Awareness of L1 and L2 Word-formation Mechanisms for the Development of a More Autonomous L2 Learner

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ABSTRACT: Unlike traditional approaches, new communicative trends disregard the role of word-formation mechanisms. They tend to focus on syntax and/or vocabulary without analyzing the mechanisms involved in the creation of lexical items. In this paper, based on the analysis of the use of prefixes by L2 learners in oral and written productions, as provided by the SULEC, we emphasize the advantages that word-formation awareness and knowledge may have for the learners in terms of production, creativity, understanding, autonomy, and proficiency. Through the teaching of word-formation learners may more easily decipher, decode and/or encode messages, create words they have never seen before, etc.

Keywords: word-formation mechanisms, autonomy, transfer(ence), interlanguage, prefixes

El conocimiento de los mecanismos de formación de palabras en la L1 y en la L2 y su repercusión en el aprendizaje autónomo de la L2

RESUMEN: A diferencia de la didáctica tradicional, las nuevas tendencias comunicativas dejan de lado el papel de los mecanismos de formación de palabras, pues tienden a concentrarse en el aprendizaje de la sintaxis y/o el vocabulario sin analizar los mecanismos morfológicos. En este estudio, basado en el análisis del uso de prefijos por estudiantes de inglés como L2 del SULEC, subrayaremos las repercusiones del conocimiento de dichos mecanismos en la producción, creatividad, comprensión, autonomía, e incluso corrección. La enseñanza de estos procedimientos permite a los alumnos descifrar, descodificar y/o codificar mensajes, crear palabras que no conocían anteriormente, etc.

Palabras clave: mecanismos lexicogenésicos, autonomía, transferencia, interlengua, prefijos

1. Introduction

Word formation may be defined as a set of processes for the creation of new words on the basis of existing ones. Thus, apart from borrowing from other languages, the vocabulary stock of a language is formed by means of what is usually known as word-formation rules and, particularly, of word-formation mechanisms, such as derivation, compounding, clipping, blending, conversion, abbreviation, etc. (see Adams, 1973; Bauer, 1983). In the case of native speakers,

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these processes are naturally acquired or interiorized at an early age. However, non-native speakers do not acquire them as naturally as natives do, for two reasons: (1) mainly because of the (let's say) 'artificial' nature of the teaching and/or learning environment, and (2) because of the (natural or expected) quantitative difference in exposure to the language. In other words, L2 learners not only deal with the foreign language in general, and with its grammar and vocabulary in particular, but also even more specifically, (in relation to our study,) with word-parts or word-formation rules that put words and other elements together to form new lexical items in a somehow 'artificial' context: usually that of the classroom in which the teaching takes place, and which is radically different from native language acquisition.

In this paper we focus on the acquisition of word-formation mechanisms in L2, which appears to us as quite a new area of research or rather, it seems that little work has been done on it up to the present day. As a rule, previous studies in L2 morphology or word-formation, such as Derwing (1976), Derwing and Baker (1977 and 1979), and Freyd and Baron (1982), have mainly concentrated on the order of acquisition of morphemes, that is, on whether L2 learners acquire inflectional morphemes before derivational ones, or whether learners are able to decode and recognize them before they can move into a productive stage, disregarding the importance of knowing and the acquisition of the morphological processes available in the L2.

Unlike previous studies, this article makes emphasis on how relevant word-formation processes or even morphology in general can be for the non-native speaker or second language learner as a way to increase their vocabulary or lexical resources, and also as a strategy to promote their autonomous learning.

2. Why should one pay attention to word-formation in language teaching?

As we implicitly suggested in the previous section, it is our belief that word-formation mechanisms and rules appear at least as important and necessary for non-native speakers as for native speakers, mainly because they would highly contribute to the learner's vocabulary and lexical resources which tend to be quite limited. In addition, it seems quite impossible to teach and/or learn, and even predict, all the vocabulary or lexical items that a non-native speaker may need at any stage. Therefore, the teaching and acquisition of morphological processes becomes a priority for a number of reasons. Firstly, not only as the mechanisms that allow the L2 learner to create new words or expand their vocabulary on the basis of already learned words. Secondly, and what is more important, they are also needed for the decoding and understanding of lexical items they may encounter as well as for the production and encoding of an idea they have in mind into a lexical item they have never come across before.

Aware of their importance, traditional approaches to language teaching tended to place morphological issues at the forefront. In recent times, however, with the arrival of the communicative trends, the learning and teaching of languages no longer focuses on the description of the language itself and, as a corollary, on morphological issues, but on language as a means of communication. As a result, the emphasis is no longer given to morphological issues, but to meaning and use of words in communicative situations (on this, see Widdowson, 1978). In our opinion, this has led to an undesirable disregard for the internal structure, the form, and the correct or accurate production and productive creation of words.

Even within this (communicative) context, there were still some scholars, such as Richards (1985), who still considered that «knowing the root and morphological relations of words» must be one of the criteria or conditions required to «know a word» and to be able to use it correctly in L2. According to Richards, knowing a word implies mastering its grammatical and contextual use, its basic meaning and different senses, knowing the syntactic structures in which the word may be used, its frequency, its combinatory possibilities and the network of associations or relations that may be created, as well as, as just said, its roots and morphological relations. However, morphology seems to be the least important criterion for him as he mentions it in the last place. Another problem with communicative approaches is that the relevance of knowing roots and morphological relations is also minimized because what is actually enhanced is inflectional morphology and not derivational morphology, which, in our opinion and as we shall prove in the light of the data in this study, would highly contribute, to the learners' advance in terms of comprehensibility and production and, consequently, it would have a positive influence in the development of an autonomous and/or independent learner.

Similarly, Ur (1996:60-63) includes the following aspects as implicit in word knowledge: form (pronunciation and spelling), grammar, collocation, aspects of meaning (denotation, connotation, appropriateness), meaning relationships (sense relations) and word-formation. Word-formation appears to be, as in Richards' case, the last in importance. However, it must be emphasized that, despite the scarce importance and secondary role placed upon word-formation mechanisms or morphological processes in communicative approaches, the case remains that L2 learners will necessarily have to create their own vocabulary or lexicon (on this, see Scalise, 1989) from their own resources and, especially, in communicative situations. Thus, as we shall attempt to show in the following sections, morphological processes and, consequently, morphological knowledge, continue to be important not only for increasing the lexical resources of L2 learners, but also for communication, that is, for understanding and production (or, in other words, for decoding and encoding).

For the above mentioned reasons, mainly communicative ones, vocabulary is mainly introduced and taught in context and with the aim of understanding or comprehending its meaning. However, there are still many voices supporting the need to pay attention to word form or rather, to the internal structure of words within communicative approaches, mainly for the sake of the learners' autonomy (one of the priorities of the EHEA [European Higher Education Area]), and far from the primitive or old-fashioned memorizing of word lists.

3. Becoming an autonomous learner through the acquisition of Word-Formation strategies

As we have just seen, and in spite of the influence of communicative approaches, the literature on L2 vocabulary teaching such as, for example, Ur (1996) and Nattinger (1988), continues to favour teaching methods in which students learn how to recognize basic forms of words and their combination with frequently used affixes. This «knowledge of basic affixes» not only «helps learners decode words» (Nattinger 1988:68) but it also enables them to form (encode) new lexical units. In other words, such recognition helps the learner to succeed in understanding and in completing comprehension or even speaking tasks, which also enhances communication.

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However, this is not the only bonus. Indeed, word formation rules not only offer links between words and affixes to create or to form other words but, as ten Hacken, Abel and Knapp (2006) argue, «a well-organized mental lexicon constitutes a better basis for the efficient acquisition of additional vocabulary items». Thus, «knowledge of these rules supports comprehension, production, and vocabulary acquisition» and, consequently, allows the learner to individually and autonomously develop their own lexicon in a more natural way, which does not require great memory efforts.

The creative power and autonomy that word-formation mechanisms provide is evidenced in agglutinative languages. Thus, Hankamer (1989) calculated that a typical educated speaker of Turkish, with a lexicon of approximately 20,000 noun roots and 10,000 verb roots, could dispose of more than 200 billion words based on this lexicon. Then, as «many words in a language are morphologically related [...] It would not be very economical if all these related forms had to be learned [..] separately» (Lowie, 1998:2). Similarly, in other languages, drawing attention to the morphological structure of words in the L2 teaching-learning process may also contribute to productive vocabulary learning but also to inferring and acquiring words, memorizing, retaining, and, consequently, to a growing autonomy in the learner (for further discussion, see Freyd and Baron, 1982 and Nattinger, 1988:64).

All these aspects had already been underlined by Gains and Redman (1986:47-49) and Nattinger (1988:64), as follows:

Focus on word-building is likely to pay dividends for the learner both receptively and productively. With the receptive skills, an understanding of all .. aspects of word building is essential if the learner is to make informed guesses about the meaning of unknown items. [...] In terms of productive skills, a knowledge of some basic principles of word-building and specific examples will serve to widen a learner's range of expression (Gains and Redman, 1986:47-49).

.. form may be more important than meaning in remembering a vocabulary item. We rely on the form of the word to lead us to its meaning, for we see or hear a particular 'shape' and try then to remember what that shape means. Therefore, in teaching comprehension, we need to teach strategies that take form as the principal path to meaning. For production, on the other hand, it is the meaning that guides us to an appropriate form for a particular situation (Nattinger, 1988:64).

All this underlines the importance of the strategies used to teach word-formation mechanisms that would allow the learner's independence and autonomy. But, apart from strategies, the tools used also play a very important role to achieve those and similar purposes. Among them, two main types of material need to be mentioned, namely textbooks and dictionaries. The former are nowadays well designed to meet the learners' needs and present varied and enjoyable tasks, sometimes within communicative situations so that the teacher may address or teach them in context, and not in isolation as the old-fashioned word lists did. However, in spite of this, they tend to disregard the importance of knowing the internal structure of words and, therefore, of word-formation mechanisms. As to the latter, dictionaries may be said not to support the acquisition of either L2 word-formation mechanisms or vocabulary (see Balteiro, 2008).

In general, an overview of learners' dictionaries shows a variety of attitudes towards word formation: concentrating on inflection instead of derivation, clustering of related forms, that is, treatment of derived items within an entry, or just the opposite, i.e. treatment of word formation elements as entries. The clustering of derivationally related items seems to favour the encoding process and contribute to the correct production and creation of new items. However, it does entail a number of drawbacks for decoding or comprehension, since it requires that the learner should previously analyse the word and be able to identify its parts in order to find it in the dictionary. In the case of prefixation, unlike suffixation¹, following an alphabetic order of presentation might be quite helpful.

Dictionaries' information on word formation tends to be implicit, as prefixed and suffixed words are often included, but quite often the meaning of a prefix or suffix itself is not. It would appear that new electronic dictionaries and databases solve the problem, at least partly, thanks to the fact that they allow the use of wild cards and, therefore, their greater flexibility in retrieval favours learners' autonomy and acquisition and answers to their particular needs. However, it remains to be seen whether learners do know how to use such wild cards, or rather just ignore them.

Nevertheless, in order to ensure effective learners' autonomy and as a previous step to the creation or preparation of more or less successful materials, attention should be paid to learners' mental processes, that is, to how they acquire vocabulary and word-formation mechanisms, and also how they process it when it comes to both decoding and encoding.

With a view to shedding some light on those processes, and also in order to illustrate the benefits of word-formation knowledge and the problems that learners may encounter in their autonomous development, we analyse prefixation in a one-million corpus of English as L2.

4. Learners' use of Word-Formation mechanisms to create or produce (IN)correct and (more or less) predictable lexical items: evidence from the $SULEC^2$

Unlike some other studies, it is our belief that the use of real data from a corpus would allow us to reach interesting conclusions for the study of word-formation and, more particularly, of prefixation in L2, in order to prove our arguments in favour of including word-formation in foreign language teaching.

Our study is based on real second-language performance of Spanish learners of English. It mainly focuses on the analysis of interlanguage morphology, or rather on prefixations produced by second language learners of English as provided by the *Santiago University Learner of English Corpus* (henceforth, SULEC). The analysis has proved us, as shown below, that error

- 1. The use of a reverse dictionary would solve the problem. See for example Sheehan (2000).
- 2. The SULEC (Santiago University Learner of English Corpus) is a corpus of about one million words of oral and written language, collected from Spanish learners of English at different levels of proficiency (elementary, intermediate and advanced). Spoken data were collected through semi-structured interviews, short oral presentations and brief story descriptions while written data were gathered from compositions or argumentative essays.

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analysis is a necessary step for the teaching of L2 word-formation mechanisms as it allows us to concentrate on those areas which present actual difficulties for the learners, mainly because it identifies those issues which entail problems of either decoding or encoding for the learner.

In our case, several problems with some prefixes, such as *des*- and *dis*-, *in*- and *un*- have been identified, which seem to be especially difficult for Spanish users of English. As we shall see, the rest of the prefixes in the corpus do not appear to present problems for the learners. However, the confusion between the preceding ones, that is, *des*- and *dis*-, on the one hand, and, *in*- and *un*-, on the other, may be said to have two main causes: first, the learner is not familiarised enough with English prefixation and, more particularly, with the differences between the mentioned prefixes; secondly, learners tend to transfer the prefixes from their mother tongue (L1). Sometimes it seems that they even make mistakes or do errors in their native language (Spanish, in this case) especially with *des*- and *dis*-. In other words, Galician people's productions, particularly uneducated people, sometimes reflect some incorrect fluctuations between *des*- and *dis*-, e.g. they may use *descriminar* for *discriminar*. (Note that SULEC includes productions in English of Spanish speakers from different regions in Spain, such as Galicia, Andalusia, and the Valencian Community).

As regards prefixation with *des*- and *dis*-, most problems have been caused by the negative transfer from the L1 as learners assume that word mechanisms and formations that are possible in the L1 are also (similar) in the L2. Thus, for example, our corpus provides the following instances:

- (1) for Spanish des- and English dis-, learners use des-, as in *desoriented (Engl. disoriented/disorientated, Sp. desorientado);
- (2) for Spanish des- and English des- or de-, learners use des-, as in
- *desviation (Sp. desviación, Engl. deviation),
- *desintoxication (Sp. desintoxicación, Engl. dexotification),
- *desesperation (Sp. desesperación, Engl. desperation) and
- *desprecieted (Sp. despreciado, Engl. despised (with hate)/ rejected).

Note also that in these cases, despite the similarity between the Spanish and the English forms, the Spanish word forms highly influence or motivate the learners' creation, the encoding or the attempts to solve a lexical gap in their vocabulary;

- (3) for Spanish *des* and English *un-/in-/dis-/*etc., learners also use *des*-, which also proves prefix-transference from the L1 into the L2, as in
- *desafortunately (Sp. desafortunadamente, Engl. unfortunately)
- *deseguallies (Sp. desigualdades, Engl. inequalities)
- *desesperate (Sp. desesperar, Engl. to drive to despair/to exasperate)
- *designality (Engl. inequality (meaning 'difference') / disparity (meaning 'desequilibrio') / uneveness, Sp. designaldad)
- *desigual (Engl. unequal/irregular/uneven, Sp. desigual)
- (4) Unlike the preceding cases, in which the L1 interference is clear, in the following two instances the use of *des* is not justified in the same terms:
- *desagree (Engl. disagree, Sp. discrepar)
- *descriminate (Engl. discrimate, Sp. discriminar)

As the examples show, for Spanish *dis*- and English *dis*-, learners continue to use *des*-. It seems that frequency factors would explain such instances: in Spanish the prefix *des*- is much more frequent than *dis*-, which leads Spanish learners of English to transfer such a prefix in all occasions.

Apart from those, as already said, further errors have also been identified as a result of morphological negative transfer from the L1 into the L2 with prefixes *in*- and *un*-. Thus, examples such as *inconfortable (Sp. incómodo, Eng. uncomfortable), *innatural (Sp. antinatural, Eng. unnatural), *innecessary (Sp. innecessario, Eng. unnecessary) and *insupportable (Sp. insoportable, Eng. unbearable/intolerable) have also been found in the corpus, which prove not only L1 interference, that is, Spanish transfer of its prefix *in*- (*inconfortable, *innecessary, *insupportable), but probably also some kind of confusion between English *in*- and *un*- as in *innatural, where no negative transference from Spanish can be suggested as the Spanish term is anti-natural. In this case we do not believe there is confusion between English *in*- and English *un*- but simply immediate or direct transference from the Spanish *in*- as in *incómodo* or *insoportable*, for example.

In the light of the preceding discussion, it seems that learners are eager to transfer items from their L1 to their L2, even if the languages are different in origin, as is our case, Germanic (L2) and Romance (L1). Our study, therefore, appears to contradict Kellerman's principle (1977) that there is a 'perceived' language distance between target and native language which he labels as «psychotypology». This would mean that as soon as learners assume that the languages are different, they would try to make the forms as different as possible. However, considering the examples just provided and those that follow, this does not seem to be the case. In fact, it may be argued that learners tend to produce in the L2 lexical items which are the result of derivation processes, such as prefixation or suffixation, as formally similar as possible to those in the L1. In this case, this «prediction» is quite valid as most of the English vocabulary or, more precisely, most of the prefixes used in English coincide with those of Spanish, as a high percentage of them or rather, of the English vocabulary is of Romance origin.

Quite noticeable is also the fact that, unlike the preceding examples in which learners seem to have problems with the use of Spanish *des-* and English *dis-* and where transfer from the L1 is quite obvious, some other lexical items formed with English *dis-* do not appear to present difficulties, such as *disabilities, disappear, discomfort, discouraging, discover, dislike, disorders, displaced,* or *disrespectful*. Furthermore, some accurate forms were also found in the corpus corresponding to the errors mentioned above, e.g. *disagree* and *disagreeable*. Such fluctuations and/or accurate uses besides the erroneous ones may be explained by the different levels of the learners (from (pre-)intermediate to advanced) whose productions were included in the corpus. Furthermore, it may be argued that the problem is not in the prefix or mechanism itself, but it seems to derive from the acquisition and/or teaching of such forms.

Apart from that, it seems that within prefixed words learners acquire and learn more easily (1) those lexical items whose prefixes are either identical or at least similar to those in the mother tongue, such as depravating, ex-smokers, illegal, illogical, immediately, immoral, maltreat, renewed, repair, resolve, subsequent, subsidies, substance, subtitled, supermarkets, etc., or, just the opposite, that is, (2) those whose prefixes substantially differ from the L1 ones, such as misfocused (Sp. desenfocado), mistake (Sp. error, cometer un error; though probably learnt as one single word, as this word is synchronically seen as simple rather than

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derived), outdoors (Sp. al aire libre, al descubierto), outside (Sp. exterior), towards (Sp. hacia); or (3) even words with highly frequently used prefixes like un- as in unable (Sp. incapaz), unacceptable (Sp. inaceptable, inadmisible), unbelievable (Sp. increíble), uncertain (Sp. incierto), unconscious (Sp. inconsciente), uncountable (Sp. incontable), unhealthy (Sp. insalubre, malsano, enfermizo), unknown (Sp. desconocido), unnecessary (Sp. innecesario), unpleasant (Sp. desagradable), unprotected (Sp. desprotegido), unusual (Sp. poco común, raro, inusual). It may also be hypothesized that probably most of these items do not present problems because they are usually linked and related to their opposites in language teaching materials and L2 classrooms. *Impolite* may be a good example to corroborate this statement as it is very different in form from the Spanish maleducado, but it is probably learnt at the same time as polite. Similarly, other less basic or elementary-level L2 prefixes such as overor under- have been identified in the corpus in «accurate» examples like overcrowded (Sp. abarrotado, superpoblado), overloaded (Sp. sobrecargado), overpopulation (Sp. superpoblación, sobrepoblación), underdeveloped (Sp. subdesarrollado), undergo (Sp. sufrir), underground (Sp. subterráneo), underlined (Sp. subrayado), underlying (Sp. subvacente), undertaking (Sp. emprendiendo), undervalue (Sp. subvalorar), which are dissimilar to their Spanish counterparts do not apparently present problems for the learners, probably because such prefixes had been previously taught to learners or rather because they are used by more advanced-level students.

Hence, we may conclude that (1) conscious and appropriate teaching of word-formation rules and their particular mechanisms help learners to be autonomous and produce accurate formations or lexical items, as the prefixes in the corpus have proved. (2) The learners' native language plays an important role in the study of L2 morphology, as it is often used as a starting point to form similar derived units in the L2. (3) Concentration on those morphological and semantic differences between L1 and L2 prefixes contributes to effective learning and, consequently, to increase the learners' lexical production. In spite of this, it cannot be disregarded that, once taught, (4) learners may use their creative power to form words they have probably never encountered before (i.e. non-entrance, non-human, non-married) but these may not necessarily and in all occasions be completely accurate. To illustrate this, we may mention instances from the SULEC such as *unwealthy (probably by analogy, that is, for its formal similarity with healthy – unhealthy, which provokes some confusion in the learner). Teachers should be aware of cases like those and provide feedback and reinforcement so that learners improve their command of the language. Apart from those, (5) other minor problems may also arise (and, in fact, they have been detected in our corpus) as regards prefixation and interferences from the L1 in spelling; among others, note, for example, instances like *dissapeared, *dissapointment, *inmature or *inmoral. In fact, the first two misspellings would probably be avoided by an emphasis on the constituents of the word (telling the student to first write appear and then add the prefix).

In the light of the preceding examples, we believe that the similarities and dissimilarities among English affixes (in this case, prefixes), as well as those dissimilarities between English and Spanish prefixes, should determine the amount of time to be spent on this area and on each prefix in order to make the learners aware of them and contribute to their future autonomy and independence as L2 users.

In spite of the preceding arguments, it appears that transference from the L1 is a mental process with a positive role, as it may facilitate the learners' vocabulary development and the production of greater amounts of lexical items. Thus, an important number of forms found in

the corpus were produced without difficulty, especially those which are very similar to Spanish forms and that fulfil two conditions: first, they come from Latin and, second, they no longer can be synchronically decomposed, such as *decline* (*de+clinare*), *deduced*, *destroy*, *impose*, *incommode*, *support*, etc. Similarly to the Latin forms, originally Greek lexical items, which are almost identical to the Spanish forms such as *democratic*, *heterosexual*, or *homosexual*, have been correctly and/or accurately produced by the learners whose productions were included in the corpus (SULEC). However, it is here believed that teachers should control the amount and quality of transferences, especially negative transferences, so that learners only produce actual words and not possible but incorrect ones. Furthermore, as already suggested, careful attention should be paid to those areas in which English and Spanish prefixation processes differ as they are the main sources of a substantial amount of mistakes and/or errors.

5. Conclusions

In the previous sections, arguments have been given in favour or the inclusion of word-formation mechanisms in L2 teaching. Thus, we have held that knowing word-formation rules and mechanisms is basic for the development of autonomous and independent learners, especially concerning vocabulary production, creativity, understanding and even proficiency. In order to validate our assertions, an analysis has been made of prefixation strategies in a corpus of over a million words (SULEC). An analysis of the data shows that the teaching of morphological processes is relevant and essential in order to enhance the learners' creative power. However, we have also found that, given the importance of transfer as learners tend to either positively or negatively apply the resources of their native language, such teaching should concentrate on those mechanisms which differ from those available in the students' mother tongue. Also, attention should be paid to those L2 mechanisms which may be easily confused, e.g. English *in-* and English *un-*.

In addition to this, it seems that enhancing learner awareness of the internal structure of words and the mechanisms by which they have been obtained has a double effect. On the one hand, it contributes to logical memorizing and retention (since words may be learnt in clusters, and not individually); on the other, when the learner is aware of word-formation processes he or she is better prepared to decode and encode new words, which is precisely what will occur in autonomous learning processes. Of course, as already argued, one of the ways to ensure such awareness is providing sufficient input into L2 mechanisms, especially those which differ from the L1.

Our study also seems to implicitly provide some insights on how second language learners acquire an L2 and the mental processes they use. For example, valuable information may be gathered from the analogies, the transferences from the L1 and the translation equivalences they make.

As a result of all this, we still firmly hold that, even within communicative approaches, textbooks and dictionaries should not disregard interlanguage or rather, second language learners' productions or corpora in order to identify problematic areas. This will make it possible to adapt contents most effectively to the learners' needs and favour the building up and interiorizing of lexical resources. All this will make learners not only independent and autonomous in their production but also more accurate and proficient in their realisations, which will indeed favour

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autonomous learning as they become aware that they are actually making progresses once outside the classroom.

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