view ,it is not comprehensible input or output but social interactions that contribute to language acquisition .

However ,social interactions do not lead directly to second language development . They are transmitted by learners psychological processes .Second language learning first happens on a social plane , or between learners and their interlocutors ,and then on a psychological plane ,or within learners . Vygotsky did not elaborate on how individuals psychological processes internalize and transmit social interactions . What he did emphasize is the connection between interpsychological and intrapsychological functioning . As Wertsch wrote :“[Vygotsky] implies that different forms of interpsychological functioning give rise to related differences in the forms of intrapsychological functioning ”(1991 :89) . Individuals second language competence is not a copy of all the social interactions they have experienced , but the way they transmit the social interactions is greatly shaped by every learning activity in which they have participated .

The quality ,frequency and level of social interactions ,as well as learners psychological processes determine the result of learners second language development . What are the characteristics of high quality social interactions ?According to Vygotsky ,learning happens in learners zone of proximal development (ZPD) . The ZPD is one of the key concepts proposed by Vygotsky . He termed the ZPD as the region between what an individual's “ actual developmental level as determined by independent problem solving ”and the higher level of “ potential development as determined through problem solving under adult guidance or in collaboration with more capable peers ”(1978 :86) .In other words ,the ZPD is an area between what one can perform on one's own and what one can perform with assistance . Therefore ,the ZPD is the next stage of learning ,and it implies the area that students ability is ready to develop .In order to learn ,the interactions between the learner and their interlocutors should be within learners ZPD . Social interactions of high quality are those interactions in which input does not over- challenge or under challenge learners but is based on continuous assessment of learners output ,and output is scaffolded by appropriate input . The ZPD is constantly changing with the development of

second language . New input should be escalated to another level and adapted to newly constructed ZPD in order to promote the quality of interactions .

In conclusion , according to Vygotsky , social interactions between learners and their language teachers , more advanced peers , and people outside classrooms give rise to learners second language development . Social interactions are a dialectic and organic combination between language input and output .

6 . Vygotsky s Sociocultural Theory and SLA Theories and Research

Vygotsky s view about SLA is compatible with and embodies Krashen s input hypothesis . By reviewing Krashen s research designs (1989 ;1997) , reading is a typical type of input . In Vygotsky s eyes , Krashen s input is also social interactions . According to Vygotsky s genetic analysis (Wertsch 1991 : 87) , the reading material results from social interactions , and the reading activity will result in learners changed form of further social interaction . Furthermore , the action of reading is itself a dialogue between a reader and the characters in a book . In fact , according to Vygotsky , all things are social (Schallert & Martin 2003 :34) . Vygotsky s view about SLA is not in disagreement with Swain s output hypothesis either . Any output , in the form of speaking or writing , arises from or serves the purpose of social interactions . Therefore , output activities in the eyes of Swain share the characteristics of social interactions . By employing Vygotsky s theory , the contradictory claim about the role of input and output in SLA could be solved .

The decadal discrepant hypotheses about the role of input and output reveals the limitedness of classic science approach to investigation and implies the prospect of embracing modern philosophical and psychological approaches in SLA research . Dunn and Lantolf (1998) wrote that Krashen s model belongs to classic and hard science approach , whose aim is to reduce complex phenomena to basic elements , or bundles of variables , and to construct abstract schema to explain its object of study , while Vygotsky holds a dialectic and monistic orientation that theorizes people as unified , self interpreting cultural agents (1998 :7) . Guided by classic scientific method , Krashen and Swain separated input from output , whereas , from Vygotsky s perspective , input and output establish a dialectic unity , or social interaction .

Many other SLA researchers have conducted studies from interactive perspectives (e. g. , Ellis et al . 1994 ; Pica 1994 ; Pica 1996 ; Polio & Gass 1998 ; Long et al . 1998 ; Mackey & Philp 1998 ; Gass et al . 1998 ; Buckwalter 2001) . As Gass et al . wrote the exploration of the connection between interaction and language acquisition has represented a major research line since the early 1980s (1998 :299) . However , interactions in these studies refer to face to face conversational exchanges between language learners and their interlocutors (parents , friends , teachers , native speakers , classmates) . The construct of interaction used in these studies differs from social interactions as used by Vygotsky . In Vygotsky s view , social interactions refer to individuals interactions with people and environment around them , including direct conversational interactions and indirect interactions .

7 . Conclusion and Implications

Employing Vygotsky s sociocultural theory , this paper proposes that social interactions , a combination of input and output , causes second language development . In the language learning context , input and output do not exist in their isolated kingdoms but within a dialectic unity , in which output gives information on the learner s ZPD and sets the level of input , and input lays down the pathway for the further development of the learner s ZPD . Vygotsky s notion of social interactions might be employed to represent the mutually dependent constructs of input and output . Social interactions , in which higher human mental functioning arises according to Vygotsky , lead to learners second language development . Moreover , this paper has discussed the difference between Vygotsky s notion of social interaction and the same concept used by researchers who utilize classic scientific approach to investigation . The former embodies Krashen s input and Swain s output , as well as the utterance exchange between language learners and their teachers , their peers and native speakers , whereas the latter refers to the last type .

The interactions between language learners and teachers constitute the major form of social interactions during second language learning . This implies language teachers should put the emphasis on the quality of classroom interactions . Giving most of the time in class for students to practice does not

necessarily promise efficient language learning. Students' output should be carefully guided, monitored, and assisted by teachers. Neither language input nor students' output activities cannot be exaggerated. They should fulfill the purpose of promoting interactions between learners and teachers or among learners.

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