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AN ANALYSIS OF THE EFFECTS OF VARIABLE EXTERNAL FACTORS ON THE BILINGUALISATION OF INDIVIDUAL LEARNERS

Abstract: In this paper an attempt will be made to analyse the effect of variable external factors commonly said to influence the effectiveness of the bilingualisation process (such as exposure to English, periods of total immersion and years of study in second language) using quantitative research. An attempt will also be made to investigate whether a correlation can be established between a student's preferred learning style and the extent to which any or all of the above factors may have more or less influence on their bilingualisation.

Key words: Second Language Acquisition, variable external factors, individual learner differences, learning style, bilingualisation.

Introduction

As Ellis points out, learners vary widely in how successful they are at learning a language "(...) learners vary not only in the speed of acquisition but also in their ultimate level of attainment, with a few achieving native-like competence and others stopping far short" (2004:525). While these differences in achievement can be attributed to a number of factors, it is individual learner differences that appear to be of vital importance when it comes to deciding the success or failure in learning another language and achieving bilingualism.

This article seeks to question, through quantitative research, how many of the world of second language acquisition's theories on factors influencing the likelihood of achieving *bilingualisation* actually translate into facts. It will also question whether simply knowing the kind of learning style one prefers and what factors matter most to those who prefer said learning style, may help them increase their chances of achieving bilingualism.

So it begins with the definition of the four main types of learner styles as theorised by Honey and Mumford (2009): *Activist, Theorist; Pragmatist and Reflector*.

[...] *These are the learning approaches that individuals naturally prefer and they recommend that in order to maximise one's own personal learning each learner ought to: understand their learning style [and] seek out opportunities to learn using that style. [...]*

As for the most commonly mentioned factors in the context of second language acquisition, the *Bilingual Language Profile*¹ (which is the main result of the *Bilingual Assessment Project*), the University of Texas at Austin published a list of non-SLA factors containing these factors as the most significant in terms of the role they play in language learning: age of acquisition/exposure; years of schooling; frequency/function of use; linguistic environment; [...]; proficiency [...]. The more specific aims set to the research conducted using a sample population of 100 bilinguals, are therefore to analyse which of the above factors, and more, seem to have the biggest impact on individuals aligning with different learner styles. The ultimate goal of the research evidently being to determine whether any of the newly-defined most influential 'non-SLA' or 'external' factors can be (or indeed already are) manipulated or utilised efficiently by second language acquisition establishments. Correlations between any number of factors across different groups of learners must also be taken into account, as it is to be expected that certain factors will have greater impact when applicable in conjunction with others, rather than in isolation.

These above-mentioned correlations will be published in a wider research project, which constitutes the author's doctoral research into the influence of external factors on the process of *bilingualisation* for subjects having demonstrated a preference for different learner styles. This particular paper will commence with a brief overview of the theoretical background and research methodology which make up the foundations for the research, before delving into the results obtained from the study group composing of 100 bilingual individuals. Different conclusions will then be drawn based on these results, some confirming, others challenging common theories concerning external factors in the realm of *Second Language Acquisition*.

Theoretical Foundations: An Overview of Bilingualism and Learner Styles

In his paper entitled '*An Investigation through Different Types of Bilinguals and Bilingualism*', Hamzeh Moradi defines bilingualism as *the use [with some degree of proficiency] of at least two languages either by a group of speakers or*

¹ The BLP is an instrument which enables researchers to collect and collate data on the functional language abilities of bilinguals through self-reports on language history, proficiency, use, and attitudes in either of the bilingual subject's acquired languages.

by an individual. He continues, however, to specify that this definition comes with a number of caveats leading to different types of bilinguals with different levels of proficiency and different levels of dominance of one language over the other. Indeed, the ability to speak a second language has become so commonplace, that in many countries, it is not unusual for people to consider themselves bilingual from the moment they are able to hold a comprehensible conversation in two languages. So while the bar for what would popularly be considered to constitute bilingualism is set quite low, and even J. Lyons states that the theoretical ideal of *equilingualism* is rare in practice, for the purposes of this paper, only the most proficient classes of bilinguals (C1 and C2), were used in order to narrow the pool of subjects to definite and accomplished bilinguals. Such a decision enables this research to be more focused in unearthing the factors which have had considerable impact on the bilingualisation of people who are now genuinely bilingual, as opposed to merely apt in two languages.

Interestingly, H. Moradi then references H. Baetens Beardsmore while continuing his definition in which he states that:

[...] Bilingualism is best regarded as occurring on a continuum. At one end of the continuum is the monolingual speaker; at the other, the individual who has acquired both languages in naturalistic contexts in childhood and who is best described as speaking LA and LB with equal and native like fluency. [...]

This statement makes the assumption that true bilingualism is attained through acquisition in a naturalistic context, and moreover, acquisition in childhood. While these factors are commonly recognised as playing an important role in the *bilingualisation process*, this paper will start a step back by questioning exactly how much of an impact the factors involved in that assumption have. These include exposure to native speakers; periods of total immersion in a second language environment; the age at which the subject first started learning the second language, and the age at which they first felt comfortable using that language. The importance of those factors will be measured in general terms as well as specifically in the context of a comparison of bilinguals preferring different learner styles as detailed by Honey and Mumford's *Learning Style Questionnaire*.²

These learner styles break down as such: *Activists* are open-minded and approach learning by looking forward to new experiences which they can take part in actively. *Theorists* analyse concepts and facts to form their thoughts and opinions about how and where to store the information in their logical minds. *Pragmatists* are experimenters, eager to test theories and techniques in practice to

² This questionnaire (which was used for this study) is Honey and Mumford's Learning Style Questionnaire (2009) and is composed of 40 in-depth questions designed to promote self-awareness of one of four main learning styles. For further reading on this questionnaire, see Honey and Mumford (2009).

judge whether or not the information is worth retaining. Finally, *Reflectors* learn through observation and consideration of the entire picture in order to reach their conclusions.

Research methodology

For the purposes of this particular paper, we will be focusing solely on three common external factors: age of initial exposure to the second language, years of total immersion in the environment where the second language is spoken natively, and years of study in second language. Once the figures for each of these categories have been examined individually for every group of learners, we will further investigate correlations between these factors and the participants' tendency to achieve a balanced bilingualism or not.

Firstly however, we will begin by describing the methodology used and the pool of participants in this study. In terms of methodology, all efforts were made, as they should be, to ensure that any possibility of the research being influenced by incidental factors was removed. Wherever the potential possibility of arbitrariness was impossible to remove completely, it was taken into account when interpreting the results for that particular section of the study, to ensure the credibility of every part of this research. With regard to the pool of participants, the groups of learners were primarily selected for their confirmed bilingualism. The specific features of the Honey and Mumford questionnaire as well as those of the additional questionnaire I used for the purposes of this research both required it to be considered of prime importance that the participants in the study have a certain level of maturity and self-awareness. The final selection of one hundred bilingual students was chosen in most part from Education First in London.

The low degree of homogeneity among the participants (stemming from the fact that they come from a variety of backgrounds and are of different nationalities) is in the case of this study, considered an advantage, as it ensures that the results obtained can paint a more accurate representation of a wider demographic. The participants also present great diversity in terms of their age (the youngest participant is aged 17 while the oldest is 62). The average age was 26 years old and the mode was 19 with a standard deviation of 9 years. Of the total of one hundred participants, 20 were males and 80 females, as it happened to be the case that a much larger pool of females fitting the requirements to participate in the study were available. However, as this study pertains to 'external' factors only (meaning ones that can be controlled, rather than something one is born with), gender is not relevant in this research. Therefore, no special attention was given to the gender of subjects during the data analysis, and indeed the imbalance in male and female participants was immediately considered incidental (and should obviously not be taken to suggest that there are a greater number of female bilinguals in the world).

The decision to use at least one hundred participants was taken in order for the data to achieve statistical significance. Said data was collected through questionnaires and the results were interpreted via quantitative analysis. The level of proficiency of the subjects in either language is C1, C2 or above, and their level of maturity made them ideal candidates in terms of providing a useful, broad sample of bilinguals as well as of learners who demonstrated a preference in different learning styles. Honey and Mumford's *Learning Style Questionnaire* and the custom-made survey for this research were completed successively and in the same session via an online survey site. All of the resulting data was used to determine each participant's preferred learning style as well as the correlations between learning style preferences and the most significant factors in their achievement of *bilingualisation*.

Results of the study

As is to be expected when the *Learner Style Questionnaire* created by Honey and Mumford is used on a large pool of people, many of the participants tested showed an equal preference for up to two or three different Learner Styles. In order to ensure methodologically correct results, which may be used to examine each individual Learner Style, any participant showing an equal preference for two or more Learner Styles was removed from the study. The number of participants in each Learner Style pool after this adjustment therefore breaks down as follows: 16 participants showed a preference for the 'Activist' Learner Style; 17 for the 'Pragmatist' Learner Style; 26 for the 'Reflector' Learner Style; and 13 for the 'Theorist' Learner Style. Even at this early stage in the analysis of the results, it was interesting to note how many more participants demonstrated a preference for the *Reflector Learning Style*. Such a result could indicate that *Reflectors* are either more likely to become bilingual than *Theorists*, or inversely, that bilinguals are more likely to be *Reflectors* rather than *Theorists*, depending on which came first.

Age of first initiation to second language

The average age of participants demonstrating a preference for the *Activist Learner Style* when they first started learning their second language was: 8.7 years old, for the *Pragmatist Learner Style* it was: 10.5 years old, for the *Reflector Learner Style* it was: 9.6 years old, for the *Theorist Learner Style* it was: 8.4 years old. While these results show too little deviation from the average or from each other to draw any significant conclusions as to the effect of this external factor on *bilingualisation*, what is interesting is that the average age for every single group falls

into what B. Beardsmore categorised as ‘early bilinguals’, which is to say bilinguals who acquired their second language in pre-adolescent phase of life. The fact that all the subjects who took part in this study were of level C1 and above confirms his and Swain’s theory that early bilingualism tends to manifest itself as a native language, as opposed to late bilingualism which is unlikely to ever reach the same level of proficiency (in which case, they would not have met the criteria of level of bilingualism which was required of participants for their inclusion in this research).

That being said, it is also noteworthy that the group with the oldest average age of first initiation to their second language (the Pragmatists) is also the second most common in our pool of participants. Furthermore, the largest group (the Reflectors) did not have the youngest average age of first initiation to their second language. So while the average age of each group was consistently pre-adolescent, none of them could be said to be in the infantile age range, and this too could be interpreted to argue against common theories stating that the younger one begins learning a second-language, the more likely they are to actually become bilingual. Especially when considering another necessary caveat, which is that the subjects of the research may have stated a certain age as their age of first initiation to their ‘L2’ when in fact, that ‘initiation’ may have been followed by a long absence of exposure making it far less important than their later exposure to the language.

Years of total immersion in second language environment

Participants who demonstrated a preference for the *Activist Learner Style* had an average of 3.6 years of total immersion in their second language environment while participants who demonstrated a preference for the *Pragmatist Learner Style* had an average of 4.8 years of total immersion in their second language environment. Participants who demonstrated a preference for the *Reflector Learner Style* had an average of 7.9 years of total immersion in their second language environment, and finally, participants who demonstrated a preference for the *Theorist Learner Style* had an average of 1.3 years of total immersion in their second language environment.

As the pool of participants used for this survey consisted entirely of bilinguals, and that within this pool of bilinguals, learners with a preference for the *Reflector Learner Style* have the highest average number of years spent in their second language’s environment, it could be concluded that Reflectors are either: most likely to need more exposure to such an environment; or most likely to move to their second language’s environment for an extended period of time.

The results also suggest that on the other hand, participants demonstrating a preference for the ‘Theorist’ Learner Style are either: most likely to need the least exposure to such an environment; or least likely to move to their second language’s environment for an extended period of time.

Adjusted years of total immersion in second-language environment

The standard deviation value for this external factor was of 7.28 years either side of the average of 5.15 years of total immersion in L2. Therefore, to ensure the data is observed in the most credible way, we can look at each learner group's average again with any learner whose value is higher than 12.43 years removed and classified as an exception (indeed they may have permanently relocated to an English speaking country, in which case, any years beyond the 12th anniversary of their arrival could be considered not have further contributed to their *bilingualisation*). This could provide a better idea of a more standard bilingual person's average years of total immersion. With the adjusted figures, participants who demonstrated a preference for the *Activist Learner Style* had an average of 2.56 years of total immersion in their second language environment while participants who demonstrated a preference for the *Pragmatist Learner Style* had an average of 2.62 years of total immersion in their second language environment. Participants who demonstrated a preference for the *Reflector Learner Style* had an average of 2.79 years of total immersion in their second language environment, and finally, participants who demonstrated a preference for the *Theorist Learner Style* had an average of 2.17 years of total immersion in their second language environment.

Following the recalculations, it was comforting for the credibility of this research to note that excluding the exceptions had no impact on which group of learners need/seek the most exposure to their second language (Reflectors), and which group does so the least (Theorists). What these results do indicate however is that achieving bilingualism, irrespective of preferred Learner Style, takes an average of over two years of total immersion in one's second language environment.

Years of study in second language

As a whole, the participants in this study had an average of 9.1 years of study in their second language. Participants who demonstrated a preference for the *Activist Learner Style* had an average of 7.4 years of study in their second language and participants who demonstrated a preference for the *Pragmatist Learner Style* had an average of 9.2 years of study in their second language. Participants who demonstrated a preference for the *Reflector Learner Style* had an average of 9.7 years of study in their second language, and finally, participants who demonstrated a preference for the *Theorist Learner Style* had an average of 10.3 years of study in their second language.

This is a particularly interesting result as it reveals that the Learner Style group with the lowest number of years of study in their second language (the Activists),

is also the one with the smallest number of bilinguals. Inversely, the group with the largest number of bilinguals had the second-highest number of years of study in their second language. This could be interpreted as an effective argument in favour of learning English through traditional study environments. Indeed this could be taken as evidence that the *Activists*' nature of wanting to learn by experience rather than by listening and reflecting, tends to take them out of the classroom sooner, which ultimately leads to fewer of them becoming bilingual.

Comparison of confidence levels in L1 and L2

Although this is not an external factor, measuring all participants' confidence levels in their 'first' and 'second' language will provide valuable insights into some of the factors we have already analysed and establishing correlations between them. It will therefore be pertinent to begin by discussing the distinction between what Peal and Lambert describe as *balanced bilinguals* and *dominant* (or *unbalanced*) *bilinguals*³. Put simply, balanced bilinguals are close to what was touched upon in the introduction with the concept of *equilingualism*,⁴ as opposed to *dominant bilingualism* where one's proficiency in one language outweighs that of the other. When participants were asked to self-assess their confidence in their 'first' and 'second' languages, the average participant claimed to be 93.3% confident in their first language and 80.9% confident in their second. These high levels of confidence in L1 and L2 confirm that our pool consists entirely of genuine bilinguals, but also confirms J. Lyons' point that *equilingualism* is quite rare in practice, with only 10% of participants claiming to be completely *equilingual*.

On average, participants who demonstrated a preference for the *Activist Learner Style* claimed to be 95.4% confident in their L1, 80.8% confident in their L2 and 8% of them claimed to be equilingual. Participants who demonstrated a preference for the *Pragmatist Learner Style*, on average, claimed to be 92.8% confident in their L1, 84.8% confident in their L2 and 12.5% claimed to be equilingual. The participants who demonstrated a preference for the *Reflector Learner Style* claimed, on average, to be 92.7% confident in their L1, 82.5% confident in their L2 and 14.2% claimed to be equilingual. Finally, participants who demonstrated a preference for the *Theorist Learner Style* claimed, on average, to be 92.5% confident in their L1, 75.5% confident in their L2, and 7% claimed to be equilingual.

These results tell us that learners with a preference for the *Reflector Learner Style* were most likely to claim to be *equilingual*, while learners with a preference for the *Theorist Learner Style* were the least likely. Interestingly, on average, learners with a preference for the *Theorist Learner Style* also appeared to have the

³ For full explanation of balanced and dominant bilingualism, see Peal and Lambert (1962).

⁴ For full explanation of equilingualism, see H. Baetens Beardmore (1981).

biggest margin between their confidence levels in L1 and L2. This result could be interpreted to suggest that Theorists are least likely to become perfectly *balanced bilinguals* (or *equilingual*). This is particularly interesting when considering the fact that the average Theorist in this study started learning their second language at the youngest age. This again goes against the theory that age of initial exposure is a crucial factor in achieving bilingualism. Furthermore, recalling that the average *Theorist* in the study had the smallest number of years of exposure to the second language's native environment further points to the conclusion that years of exposure is a much more significant factor than age of initial exposure. Especially when combined with the fact that *Reflectors*, the group with the highest percentage of equilinguals is not only the group with the highest average number of years spent in an environment where the second language is spoken natively, they are also the group showing the highest number of bilinguals overall.

Another set of results which this section could put into question, is the factor of years of study in the second language as a necessary benefit to reaching a more balanced bilingualism. Indeed, the group with the highest average number of years of study (Theorists) also produced the greatest average imbalance in confidence between L1 and L2, and the lowest percentage of *equilinguals*. That being said, this fact could further be put in correlation with the fact that *Theorists* are also, as we know, the group with the smallest average number of years of exposure, which in addition to previous findings, would give rise to the conclusion that 'years of exposure' seems to be the most influential of the external factors analysed for this research.

Conclusions

To begin this conclusion, I would like to quote Singleton and Lengyel (Singleton 1995:4) in their open criticism of 'folk wisdom', especially with regards to the age at which one starts learning a second language.

[...] First, [...] empirical evidence cannot be taken to license the simplistic 'younger = better in all circumstances over any timescale' version of the Critical Period Hypothesis (CPH) that one finds in folk wisdom and that seems to underline some of the 'classic' treatments of age and second-language learning (e.g. Tomb, 1925; Stangel, 1939; Penfield & Roberts, 1959; Lenneberg, 1967). Everything points to the situation being very much more complex and very much more interesting than such treatments would tend to suggest. [...]

[...] Second, even the 'younger = better in the long run' version of the CPH in respect of second-language learning needs to be seen in perspective of a general tendency and not as an absolute, immutable law. [A]n early start in a second-language is neither a strictly necessary nor a universally sufficient condition for the attainment of native-like proficiency. [...]

Singleton and Lengyel's statement falls perfectly in line with the results of this study which show that the age at which one begins learning a second language, while all being pre-adolescent in our pool of participants, is not necessarily a significant factor in the attainment of native-like proficiency in said second language. It also leads logically into the next conclusion we have come to which is that 'years of exposure' is a much more significant factor, with the group presenting the highest number of years of exposure not only having the most bilinguals in it, it is also the group claiming the smallest imbalance between their confidence levels in their first and second languages. Inversely, the group of learners with the lowest number of years of exposure (Theorists) had the greatest imbalance in bilingualism and the lowest level of confidence in their second language, despite them also having the highest number of years of study in their second language. Which brings us to this third factor: years of study in the participants' second language. It seems to make sense that the two groups of learners who prefer a more practical approach to learning would not have pursued to extend their years of study in the same way that the *Reflectors* and *Theorists* seem to have done. But while the group with the lowest number of years of study showed the lowest number of bilinguals and the second highest imbalance in bilingualism, the group with the highest number of years of study also showed the greatest imbalance in bilingualism.

These findings could be interpreted to mean that while insufficient studying of one's second language will lead to poor chances of becoming bilingual, having a greater number of years of study in one's second language will not yield the same results as increasing the amount of time spent in total immersion of one's second language. This too fits logically with the point of view of Honey and Mumford's Learning Styles, as an immersive experience will appeal to every style of learning whether one has a preference for experience like the Activists, analysis like the Theorists, practice like the Pragmatists or observation like the Reflectors.

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