

Adapting Piagetian Concepts to L2 Learning: Pedagogical Implications

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Abstract

Piaget believed that *action* stands at the very heart of any intellectual development. In a similar fashion, the author is inclined to argue that success in L2 learning takes its roots in action. The aim is to call for adapting Piagetian concepts to L2 learning. In the present study, the author will attempt to: (1) account for some of Piaget's basic concepts within the context of general learning, namely action, adaptation (through the interplay of the two processes of assimilation and accommodation), and equilibration, (2) show how these may be used in the area of language learning and communication, (3) show how affective influences have some bearing on action, and (4) suggest and discuss some pedagogical implications with respect to interest, personality, learning style, streaming, and learning strategies along with their teachability.

Keywords: action, equilibration, adaptation, strategies, interest.

Fouad BOULKROUN *

Institut des Lettres et des Langues,
Centre Universitaire de Mila
, Algeria.

Résumé

Piaget pensait que l'action est au cœur de tout développement intellectuel. De la même manière, l'auteur est enclin à démontrer que le succès dans l'apprentissage d'une langue étrangère prend ses racines dans l'action. L'objectif est de suggérer l'adaptation des concepts piagétiens à l'apprentissage de langues étrangères. Dans la présente étude, l'auteur tentera de: (1) expliquer certains concepts de base de Piaget dans le contexte de l'apprentissage général, à savoir l'action, l'adaptation (par l'interaction des deux processus d'assimilation et d'accommodation) et l'équilibrage, (2) montrer comment ils peuvent être utilisés dans le domaine de l'apprentissage des langues et de la communication, (3) montrer comment les influences affectives ont une relation avec l'action, et (4) suggérer certaines implications pédagogiques concernant l'intérêt, la personnalité, le style d'apprentissage, et les stratégies d'apprentissage ainsi que leur enseignement.

Mots clés: action, équilibrage, adaptation, stratégies, intérêt.

ملخص

يعتقد بياجيه (Piaget) أن الفعل يقف في صميم أي تنمية فكرية. بطريقة مماثلة، أميل إلى القول بأن النجاح في تعلم اللغات الأجنبية يكمن في الفعل. الهدف هو الدعوة إلى استعمال مفاهيم بياجيه في تعلم اللغات. في هذا المقال، سوف يحاول المؤلف أن: (أ) يتطرق إلى بعض المفاهيم الأساسية لبياجيه في سياق التعلم عامة، خاصة مفهوم الفعل، التكيف (من خلال التفاعل بين عمليتي الاستيعاب والتكيف)، والتوازن، (ب) يظهر كيف يمكن استخدام هذا في مجال تعلم اللغة والتواصل، (ج) يبين تأثير الرغبة على الفعل، و (د) يقترح و يناقش بعض الدلالات التربوية فيما يتعلق بالرغبة، الشخصية، أسلوب التعلم، تقسيم التلاميذ حسب المستويات، استراتيجيات التعلم وكذا إمكانية تدريسها.

الكلمات المفتاحية: الفعل، الموازنة، التكيف، استراتيجيات، الرغبة.

* Corresponding author, e-mail: f_boulkroun@yahoo.fr

Introduction

Piaget was interested in general learning and intellectual development, not in language proper. For him, the key question is how organisms adapt to their environment. His construct of *adaptation* to the environment consists in the interplay of the two processes of intelligent activity, *assimilation* and *accommodation*, through which a child incorporates (i.e. assimilates) new objects and experiences into existing schemas, and then modifies (i.e. accommodates) schemas as a result of new experiences to meet new situations [1]. Equilibration is one of the factors accounting for cognitive development. It is a self-regulatory process, the fact of bringing assimilation and accommodation into a balanced organization.

Development, or the acquisition of knowledge, for Piaget, is the fact of acting upon the environment i.e. individuals do not merely react, they also take action. In common-sense terms, we come to learn when we get to know something the knowledge of which is the result of our own actions. The acquisition of knowledge is a continuous process. The point is that each time, development is a matter of reconstructing on a new plane what was achieved before.

In this perspective, I am inclined to argue that success in *language learning* takes its roots in action. That is, learners should be active in using the language and trying their tongue at speech. 'Active', here, is a very telling adjective in that for language learners to have a good command of a language, they have to actually practise it and use it for their communicative purposes – as the saying goes, language is a matter of practice.

Obviously, there is more to learning than cognitive factors alone. Affective influences have some bearing as well. Learners differ in the business of learning depending on the degree of their motivation and interest. Motivational forces, it must be noted, relate both to general learning as well as to language learning.

1. General Learning

1.1. Adaptation

Piaget [1] pointed out that certain biological processes underlie all learning. These are especially *adaptation* to the environment, and *organization* of experience through action, memory, perception and all sorts of mental activities.

Organization is seen in the development of habitual actions. When an infant is newly born, it tends to seek with its mouth anything which comes in contact with its lips, and to grasp anything which touches the hand. Such actions are termed by Piaget *schemas* or *schemata*. Schemas are organized wholes which are continually repeated, at least, during a given period, and can be recognized easily among other diverse behaviours [2].

The second biological feature is *adaptation* which refers to the adjustments of organisms to the environment in order to survive. However, every adaptive act must be part of organized behaviour for the actions to be co-ordinated. The property of adaptation has two complementary processes: *assimilation* and *accommodation*. When a schema of action (or for the purposes of the present paper, a language form) is developed, it is applied to new objects in different situations: The infant sucks, for instance, a wide range of objects (or over-generalizes a grammar rule) as his schemata widen. The general term which Piaget gave to this part of the adaptive process is assimilation – i.e. fitting the environment and incorporating it into already existing structures. Assimilation, then, is altering aspects of the environment and interpreting new events by fitting them into what is currently understood. It is clear, however, that assimilation cannot be effective if it functions alone. There is development, that is, when assimilation and accommodation are in a dynamic balance.

Reflexes, with which the baby is born, such as sucking, will be modified later in life through experience and action – that is, adaptation to the environment. Thus, if an infant is to adapt successfully, it must modify its behaviour so that it goes in

accordance with the new experiences it is dealing with, or acting upon. Such modifications of the organism to fit with the environment constitute the second component of the adaptation process, a component Piaget named accommodation. Assimilation and accommodation cannot be separated in any adaptive act. On the contrary, both processes take place together.

Piaget claimed that the origin of learning lies in action. In fact, he believed that the child is active and so is his system of cognitive development. The child is more motivated to act upon new events. He attempts to assimilate them by applying his existing structures, but then he enters into conflict: A conflict between the demands of the new experience and his existing knowledge which creates disequilibrium in the cognitive system, this being a transitory period. Further action takes place when the child accommodates his behaviour to the environment, and *equilibration* is, thus, restored.

1.2. Equilibration Factors

Equilibration for Piaget [1] is one of the four general factors accounting for cognitive development (namely, biological maturation, social factors of interpersonal co-ordination, and factors of educational and cultural transmission). Whereas equilibration is a process, equilibrium is a state; the former is a self-regulatory process while the latter is a balanced state of affairs within the individual and can refer both to biological and psychological states.

As far as intellectual development is concerned, equilibration is the fact of bringing assimilation and accommodation into a balanced organization, organization of knowledge into integrated schemata instead of being kept separate. Equilibrium, then, is the result of this. McNally [3] argued that

“This balancing effect is a very necessary part of intellectual development. If the individual assimilated all the time and never accommodated, or accommodated all the time and never assimilated, there would be no patterned development, no stability or integration and very little dependable and consistent behaviour.” (p. 11)

The construct of equilibration constitutes the impetus for the individual's active state to overcome disequilibrium. It operates in a continuous fashion in all exchange between the individual and the environment and is the cause of change and adjustment. It is important, thus, to mention that equilibrium takes place only to give way to a new disequilibrium – for the person to be ready for further adaptation and modification [1]. This is to mean that equilibrium has no culminating point; rather, there is always continual activity.

In any case, this issue of action is gaining ground and can even be applied, in addition to general learning, to the learning of languages. It is to this, the acquisition of language, that we now turn.

2. Language Learning

Piaget believed that the individual is active in seeking experiences and opportunities for the realization of his goals. Action is there present both in infancy and at advanced ages, albeit in different forms (be that physical, operational, or linguistic). Given, thus, the importance of *action*, it follows that before considering social and external influences on the individual – which do not suffice alone – we should dig into the nature of his activity first.

Learning in general is nowadays studied within cognitive psychology. The issue of action is gaining currency both in general learning and in the learning of languages.

Organization, adaptation and equilibration which apply to physical development have equal bearing on the development of language and thought. In other words, for Piaget, these principles or functions hold for biological as well as psychological or intellectual functioning. He believed that the two fundamental

processes or functions of the intellect are the same all life long in different age groups; these are adaptation and organization which are complementary, and which he called functional invariants i.e. functions which never change.

When there is interaction with the environment (in our case, the second language input) through assimilation and accommodation, the child's schemata (in our case, interlanguage properties) are modified in that new features are added to his structures – these clearly build on his prior existing structures. This is, as will be seen later, very much in keeping with Krashen's [4] Input Hypothesis. Adaptation in our context, it must be noted, means success, intake, acquisition. Assimilation or accommodation alone is half the learning process.

2.1. Language for Piaget

Piaget was not so much interested in language as such as he was in the development of thought. He set out to study general factors that are assigned to cognitive development, but was forced somehow to tackle the issue of language acquisition. One might call into question the very issue of action arguing that it applies just to physical actions on the part of the individual and as such is not applicable to the learning of languages. Piaget stated that one can be active in the sense of functional behaviour i.e. manipulation of objects, or even in pure thought, of which language is a part. Therefore, just as cognitive structures develop from the co-ordinations of the actions of the individual, so also does language development take place via the co-ordination of utterances into discourse.

So far, so good. However, before we go any further in pursuing these lines of thought, a question may loom on the horizon at this level: What relevance, if at all, have Piaget's ideas for language *acquisition* and language *learning*? (These two terms stem from two different approaches to language teaching; see below). In fact, early childhood has some bearing on later development. To this extent, language teaching is based in one way or another on a theory of child development. Be that as it may, according to McNally [3],

“The question ... is not whether Piaget's theories have relevance for the classroom but rather, given that Piaget's theories have relevance for the classroom, how can we map theory into practice most effectively.” (p. 146)

Throughout the present paper, the intention is far from presenting an exhaustive answer to the question posed above. Following the tradition of Piaget, none the less, I am inclined to subscribe to the view that learning originates from action. Language learning and L2 learning in particular, being part of the process of general learning, also assumes the importance of this concept of action. The development of language is seen as residing in doing, in action, and in interaction with others. Put another way, we actively use language not just possess it passively. In the 'actional' dimension of language, we do not mean just any action or any activity: it is rather that activity with a social and interactional purpose.

2.2. Language Acquisition vs. Language Learning

Let us agree that we will in no sense make out of the acquisition/learning distinction a matter of debate here. Still, it is worthwhile to draw a distinction of some sort. Krashen [5] distinguished between *language acquisition* being implicit and spontaneous and *language learning* being the reverse. The latter, adapting Piagetian terms, might be equated, in my view, to language which is assimilated (i.e. learnt) but not yet accommodated (i.e. acquired) or integrated within one's own schemes (or interlanguage).

Piaget's [1] highest stage of intellectual development, namely formal operations, hints to the individual's cognitive and *formal* (as opposed to *concrete*) operational ability to assimilate the abstract nature of language i.e. without necessarily concretely manipulating its elements. For him, roughly after the age of 12 or 13,

children are able to carry out logical operations involving induction and rule prediction, for example; they also begin to handle explicit abstractions: they can go from the general to the particular; the reverse situation is also true.

2.3. Learning by Action: Input or Output?

Language learning is an ongoing task and language is a skill one has to use all the time. The best way of learning a skill is by using it, practising it, and acting in it. It is, however, conceivable that, in the complex enterprise of language learning, comprehension (input) precedes always production (output). For the latter to take place, the former is deemed necessary. To this extent, there is bearing on Krashen's Input Hypothesis [4] and Swain's Output Hypothesis [6].

For Krashen, receptive skills (listening and reading) are of primary importance in the learning of languages. In other words, if learners are to have a good command of a L2, teachers should provide them with *comprehensible input*; productive skills (speaking and writing) will no matter look after themselves. This can only be realized, for him, if the input in question is within, not beyond, the reach of learners (see below). When the reverse situation holds, learners may fall victims of the failure to experience interest and comprehend the message – not to mention eventual productive disability. (Krashen's ideas, in my view, can be equated with Piaget's when saying that each new knowledge builds on the one before: the new represents an advance over the old.

This hypothesis, though very striking, seems to run counter to the evident fact that comprehension alone hardly leads to production through language use. That is, teachers' input does not necessarily result in learners' output in a re-active fashion. *Intake* (learning or development, for Piaget) which mediates between input and output is said to be the 'locus of equilibration' [7]. It bears repeating at this stage that Piaget held learning as being the outcome of the equilibration between assimilation and accommodation where the individual has a sensation of a mismatch, a disequilibrium, between two dimensions of an object or event. To solve the problem, the individual uses adaptation strategies. It is necessary that there be an equilibration between the processes of assimilation and accommodation for development and intake. Moreover, in pedagogical or formal situations, input does not always entail intake, though comprehensible, on the learners' part.

Boulouffe [7] pointed out that in the learning process no aspect is sufficient alone in accounting for L2 learning: Learners first assimilate *input*, and then accommodate it through *learning strategies*. These, for Boulouffe, initiate a debate between the two processes of assimilation and accommodation which lead to *intake* as a product resulting from intake as a process. For intake to become *output*, communication (or say action) is needed both to test the hypotheses formulated and negotiate meaning. Learners have linguistic means and communicative ends; when a mismatch shows itself between the two, equilibrium fails to take place. It is only here that *communication strategies* are employed. This means that learners' intake is just inferior to their input and superior to their output.

As the saying goes, language learning is a matter of practice; practice or action, still, is central to all learning, whatsoever. As such, it is beneficial to speak about Swain who patterned her hypothesis on Krashen's Input Hypothesis and termed it the *Output Hypothesis*. Through her observations, she came to the conclusion that comprehensible input, though very much important, is by no means sufficient for learners to use language productively. The Output Hypothesis was brought into being as an extension to the Input Hypothesis; altogether they form two sides of the one coin i.e. they are complementary. Interactional exchanges may relate to comprehensible output as they relate to comprehensible input: they draw on both of them.

The Input Hypothesis is called into question for the mere reason that it does not meet two requirements, present as they are in its other side [8]. These are as follows. First, one can understand a message (input) without grammatically analyzing it, simply by knowing the meaning of the words; in order to produce language output, however, one is required to attend to what one *does*, not know. Thus, output forces learners to move from a semantic processing to a syntactic analysis of, or action on, the message. It gives room for *noticing the gap* [6]. Drawing on the first front on which

Krashen was attacked, namely the fact that input does not provide for grammatical analysis, Schmidt [9] claimed that conscious attention or awareness at the level of *noticing* is the necessary and sufficient condition for input to translate into intake. This is a call for explicit grammar instruction through pedagogical approaches and techniques such as focus on form, input enhancement, consciousness-raising. It seems that Piaget's concepts of child physical manipulation of, and action on, objects have their bearing on L2 learners explicit manipulation of grammar forms for them to be acquired and translate into intake.

Second, learners are in need to produce output so that to test hypotheses about the target language and receive corrective feedback from teachers or else. To put it differently, one must act on or try out various means of expression to find out where the problem is and make up for that. The works of Krashen and Swain seem worlds apart, yet they are inescapably interrelated; that is, they are at different ends of a continuum (input-intake-output).

3. Interest and Motivation

Piaget made differing demands on the cognitive and linguistic capacity of the individual, but there are as well personality and affective demands on action and linguistic performance i.e. the ability to communicate and act in a L2 is in no way void of affective factors.

There is a traditional distinction, insofar as learners' makeup is concerned, between cognitive variables (attention, intelligence, aptitude and cognitive style) and affective variables (motivation, attitude and personality) which influence success in L2 learning. That is, cognitive factors are not the only ones at work. Individuals also differ with regard to the extent of their action (or adaptation/intake) depending on the rate of their interest and motivation.

Affectively, L2 learners feel frustrated due to inability to communicate i.e. there is a feeling of stress. Affective and Personality factors may, in addition to others, influence their actions and reactions and are concomitant of the ongoing learning activity. Cognitively, L2 learners are at a loss with regard to the new linguistic, semantic and sociolinguistic features. They should, thus, be helped right from the start to overcome their affective and cognitive constraints if they were to use the language actively and communicatively in appropriate situations, that is to say, to 'interiorize' or 'internalize', as in Piaget's terms, the system of the new language.

Affectivity is the energetics of behaviour [1]. Interest, then, is a pre-requisite for a true activity. It is the dynamic process of assimilation proper; when the individual finds in the object (or language material) the means of expression (for Krashen, when the affective filter is low) and that it is within his accommodative reach (to receive comprehensible input, for Krashen), then interest becomes apparent in the individual taking action.

Motivation is, in effect, an important issue for teaching. If a given feature of the environment/L2 is beyond reach for the individual i.e. he cannot accommodate it, then he simply ignores it for this far outstrips his existing schemas, and thus the individual does not make sense of it. Likewise, if the task is too easy, the individual gets bored due to the easy assimilation of it. For Piaget, the individual is especially interested in tasks which are neither too familiar nor too novel, and thus neither too easy nor too difficult. He believed, like Krashen, that optimal learning requires some novelty which is only slightly ahead of the child's current level of development – moderate novelty may be accounted for in terms of new vocabulary, structure or function. Only when this is the case can adaptation/intake take place.

4. Discussion and Implications for Teaching

The following are pedagogic implications drawn from the present study, along with some suggestions, recommendations which might guide teachers and future research. They should be understood as merely suggestive in nature.

Let it be plainly stated that Piaget's efforts were not an attempt to solve problems in education via classroom intervention; still, his prolific work has informed educators all the world over. He was critical of the educational practices in vogue during his lifetime arguing that education suffered from three principal problems, namely aims, subjects, and methods [2]. Besides, he did not contribute directly to language teaching and learning; his cognitive view of the individual, however, does bear on *how* (but not *what*: curriculum) the child should be taught i.e. he contributed the provision of methods of teaching. The teacher, for him, is analyst of the affective, social and intellectual development of the child, a manipulator of the teaching material, a guide and a group leader.

The actional dimension of learning is a very promising field of research. It seems, however, that some learners are more or less active than others. This may be due either to their motivation, personality traits, learning style, linguistic (dis)ability – or (dis)equilibrium, to use Piaget's term – or else. Of note is the fact that Piaget was not primarily concerned with individual differences, yet his work did bear on this area of research.

Whatever the teacher does may be inefficient due to the multiplicity of factors acting on learners. The issue of individual differences, of which our understanding is far from complete, is one of the conundrums in the field of second language acquisition. It may solve as many questions as it may raise. Action is a consequence of cognitive, affective, linguistic attributes – to name but a few. Maybe, we are still a long way from being in a position to predict, with certainty and reliability, how different factors contribute to the learning process along the actional dimension.

Piaget argued that the traditional school imposes learning on learners whereas the new one seeks their interest and need, and the resultant action is spontaneous work; as such, learners' action must come from within not from without. When such a school demands that learners' action must not be imposed but come from the free will of the individual, it is simply asking that their makeup must be respected. In fact, this view of interest sounds convincing and can even be applied to the realm of L2 learning. The area of interest is a very promising field of research. This is to mean that when recourse is made to such an area, one is likely to obtain optimal results.

L2 learning is not a simple process of acquiring new linguistic or communicative abilities, but one which also bears upon several complex phenomena where learners' personality is threatened by the challenge of a new language they do not master yet. In light of the personality factor, then, some learners – though interested – are more or less at a disadvantage than others, meaning that they are not all of a kind in terms of their action on, and interaction with, the language they are learning. Although some introverts may be motivated to learn the target language, they are in no possibility to learn it given their inability to interact with their peers, lack of desire to openly communicate and practise the language. If they keep unwilling to take risks for action for fear of appearing foolish when mistakes are made, students may not advance their way to native-like competence, thus fossilize or stabilize [10] mid-way.

A compromise may be obtained, however, so as to maintain action on the learners' part –although not all that promising. Given learners' inhibited personality as to speech and overt action, I suggest that more input be obtained through reading and more output be produced through writing, a different form of action which maintains motivation and fosters acquisition with less or no risk of losing face and reducing one's personality. This might be what Furnham [11] called a 'personality-communication media fit' (p. 74), meaning that individuals having particular personality dimensions would be attracted to particular media of communication. This implies that both extroverts and introverts may be different actors and successful language learners, though in different tasks or skills, and that language lessons should be geared to both types of learners so as to meet different learning styles.

The likelihood is high that extroverted learners are good speakers but poor listeners, and that contrariwise introverts are the reverse which has its implications for monopoly of, or retreat from, overt action in the one classroom, and thus implications for streaming. If to have, as an objective, inhibited introverts express themselves more than is usual and talkative extroverts listen to other students, it would be harmful to mix the two. This is so because extroverted learners would monopolize communication and participation (i.e. take more action) while introverts would simply be grateful to them for taking their part of the conversation and thus of freeing them of language use anxiety. Streaming them would, I believe, be a promising idea – though not without limitations.

To put the above conjectures on the defensive, it has been shown implicitly, as yet, that the application of Piaget's theory to the field of language learning bears some resemblance to some aspects of personality psychology – namely extroversion and its antithesis introversion (i.e. the concept of action in relation to the actional dimension of personality and learning). Certainly, there is room for personality traits in the ways learners learn; be that as it may, it is *de facto* hard to investigate causes for differences in learning, especially if these relate to non-linguistic factors such as extroversion. Learners' personality and how it affects the learning process and outcome is an acute problem for we do not have available convincing measures of traits [12]. If the truth be told, personality traits can hardly if ever be measured experimentally. In the absence of experimental research, we cannot claim with certainty cause-effect relationship between the variables under discussion.

Given the above caveat, I suggest that the teacher should influence what is influenceable (for example, motivation, task) rather than learners' more deep-seated personalities which – along with linguistic aspects – may change due to motivation, the energetics of action. The teacher should at least pay attention to learners' gestures indicating that a student is willing to speak and take action, such as a slight motion of the hand, an expectant look in the eye. These may induce that a student is responsive but a hindering factor of some sort keeps him hesitant or inactive. Teachers should learn not to correct or reject the first contributions of students, though wildly wrong or inappropriate: This will discourage them. They must not show disapproval or scepticism unless they are sure it will help (for example, in terms of feedback), not hinder, learning. When an honest attempt or action, that is, is made by a learner, we should not think ill of him.

The above discussion suggests that given interest, all learners are actors or to say the least happen to take action, albeit in different ways. Action may stem from learners' personality and learning style. Indeed, learners with a given personality happen to have a particular learning style. At times, however, a learning or linguistic disequilibrium shows up even though there is room for learners to use their preferred learning style to meet with the demands of the task at hand. When a linguistic, communicative, or learning disequilibrium takes place, teachers should intervene. Their subject matter is not only the teaching of language; it should go even so far as to encompass training learners how to learn by themselves. In directing teachers to teach learning strategies as part of their instruction, their art consists in making students aware of the range of useful learning strategies they can adopt and encouraging their use; like this, they might develop the students' independence of the teacher with self-directed (or to use Piaget's term, self-regulated) learning where learners take on responsibility for the learning task – though it may be some time before this becomes a reality.

Strategy training assumes both that it is beneficial to pay conscious attention to learning strategies, and that these are in themselves teachable [13]. In point of fact, not all learning strategies can be readily taught [14] especially if they do not meet learners' usual experience. For Bialystok [15], individuals are severely limited in their ability to incorporate ideas which do not bear the slightest resemblance to their current experience. This is in keeping with Piaget's as well as Krashen's line of thought, that optimal learning necessitates some novelty which is only a bit ahead of the child's

existing level of development. It could be conjectured, after all, that a possible factor influencing the use of particular strategies is the learners' personality [12].

Now, the present research suggests that the extension of current and future research on learning strategies is warranted, and that more specific studies need to be done experimentally. A final word may be the fact that the extant literature on strategies relates mostly to good language learners; attention should be directed to research also poor language learners' strategies, an exciting agenda for future research which might yield useful insights.

To sum up, in this section, we have discussed pedagogic implications and suggestions that relate to learners' interest, personality and learning style, streaming, and learning strategies along with their training. They are but suggestive in nature. As such, it is informative to note that we should not lend ourselves to the present suggestions blindly.

Conclusion

We are drawing to the close of this paper, and it is customary to allot a brief space to a concluding account. Like other areas of psychology, child psychology has, for sure, bearing on language learning and teaching. In point of fact, psychological contributions to language learning and teaching are more important than we give them credit for; they affect any aspect of this complex and many-sided enterprise.

Much ink has, as yet, been spilled by applied linguists and psychologists on the issue of leaning. Working on the hypothesis that learning originates from action, we have tried, thus far, to show how Piaget's concepts relate to L2 learning also, not just a privileged type of learning. This is clear when accounting for the matter in terms of the very issue of action, a concept that may raise as many questions as it may answer. It might be easier to have a close grasp of the sense given to the term here by thinking of the activity in terms of communication (be it oral or written). The Piagetian view of cognitive development introduces this and other concepts which seem to be of vital significance to, and at the heart of, any study of learning, of which language learning is a part, at any stage. Of note, the area of action is far from reaching a point of exhaustion, and we are in no way trying to make our account exhaustive here.

It is of capital importance by way of concluding this paper to provide a reminder which we are in need for. Piaget did not contribute directly to language teaching and learning; he contributed, however, the provision of methods of teaching.

The present study has certainly its limitations. It can serve, however, as a basis for further research on individual differences in language learning.

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