Maltese as a Second Language
Learning Challenges and Suggested Teaching Strategies

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Abstract

Adult learners experience challenges when learning a second language (L2), and educators must think of potential teaching strategies to overcome these challenges. This study explores the learning challenges that adult participants experienced while learning Maltese as a second language (ML2), including some of the teaching strategies which they indicated were effective. This study applied a pragmatic epistemology and a longitudinal, qualitative research design to clarify the complex phenomenon of second language acquisition (SLA) and comprehensively address the research question. Thirty-five adult participants in an ML2 class sat for two timed grammaticality judgement tests (TGJTs) and verb conjugation (VC) tasks, picture interpretation tasks six times over a 15-month period and reflective journals. For post-hoc analysis, the participants participated in an interview and a stimulated recall session. Despite participants' learning difficulties, which were collected through reflective journals and interviews, they indicated that the acquisition of the Maltese verbal tense and aspect did take place over time, although this was a particularly challenging area of ML2 acquisition. The participants recommended teaching strategies that could facilitate ML2 learning.

Keywords: Maltese as a second language (ML2), second language acquisition (SLA), learning challenges, teaching strategies, Chaos/Complexity Theory (C/CT)

Introduction

Second language acquisition (SLA) occurs when an individual is learning a language that is not their native/first language (L1; Gass & Selinker, 2008), although the language in question could be the learner's second, third, or fourth (etc.) language. Costa (2018) and Rosner et al. (2012) assert that most learners currently learning Maltese as a second language (ML2) are expatriates. Malta is densely populated for its size, with a population of 441,391 (Malta Population, 2020). There are over 67,000 non-Maltese people living in Malta,

based on the figures from Eurostat (Maltachamber, 2019); 38,563 of the expatriates living in Malta came from different EU countries, while 28,582 are from non-EU countries.

Many expatriates decide to live and work in Malta permanently or long term for various reasons, including Malta's geographical position between Europe and North Africa, Malta's tax system, the fact that many Maltese can speak English well, the local legal framework for iGaming (Internet gaming), the Mediterranean climate, safety, low unemployment, ease of finding a job, and political stability (Lutterbeck, 2009). Many foreign workers have found employment in the iGaming industry, financial services, the restaurant industry, health care and pharmaceuticals, construction and manual occupations (Barbaro-Sant, 2018; Micallef, 2018). Some expatriates are thus interested in learning the Maltese language.

Malta's geographical position and history have made Maltese an interesting and unique language (Mifsud, 1995). There are two major conflicting theories about its origins – whether Maltese originated from Punic (today's Lebanese) due to the influence of the Phoenicians or from Arabic due to the Arabic dialect of Sicily and/or North African Arabic dialects – but there is one consistent point in these two theories: Maltese is part of the Hamito-Semitic language family, also called Afro-Asiatic languages (Camilleri & Sadler, 2016). Maltese is the only Semitic language written in the Latin alphabet and the European Union's only official Semitic language, as Malta has been an EU member since 2004. The Maltese language is thus used in official EU documents and communication competence in Maltese is required for EU nationals working in Malta under Directive 2005/36/EU, Article 53, as well as third country nationals.

Learning Maltese as a second language

As the non-Arabic L1 participants explained in the present study, Maltese is a difficult language to learn, particularly regarding verb tenses and aspects. According to Mifsud (1995), 95% of the Maltese grammar is Semitic, but what is unusual about the Maltese verb system is that Maltese verbs are 'trilateral' and incorporate Romance and English verbs, while adding Arabic prefixes, infixes and suffixes to them (i.e. three separate consonants represent the general meaning of a word, and the combination of vowels before, in between and after those consonants indicates the tense or determine the meaning) to make them Romance Maltese and English Maltese. Arabic only rarely does this, although several Arabic dialects, such as Tunisian, do so more often (Hoberman, 1989).

In SLA, the use of tenses is one of the most effective ways of assessing someone's knowledge of a particular language (Jordens & Bittner, 2017). When

learning any second language (L2), students tend to make tense-related grammatical errors both in oral and written forms (Pallotti, 2018). Pallotti states that, in most languages, the imperfective aspect generally sounds and seems simpler to many students compared to the perfective aspect. As learning is systematic, particularly in the use of verbs, Pallotti found that where the imperfective was used extensively, L2 learners were able to construct their own rules in systematic and creative ways. For instance, when learning Italian and other European languages, verb conjugation in the imperfective aspect always appears before the emergence of the perfective aspect, especially when expressing habitual and interactive actions (Pallotti, 2018).

For ML2 learners without any knowledge of Semitic languages, the temporal and aspectual systems of Maltese could be problematic. One difficulty that ML2 learners could encounter is when a sentence in Maltese contains a verb-chain consisting of a *perfett* (a verb form describing a complete action, generally associated with past events) aspect followed by an *imperfett* (a verb form that refers to the internal temporal constituency of a situation) aspect; that is, the *perfett* as well as *imperfett* aspects are found in the same sentence (Borg, 1981; Fabri, 1993). For instance, in the sentence 'Komplejt naħdem' – literally, 'I continued I work' (I continued to work) – one must first conjugate '*kompla*' – literally meaning 'he continued' (to continue) – in the first person singular *perfett and perfective aspect*, and then one must conjugate '*ħadem*' – literally meaning 'he worked' (to work) – in the first person singular *imperfett* and habitual aspect. In most Indo-European languages, the second verb would be in the infinitive or a participle (for example in English: 'He continued to work'), whereas in Maltese there is a combination of *perfett* and *imperfett* as these terms encode both tense and aspect (just as in Semitic languages) and because there is no infinitive (again, as in Semitic languages).

It is obvious, then, that to master the Maltese language, an ML2 learner with no background in Semitic languages must handle the Maltese verbal tense and aspect from a new perspective. As there is no infinitive in Maltese, L2 learners should learn that when there is a verb-chain in a sentence, they must conjugate all verbs and that these verbs can have different aspects, as we have seen in the example of '*Komplejt naħdem*' above.

According to Żammit (2019), who confirmed and developed Camilleri Grima's (2015) findings, in contrast to Maltese people who prefer to use the *perfett*, ML2 learners from European and Asian countries opt for the *imperfett* when describing a set of pictures, despite their analysed knowledge of both the *imperfett* and the *perfett*. Both Camilleri Grima (2015) and Żammit (2019) acknowledged that this may mean that ML2 learners find it easier to learn and use the *imperfett* before the *perfett*. The present study investigated whether 35 intermediate-level adult ML2 learners preferred to learn the *imperfett* before the *perfett*.

ML2 pedagogy

It was only in recent years that many expatriates felt the need to learn ML2. Although there is a demand for and interest in ML2 classes, there is a notable lack of linguistic research and no previous large-scale study examining ML2 teaching and learning (Żammit, 2019). Moreover, before the influx of expatriates in Malta, Maltese teachers were trained to teach Maltese as an L1 (ML1). It was only in 2014 that teaching ML2 began to be required, as many teachers started teaching foreign students in addition to Maltese students. A postgraduate training programme in Teaching Maltese as a Foreign Language started recently, in 2018. This postgraduate training was intended to teach Maltese teachers how to teach ML2 and provide them with the necessary training to do so effectively.

The need for a national policy for teaching ML2 within the context of bilingualism and plurilingualism, which involves both children and adults, emerged in 2019 as a result of the significant advent of foreigners to Malta (The National Policy of the Teaching of Maltese as a Foreign Language, 2019). As the Directorate for Learning and Assessment Programmes states, ML2 started being assessed at Primary, Middle and Secondary State schools in 2016. ML2 is also taught in independent schools, but it is not yet being taught or assessed in church schools. Teaching ML2 is thus quite new, and the teachers who did not graduate in recent years and who teach at Primary, Middle and Secondary schools or adults at evening classes did not receive any training in teaching ML2 during their pedagogical course, which is problematic because ML2 teaching must be implemented in a different way than ML1 teaching.

Second language acquisition and chaos/complexity theory

Chaos/Complexity Theory (C/CT), which forms the conceptual framework of this study, has its origins in research explaining complex systems in the scientific fields (Harshbarger, 2007). However, it has recently attracted the attention of social scientists and educators in the SLA field, particularly in analysing the L2 learner's learning pattern (Larsen-Freeman, 2018). This theory is based on the connectivities/interactions amongst the factors which influence language learning and determine its nature. The theory posits that these unpredictable interactions could lead to the emergence of larger structures that are much greater than the sum of the components.

C/CT seeks to explore SLA through 12 characteristics; SLA is dynamic, complex, non-linear, chaotic, unpredictable, butterfly effect (sensitive to initial conditions), open, self-organising, feedback sensitive, adaptive, strange attractors and fractal patterns (Larsen-Freeman, 1997). These C/CT characteristics which influence SLA are associated with the learner, the teacher

and the learning environment (Larsen-Freeman, 2018) and can either enhance or hinder learning, leading to the learning phases of progress, decline and plateau. The present study seeks to link the L2 features of C/CT to explore the challenges encountered by foreign adults learning ML2 and to formulate effective teaching strategies for ML2.

The study

This study explored how C/CT can be applied to explore the difficulties experienced by those learning Maltese as a second language. This research adopted a pragmatic epistemology and a longitudinal, qualitative research design. Pragmatism emphasises that the development of knowledge is through an individual's reflection as well as lived experience (Bazeley, 2013). The rationale for selecting pragmatism as the epistemological approach was that the study aimed to explore the lived experience of a sample of ML2 learners and to reflect upon the findings in line with C/CT. A longitudinal design of 15 months was adopted to effectively determine the impact of C/CT on SLA based on the data from the ML2 adult learners' scores on the Timed Grammaticality Judgement Test (TGJT) and Verb Conjugation (VC) tasks. In addition, qualitative data was obtained through the use of reflective journals, picture interpretation tasks, stimulated recall and interviews as these were essential to explore the issues associated with ML2 learning difficulties (Teddlie & Tashakori, 2003). The participants were also asked to identify any learning strategies that could overcome their ML2 learning issues. The ethics and research committee (University of Malta Research Ethics Committee and the Faculty Research Ethics Committee) approved this study.

The researcher

I define my roles in this study as those of a researcher and a learner (Glesne, 2006). As I recruited participants, established contact with them, conducted one-on-one interviews, administered the tasks, transcribed, analysed, and interpreted the data, I felt fully involved in the study and acted as a researcher. At the same time, I took a learner's perspective that allowed me to examine and understand different aspects of the topic, reflect on various aspects of research procedures, and find answers to the research questions. Acting as both researcher and learner, I felt responsible for making sense of data and constructing realities through my own interpretation (Lichtman, 2010). As I have often been a student of foreign languages, I have experienced the SLA process in ways similar to the participants of this study, because, although I did not live in the country of the L2, I experienced the same kind of teaching methods, like the ML2 participants. For example, to name a few, as an L2 student, I used to sit in silence, listening to the teacher instead of interacting in L2 in class, working on my own rather than in groups, studying endless lists of words, verbs and exceptions by heart, and memorising them for examinations.

My experience allowed me to better understand the participants' stances and their experiences related to their ML2 learning process. However, I was aware of potential biases that I could unintentionally bring due to my own experience, and I tried to ensure throughout the study that I restrained myself from relying on my subjective opinion. In order to reduce bias and subjectivity, I purposefully avoided sharing my own experience as an L2 student with the participants. I clearly defined my role as the researcher at the beginning of the tasks to ensure that my experience did not influence the participants' responses

Contextual background

The setting of the study was three lifelong learning centres in Malta. For a minimal fee, ML2 classes ran once a week for three hours from October to May with two-week intervals during Christmas and Easter recess (i.e. about 32 weeks). Thirty-five ML2 adult learners (aged 18–76 years) having different language backgrounds, coming from different parts of the world and various walks of life (i.e. participants held diverse professions and were from varied family contexts) participated in this research. The participants who met the inclusion criteria (i.e. adults over 18 years of age and who had finished the first level of ML2) provided informed consent; participation was voluntary. Fifteen Maltese adults from different walks of life also participated in this study for comparative reasons.

Although the demand for learning Maltese is increasing, it should also be taken into consideration that the number of adults who study Maltese in a formal way by attending classes is not very large yet. For this longitudinal study, during the last week of March 2016, I used convenience sampling in which all ML2 learners at Intermediate level attending the state-run lifelong learning programme had an equal and independent chance of being recruited and I did not select choose from among them. The population size in the 2015/2016 scholastic year was that of 39 participants who were studying ML2 at three different lifelong learning centres in Malta. The population size dropped to 37 in the 2016/2017 scholastic year, because two ML2 learners did not continue to attend their Maltese course. Of the initial population, one student was not willing to volunteer for this study, and another student left Malta for good. The final sample size for this study dropped to 35 out of a starting population of 39.

I was aware that ML2 participants could return to their home countries or that they could be absent on the day when I visited their class to collect data. To decrease the risk of dropouts from the study, I used to meet the participants who were absent from their Maltese lessons at a coffee shop to complete the data collection tasks for my study. In this way I avoided participant attrition as much as possible. This has affected the data because otherwise I might have had fewer participants and invalid results.

The research tools

Since I did not carry out observations of lessons that the participants attended, the data regarding the teaching approach/es was gathered from the participants. According to most participants, they experienced a form-focussed and content-based approaches based on a graded grammar syllabus in which they were provided with tasks such as dictation, drill work, countless lists of grammar rules and verb conjugations to learn by heart. The participants reported that they did not experience a communicative approach or some form of inductive grammar instruction. Thus, it was assumed that the TGJT data collection tasks in which in 20 minutes, the participants needed to verify if 40 sentences were grammatically correct or not and the VC tasks in which the participants needed to conjugate the basic verb that was in brackets could have been related to the tasks they worked on during their ML2 lessons.

The other data collection tasks included a picture interpretation task in which the participants were requested to talk about two sets of pictures to assess the kind of verbal tense and aspect they used, a reflective journal in which five participants volunteered to write about their experience of learning Maltese and Maltese verbs, one-on-one structured interviews in which the participants answered my open-ended questions relating to ML2 learning especially the Maltese verbs, and a stimulated recall session during which the participants received copies of their previous TGJT and VC responses together with their picture interpretation transcripts, and were asked to recall why they responded as they did.

Analysis and Discussion

The first part of this section reports that while learning Maltese as a second language did take place, the learning patterns were non-linear for all the participants. The second part organizes the difficulties experienced by learners into themes and explores the extent to which Chaos/ Complexity Theory can be applied to ML2 learning.

Non-linear learning patterns

From Figures 1 and 2 it can be concluded that learning ML2 verbs has taken place. As the data also shows, the distribution of the mean scores of TGJTs and VC are comparable. This supports the *fractal pattern* which is a C/CT characteristic, and indicates that if a participant experienced an improvement in their TGJT mark, there was also an increase in the VC mark, and the same trend followed when the scores declined.

From the confidence intervals shown in Figures 1 and 2, the differences between the participants' mean scores on the TGJTs and VCs from the three learning centres did not achieve any statistical significance for the participants'

first four performances on TGJT and VC, (i.e. in March 2016, May 2016, October 2016 and January 2017). In fact, the mean TGJT and VC scores varied only marginally between March 2016 and January 2017, as one can see through the overlapping of the confidence intervals. They then increased significantly from March 2017 to May 2017, as one can see through the disjoined confidence intervals of the last two months compared to the first four months. This shows that the learning process is exponential after some time: early on, there are small insignificant changes in the learning process, but over time, learning accelerates – at least that is what occurred among these participants in this study and concerning this grammatical area of verbs. This supports another C/CT characteristic, the *butterfly effect*. According to the butterfly effect, insignificant minor changes can lead to drastic major changes over time (Larsen-Freeman, 1997).
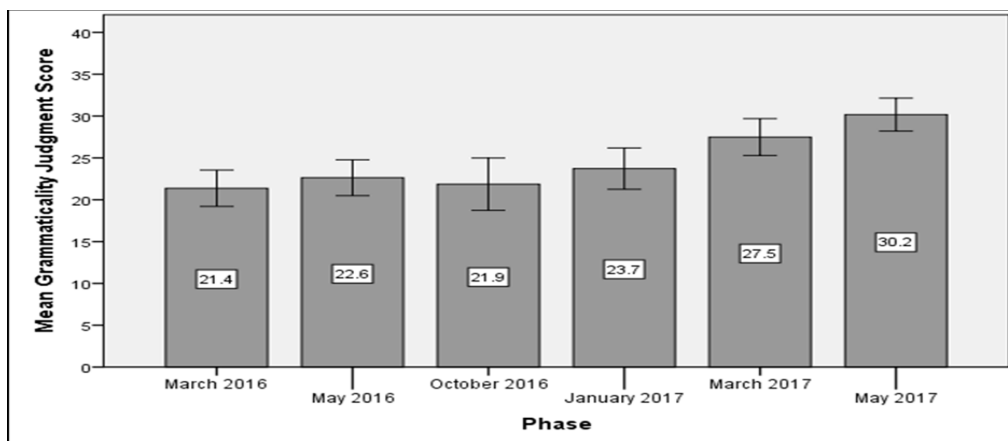

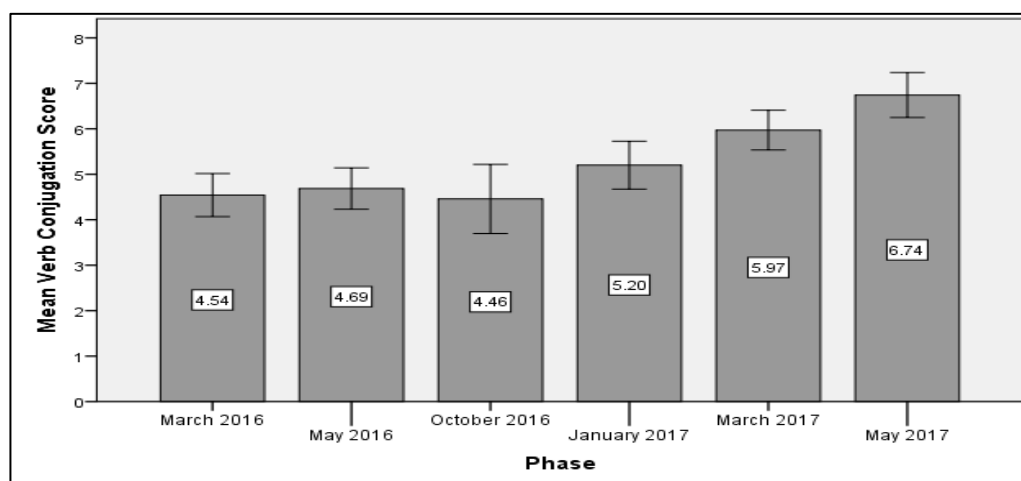*Figure 1: The Mean Scores of Timed Grammaticality Judgment Tests out of 40*

Figure 2: The Mean Scores of Verb Conjugation Tasks out of 10

Analysis of learner performance on TGJT and VC tasks indicates that the teacher cannot predict the learner's performance, because a student who has

performed well may either improve or decline in performance in the subsequent test. In light of this, the findings of the present study are contrary to those reported by -previous?? studies, such as De Bot and Verspoor's (2005), who found that SLA has a clear starting and ending point and is thus linear and can be displayed in a cause-effect graph. The idea that learning is linear means that the learner's performance keeps on improving over time and it cannot decline; this is not evident in the current study, and is also not supported by C/CT. The findings of this study are supported by most researchers who acknowledge that SLA is not linear (Bernat, 2008; Larsen-Freeman, 1997, 2016, 2018; Safari & Rashidi, 2015), but is rather a complicated process that cannot be predicted, as evidenced by the varied performance of learners over time. The unpredictability of a learner's performance is influenced by several factors, as demonstrated in some learning theories such as the Completion Model, which emphasises that within a person's system of language, SLA is influenced by social, cultural, environmental and psychological variables, which work together to determine how a person learns a language (Larsen-Freeman, 1997, 2011, 2016; Verhoeven, 1994).

According to Larsen-Freeman (1997), a complex system is usually non-linear, so the effect does not depend on the cause. It is therefore evident that the ML2 learner performance on grammar tests (i.e. the effect) does not completely depend on the teachers' teaching methods or the learner's time or effort spent in learning ML2 (i.e. the cause), although certain teaching methods and quality study time could help. There are many internal and external factors that may influence the L2 learner, such as interlanguage feedback from L1 users, peers or teachers; the learner's age, motivation, and attitude; and the strategies of teaching and learning (Larsen-Freeman, 2011). It is expected that learners will always have their reasons for their poor performance in L2 tests. Beckner et al. (2009) add that if an individual desires to do things in a certain order, C/CT will prevail. To comprehend how C/CT applies to SLA, the ML2 learners' difficulties are explored below and linked to C/CT.

Learning Challenges

All participants were faced with various problems ranging from personal to environmental that could have led to either a *decline*, *progress* or *plateau* (i.e. periods of no noticeable progress in learning) in their learning curves as assessed by their performance on both grammar tests. The existence of these problems associated with ML2 learning is evidence that C/CT truly prevails.

Learning the perfett *before the* imperfett

During their interviews, all 33 ML2 participants – except the two Arabic L1 participants –stated they had learnt the imperfective aspect before the perfective when learning other European, or Asian languages as their L1 or L2,

and Semitic languages as their L2. However, all 35 participants claimed that Maltese teachers taught them the *perfett* before the *imperfett*, and the 33 ML2 participants (with non-Arabic L1) found the Maltese verb system very difficult to learn.

The two Arabic L1 participants (one from Palestine and the other from Libya), however, both claimed during their interview that they found it quite natural to learn the *perfett* aspect first and then the *imperfett*. Both also acknowledged that, when they learnt Arabic as their L1, they first learnt the *perfett* and then the *imperfett*. This is what happens when Maltese people learn or teach ML1, as confirmed by both the 15 Maltese participants and the 35 non-Maltese participants in the present study. This could be because Maltese, like all Semitic languages, does not have an infinitive, and also because the basic verb form in Maltese (as in other Semitic languages) is the third person singular masculine in the *perfett* aspect (called 'Mamma' in Maltese).

As teaching and learning ML2 is a new subject in the Maltese education system, teachers have not been trained to teach it and were trained to teach ML1 during their pedagogical course. Since they may not be aware that ML2 should be taught differently from ML1, it seems that most teachers tend to teach ML2 in the same way they would teach ML1 to a native speaker (henceforth ML1 users), accordingly preferring to teach the *perfett* before the *imperfett*.

My finding is in line with Camilleri Grima (2015) and also found, during the picture interpretation tasks, that the *imperfett* is produced by ML2 learners as opposed to ML1 users and Arabic L1 users, the latter producing the *perfett* when describing a set of pictures. There were also some European and Asian participants who reproted that, when studying their L1 and any other L2, including Arabic, they first learned the imperfective and then the perfective, while ML1 users and Arabic L1 users claimed that they learned the perfective before the imperfective when learning their L1. This relates to the C/CT characteristic of the Butterfly Effect, in which the L2 learner is influenced by initial conditions and hence by their L1. Based on these findings and the participants' comments in this study and Camilleri Grima's (2015) project, it is suggested that teachers should teach the *imperfett* before the *perfett* when teaching ML2, in contrast to the order adopted by Maltese teachers who teach ML1 of the *perfett* first, followed by the *imperfett*.

Difficulties in making effective use of language transfer

C/CT explains the difficulties experienced by the L2 learner via adaptability as well as feedback sensitivity. For SLA to be effective, the L2 learner needs not only to adapt to the new environment/culture, but also to accept and use feedback from native speakers (in this context, ML1 users). The self-organising aspect of the transfer from L1 can either be positive or negative, and a negative

transfer is associated with a decline or plateau in the learning process (Tamjid, 2007).

During their interview and in the reflective journals, all 35 participants acknowledged that Maltese was either similar to or different from their L1, and this either positively or negatively influenced their ML2 learning. Positive transfer from a source language can be attained by the facilitating effects of the L1 in SLA. Positive language transfer (Selinker, 1972) was reported in cases in which the participants' L1 is Arabic or Italian. Most of the learners acknowledged that if they were familiar with Arabic they would perform well in learning Maltese, especially Maltese grammar. Knowledge of Italian was associated with easier learning of Maltese vocabulary. According to Brincat (2005), out of 41,000 words in Aquilina's Maltese-English Dictionary, 32.41% are of Arabic descent, 52.46% are of Sicilian and Italian, and 6.12% are of English origin. For other L1s, negative consequences of language transfer were reported; most learners may thus have experienced negative transfer due to the differences between their L1 and Maltese.

All participants bar one agreed that it was easier for a person who knows Arabic to learn ML2 (because Maltese was initially derived from Arabic, so the two languages share several similarities). , This participant who had learnt Arabic as an L1 scored extremely low marks in the TGJT and VC tasks and in his reflective journal, he reported that Arabic was interfering with his ML2 learning. Some participants who had no knowledge of either Arabic or Italian obtained high scores in the TGJT and VC tasks. This result is grounded by Kellerman's theory (1979) on Perceived Language Distance, which postulates that when an L1 and L2 are related to each other, they can create more confusion and present greater issues for the L2 learner than where there are differences between the two languages. This is in line with C/CT's characteristic that SLA is unpredictable, complex, chaotic and is attracted to a strange attractor (Larsen-Freeman, 1997).

During their interview, the participants suggested that the ML2 teacher should ask the learners to list a number of words or grammar rules which are similar in Maltese and their L1. In this way, the adult learners reported they could benefit from a positive transfer between Maltese and their L1, and could eventually remember more grammar rules. In fact, all participants reported that although Maltese was quite different from their L1, the two languages shared some similar principles. For instance, one of the participants realised that, like Russian, Maltese does not have the verb 'to be', while another one identified that, like Italian, the Maltese language is null-subject and another participant realised that the order of appearance of units and tens in Maltese numbers was similar to the German order.

Problems encountered during the initial stages of learning Maltese

When a learner experiences a problem in the first encounter with the L2, the problem may continue. Most participants reported that they performed poorly in this study's tests because of an initial problem they encountered while learning ML2. This is further evidence of C/CT's butterfly effect, which is described by De Bot et al. (2007) as a little alteration in the initial learning stages could lead to a significant difference during a later state. During the stimulated recall session, thirteen participants reported that their poor performance in the TGJT and VC tasks was due to the challenges they experienced since their first lesson and which persisted. A participant reported in her? reflective journal that he had been confused from the start about verb conjugation in Maltese and has always scored very low marks in verb tests. Another participant declared during her interview that she felt frustrated because, since the first class, she not only experienced problems with verb conjugation but also with pronunciation, as she confused the pronunciation of the vowels 'e' and 'i', which in Maltese is the opposite of their English pronunciation. Concurring with De Bot et al. (2007), Larsen-Freeman (2011) states that an early problem in SLA can affect the L2 learning process; a small, insignificant problem in the beginning of SLA can thus lead to a drastic problem over time. The participants who discussed this issue during their interview, were of the opinion that the educator and the students who encounter a specific problem at the beginning of the ML2 course should promptly address this issue before it worsens.

Lack of both implicit and explicit knowledge

SLA can occur in an implicit (i.e. learning a language in an incidental way, without being conscious of what has been learned), as well as an explicit manner (i.e. a learning process that enables the learners to express what they have understood by attending lessons), depending on the continuity of the exposure of the learner to the L2 (Helie & Sun, 2010). According to Esteki (2014), implicit knowledge helps the learner to be proficient in L2, while explicit knowledge helps the learner to use the L2 accurately, although overdependence on explicit knowledge to increase the language accuracy will lead to a reduced fluency (Roehr-Brackin, 2010). To effectively develop ML2, explicit and implicit knowledge should be considered together and not in isolation.

During their interviews, several participants reported that when they obtained lower scores on the TGJT and VC grammar tasks, this was due to a lack of exposure to Maltese during their four-month summer vacation period or the two-week recesses for Christmas and Easter. Thirty-one participants acknowledged that when they visited other countries, they neither spoke nor listened to Maltese and thus, their implicit knowledge could not develop during their holidays. As evening classes were not provided during the

holidays, most participants could not attend, which also ruled out the development of explicit knowledge. Participants who were married to Maltese partners reported that their partners were not willing to speak in Maltese, and if participants spoke in Maltese to their Maltese partners or other ML1 users, the latter were not willing to correct these learners' mistakes, but answered in English instead of Maltese. According to C/CT, learning is also feedback sensitive (Larsen-Freeman, 1997), so learning might not take place when ML1 users are 'too polite' (as many participants reported) to correct ML2 learners during their interactions.

Language development is frequently characterised as a process in which learning occurs implicitly in the absence of awareness of what is learned, in the way children learn their L1. As noted in Rebuschat and Williams (2009), essential skills including language comprehension and production are largely dependent on implicit language, which did not occur in this context. The lack of an interface between explicit and implicit knowledge underlines the pedagogical implications of the lack of implicit or explicit knowledge during SLA. The underlying issue is not the lack of exposure to L2, but the break in exposure during the holiday period. As observed in Zdanawoski (2014), apart from age as a determining factor in SLA, disruptions after the initial period of exposure are a major factor that affects SLA among adult learners. Exposing adult learners to a different environment will eventually lead to resistance and lack of willingness to learn an L2 (Buttaro, 2004). Extended breaks in exposure to the Maltese language hampered SLA and might have contributed to a decline in ML2 knowledge among participants.

During their interview, many participants suggested that the issue could be addressed if the teacher makes the lessons relevant to their everyday lives, such as by teaching them through dialogues, stories, real-life themes and role-plays. They preferred to learn their grammar, vocabulary and sentence structure through storytelling, dialogues and role-plays, rather than receiving a list of vocabulary phrases and grammar rules from the teacher and doing drilling exercises. Participants maintained that they could better understand and memorise the vocabulary and grammar rules presented in this way and more readily apply their language knowledge into practice. As Cameron and Moss (2011) state, it is important for foreign adults to apply their learning to everyday life circumstances to become resourceful, confident and able to integrate into L2 society.

Adult commitments

C/CT's characteristic of openness requires that external factors influencing SLA should be considered in the learning process (Gonsior et al., 2014). External factors can affect SLA either positively or negatively. In this study, adult learners had many commitments apart from learning Maltese. Most (32)

adult participants claimed during their interview and in their reflective journals that learning Maltese requires commitment in terms of time, but that it is difficult to find the time when one is working; cooking; raising a family; taking care of children, a new-born baby or sick parents; has a garden, pets or hobbies; and needs to keep the house clean. These responsibilities can limit time to plan, read and study (Malone, 2014). Some participants perceived being an adult with so many commitments and responsibilities as a reason for their poor performance in the ML2 tests when they compared themselves to learning an L1 or L2 as carefree children.

In general, during their interview, some participants said they were attempting to do too many things and were struggling to multitask. Also, as they multitask, their level of work and concentration drop. This suggests that if they are seeking to do more than one aspect when learning ML2, the odds are they are not going to have the attention they really need to learn what they are studying: it is much easier to concentrate on one thing. Nevertheless, good things are not achieved by accident, but by a number of small things put together (attributed to Vincent van Gogh [Chang, 2006]). This is in accordance with the butterfly effect characteristic of C/CT, which indicates that small insignificant actions may contribute to a drastic improvement over time.

Participants proposed during their interview that the ML2 educator could show them how to set specific targets in Maltese learning. Such objectives should be simple to attain and inspire learners to achieve frequent successes. When teachers set a huge target for them, such as 'study Maltese one hour per day', participants found themselves achieving it only two or three days a week and thus felt like they were failing. If their goal is, rather, to 'study for five minutes a day', they could feel more successful in meeting this goal. Thus, in line with the butterfly effect, these five-minute increments will create something more.

A few participants described during their interview that many language learning products promise to help them learn an L2 quickly, but it is impossible to learn a language in a week, three months or even a year. SLA requires years of constant work to reach a high level. This does not mean that L2 learners do not accomplish any significant goals along the road, including conversational fluency, but it suggests that it is going to take longer to get to that desirable, native-like fluency. According to the participants, because there are no shortcuts in learning ML2, it makes far more sense to commit to it for the long haul, so it does not seem to be a barrier during their learning journey. These adult learners claimed that teachers need to encourage their students to remain dedicated to studying ML2 so they can set up a successful study routine with only five minutes a day. Learners should keep track of their improvement and will see that their commitment get results.

Culture shock

C/CT is characterised by sensitivity to initial conditions and adaptation. There are indications that SLA is influenced by the existing difference in culture between the learner's home country and host country. In this study, during their interview, some participants blamed their poor performance in learning Maltese on the existing cultural differences with their home country, whereas other participants performed well due to the similarity of their culture with Maltese culture. Twenty-three participants reported that they were influenced by culture shock and they needed to adapt themselves to Maltese culture. One of the participants, from Albania, wrote in her reflective journal that she had adjusted to Maltese culture by repairing computers for the Maltese and then felt more successful in learning Maltese as she was interacting more with Maltese people. According to C/CT, learners must adapt to the environment of a complex system (in this case of SLA). Based on Foley and Thompson (2003), learning a language is a socially oriented process that widely links to the environment, which is a constituent of cultural and cognitive processes.

The present research shows that culture differences between Malta and the original culture of the ML2 learners could create difficulties in learning ML2. Culture shock can be countered by cultural intelligence, where the learner becomes flexible enough to understand, listen and analyse as well as reflect on the target language culture (Aravind & Dwivedi, 2015). An inability to unlearn and challenge one's own cultural beliefs and practices may impede SLA.

The participants would like their teacher to encourage them to compare their own culture with Maltese culture. They reported during their interview and in their reflective journal that they would develop a greater appreciation for Maltese in this way because they would have a way of comparing traditions and customs. Maltese cultural peculiarities can make for memorable points of comparison. By integrating intercultural communicative competence in language teaching, the teacher could motivate learners to contrast Maltese culture with their own and provide comparative interpretations, pictures and stereotyping of the learners' own and Maltese culture (Lázár, 2003). Nonetheless, according to C/CT, SLA is unpredictable (Finch, 2004) and it is therefore not a given that the ML2 learner who can adapt to Maltese culture will not experience a problem while learning ML2. It is also difficult for the teacher to declare that all ML2 learners will resolve the culture shock issue in a similar way.

Learner's memory problems due to ageing

According to Gathercole and Baddeley (2014), as an individual grows older, memory loss sets in and SLA is also affected. However, some learners performed well in the ML2 tests despite having advanced age, and it can thus

be said that other factors interfere with learning apart from memory loss. Growing older and experiencing memory loss was cited by 27 of the 35 participants as the reason for the declining performance in their TGJT and VC tasks, especially on the VC tasks. Twelve of these participants declared during their stimulated recall that they had been suffering from long-term memory loss. Memory loss was also found not only to affect ML2 learning but also L1. Participants were consequently very frustrated when they made a strenuous effort to remember a word in their L1.

During her interview, a participant admitted that her memory was failing her due to the ageing process, because as a child she had a very good memory. This highlights the critical period hypothesis, in that SLA processes in adults are slower and less successful than in children younger than 18 years of age (Muñoz, 2017). The maturation mechanism has been proposed as synchronous constraints in both the ability to lose some vocabulary and grammar aspects in L1, and the ability to gain some aspects in L2 (Bylund et al., 2012). During the first 10 years of life, SLA and L1 acquisition are at their highest (Jia & Aaronson, 2003). After this period, the potential to acquire an L2 declines and L1 acquisition also slows. Moreover, according to Jia and Aaronson (2003), the differences favouring SLA in children may lie not only in biological but also in psychological and social factors. This implies that plasticity for both L1 attrition and SLA are age-dependent and correspond to qualitative changes in individual learning ability. Since during their stimulated recall, most participants gave this reason for their lower scores on both TGJT and VC tasks, this supports the self-organising C/CT feature, which means there are numerous factors at play that influence SLA.

As reported above, participants pointed out the importance of oral discussions and involvement, role-plays, language games, small debates and written essay activities, rather than long repetitive lists of vocabulary words and grammatical rules, to help them overcome their memory issues. This result might be accounted for by the hypothesis suggested by McNamara and Scott (2001), who claimed that a learner's memory issues could be due to a lack of teaching and learning strategies for processing information. It is probable that the participants required the learning they received to be integrated and transferred in their production, thereby improving their memory and eventually their overall output in ML2.

Frustrations associated with either stagnation or slow progress in ML2 learning

Three of the most imperative C/CT characteristics are that SLA is dynamic, unpredictable and chaotic (Finch, 2004). As SLA is dynamic – since learning an L2 declines or improves – the ML2 learner may feel frustrated at not being able to learn Maltese as expected. This situation is chaotic and, when frustrations set in, the outcome is either a decline in performance or stagnation (when the

learning curve plateaus). During their interview, most participants expressed their frustrations because, despite putting in considerable effort, money and time into learning Maltese, the results indicated a decreased performance or absence of progress. Initially, the learning curve could be steep but, following SLA, the curve could flatten and thereafter slow down irrespective of the learner's L2 exposure (Engel & Van den Broeck, 2001). In such a situation, the learner is likely to become frustrated and unable to generate more effort, leading to even poorer performance. Tamjid (2007) adds that even if the learner's L1 is related to the L2, the existence of strange attractors – which are also C/CT features – will lead to a non-linear pattern of learning. The period during which the L2 learner is experiencing a plateau can be called chaotic because the new content being taught results in a collapse of the content that was taught earlier (Safari & Rashidi, 2015). The stagnation in the learning process usually continues until the learner understands how to incorporate the new concept into the already existing, previously taught, concepts.

During their interview, twenty-nine participants reported being frustrated due to the absence of progress in ML2 learning. This frustration was further aggravated by the fact that these participants were attending evening classes as well as trying hard to interact with ML1 users and yet their performance in speaking Maltese was stagnating. A participant reported that she did everything she could, such as always speaking in Maltese to ML1 users even when they reply to her in English, listening to the radio, watching Maltese drama series on TV and reading books, and yet she experienced a plateau phase (i.e. she obtained the same mark on three consecutive TGJT and VC tasks). As a result, she felt frustrated because she was not aware of the reasons for her stagnation in learning Maltese after all her effort and time.

Some participants admitted that they were uncomfortable speaking in Maltese to ML1 users. They felt that they have not perfectly mastered the Maltese language, although they passed their evening class final exam and were at an intermediate level. This supports the C/CT characteristic of a strange attractor (Larsen-Freeman, 1997), which means that no matter how much time and effort a learner dedicates to learning a language, he or she still can obtain unpredictable results; in this case, the same scores as previously on the same grammar tasks.

Most participants who gave up due to stagnation pointed to their teacher's need to encourage them, praise them, reinforce them positively, calling them by their names during class discussions and motivating them to raise the learners' spirits effectively. According to the participants, the class should be challenging enough to make students believe that their work will produce a meaningful result by asking them 'intermediate level' questions rather than elementary level questions. If a student is unable to address an 'intermediate' question when asked, the teacher should guide him or her to the correct answer

or, if absolutely necessary, supply the answer. The teacher must then make the student repeat the answer a few times so that the whole class can hear the response; this should be followed by praise.

Some participants also mentioned during their interview, that music is a perfect motivator if the teacher wants students to get into the groove of the lesson and for the lesson to be more effective. Music could keep adult learners awake and make them move: snap their fingers, tap their toes and nod their heads. Several participants proposed tasks for Maltese song lyrics and engaging in group work. Chances are that, amongst three learners, one of them will know the answer and be able to explain it in a way that their fellow classmates could understand, particularly if they all have the same L1 or a shared language other than Maltese. According to the participants, this ensures a comfortable atmosphere for learners to pose concerns and understand new ML2 concepts. In her interview, one English participant explained how working in a group helped her feel comfortable communicating with her peers and learning more.

Limitations associated with personality, especially extroversion and introversion

The ML2 learners reported during their interview that they have different personalities and thought that their personality might influence their ML2 learning. At the beginning of the ML2 learning process, the difference in personality can be linked to C/CT's butterfly effect, because being either an introvert or an extrovert could influence ML2 learning over time, and this is called the learner's *initial condition*. Some participants indicated that their improved performance in Maltese was attributable to the fact that, according to them, they have an extroverted personality and were never afraid of making mistakes and thus kept on speaking Maltese in class and when meeting ML1 users. The interaction of ML2 learners with ML1 users is imperative, because SLA is particularly sensitive to feedback and adaptation (Larsen-Freeman, 2011). Extroverts tend to enjoy interacting with L1 users and have been found to learn an L2 faster than introverts (Barron-Hauwaert, 2010; Lightbown & Spada, 2013). In a contrary finding, Zafar (2017) reported that introverts learn faster and are better at L2 in comparison to extroverts because they listen better. In fact, several participants reported that their performance improved although they have an introverted personality, contrary to what many studies claim.

One of the participants, a declared introvert, admitted during her interview that she felt shy speaking to ML1 users because the latter speak very fast and she was afraid of sounding ridiculous when speaking Maltese. As observed in Ratner (2010), introverts prefer to choose cautiously whom they interact with. This participant recorded an improvement in her performance on the Maltese grammar tests, and she attributed this to the fact that she liked reading Maltese books as well as listening to the radio and podcasts in Maltese. That personality

may have had a positive influence on SLA gives further credence to the C/CT characteristics, which suggest that SLA is unpredictable and complex and thus is not pegged on personality, particularly introversion and extroversion among adult learners. While an extroverted personality facilitates more learning because these individuals are not afraid of interacting with ML1 users, introverts may be better listeners and readers, thereby enhancing their implicit knowledge of L2.

During their interview, the adult learners in this study proposed that teachers should identify or learn about the learners' personality characteristics and their preference in language learning strategies. In this way, lessons could be more productive, because the teacher would implement appropriate teaching approaches to meet the lessons' learning goals. This study showed that certain learners who assumed they were extroverts used more functional strategies and social-affective techniques in language learning than the declared introverts. It also seemed like extroverted students preferred to rely more on meaning than on form, and thus they interacted with Maltese people and did not mind the grammatical errors they produced. This observation confirms the findings of Lightbown and Spada (in Wakamoto, 2000), who found that extroverts are more effective in language learning and better in communicative skills than introverts.

The typical introvert is usually a quiet and withdrawn kind of person, introspective, fond of books instead of people, reserved and detached but for close friends. He or she attempts to work ahead, does not like excitement, takes issues of daily life seriously and wants a well-ordered way of living. Introvert participants tend report very frequently using five strategic items: they (a) learn from mistakes, (b) learn from teachers, (c) use dictionaries and Google search and translation, (d) listen to songs in Maltese and (e) keep a diary in English for ML2 learning. Participants who consider themselves to be introverts used five lowest rated tactics involving: learning in a Maltese speaking environment, learning about Maltese culture, talking to ML1 users and becoming friends with ML1 users.

The participants who consider themselves to be extroverts described that they used more tactical elements such as (a) learning from mistakes, (b) watching TV drama in Maltese, (c) actively learning new words and (d) not worrying about making mistakes when interacting with ML1 users. Learning from their mistakes, surprisingly, was the most frequently used strategy by both introverts and extroverts. Learning from errors is probably a great starting point in learning a language. This supports what Rubin stated in Brown (2001) that one of the traits of a successful language learner is making errors that do not work against them. Although this strategy was equally ranked by both introverts and extroverts in this study, the reason behind this choice could not be interpreted due to the participants' personality. This might simply reveal

the participants' true awareness that learning from mistakes is essential to their ML2 learning irrespective of their personality.

Limitations of the study

Several limitations were encountered in the course of carrying out the study. One of the limitations was that some participants withdrew from the study. The population size in the scholastic year 2015/2016 was that of 39 ML2 learners. However, in the following scholastic year, 2016/17, the population size dropped to 37 as two learners stopped attending the course. The sample size further dropped to 35 participants as a learner was not willing to volunteer for this study and another learner left Malta permanently. Due to the small sample size, the results cannot be generalised to the whole foreign learner population in Malta, which is in any case, unknown.

Another limitation was the fact that I wanted the five reflective journal participants to feel that they could communicate openly with me, and hence, I did not want to be overly strict about placing limitations on what they could write on their reflective journal. This affected the reflective journal results, because these participants sometimes wrote about other factors affecting their ML2 learning that differed from what I considered to be relevant to my research questions.

Another limitation of the study was that I had to rely heavily on what the participants told me during their interview or wrote on their reflective journals. Thus, I was forced to note down their opinions without being able to validate their answers. For example, if they thought they were extroverted or introverted, I have no evidence to show that they really had such personality traits, because I did not carry out personality tests, and this was not part of my research questions.

Conclusion

C/CT applies to ML2 learning. An analysis of the learning pattern of Maltese among 35 participants demonstrated that SLA is non-linear, as stipulated by C/CT. The non-linearity in ML2 learning is further highlighted by linking the difficulties experienced by the learners with the characteristics of C/CT, as highlighted in the analysis and discussion section. The commonly identified difficulties experienced by the learners that hinder ML2 acquisition include the teacher and the teacher's pedagogy, learning the *perfett* before the *imperfett*, lack of both implicit and explicit knowledge, culture shock, the adult learner's commitments, memory issues due to ageing, problems encountered during the initial stages of learning ML2, difficulties in making effective use of language transfer, limitations associated with personality especially extroversion and

introversion and difficulties interacting with Maltese people. If these problems are addressed, ML2 learning will be easier and more effective.

This research contributes to existing knowledge, practice and research. It has provided evidence that SLA does not completely depend on teaching methods but also on many other environmental and personal factors that can interfere with the learning process. Therefore, for effective learning of ML2, a thorough evaluation needs to be conducted and the existing barriers to learning addressed accordingly. However, with regard to the stages of *perfett* and *imperfett*, this research supports Camilleri Grima (2015) and also suggests that the *imperfett* should be taught before *perfett* when teaching and learning ML2. Regarding future research, there is a need for a case study focusing on the influence of the environment and personal factors on SLA so that strategies to address some of the preventable factors could be developed and implemented. Concerning practice, this research paves the way for teachers to consider certain teaching strategies, such as individualised learning, while teaching ML2 because in line with C/CT, each learner has a unique set of factors that could interfere with the learning process and need to be addressed.

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