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"Analysing Language Learning Websites: Developing a Framework of Evaluation with the Focus on Grammar and Writing"

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1 Introduction

The aim of this thesis is to propose a means to identify and evaluate key aspects of language learning websites. A framework of evaluation has been created which allows the researcher to evaluate a language learning website in terms of its benefits for improving English grammar and writing skills. Since digital content like language learning websites are unlike printed learning materials in many ways, it is important to take into account other factors than those necessary for a mere textbook analysis. Therefore, the proposed evaluation criteria are based on significant theoretical aspects from general pedagogy, language learning theory as well as multimodality and technical usability. In order to test the validity of the framework, the evaluation criteria have been applied to a language learning website of my choice, i.e. BBC Learning English. Each of the established seventy-eight criteria has been tested on the website, which has enabled me to form a valid statement about the overall usability of the chosen website and to judge the quality of the framework as well as recommend improvements for it. The website tests have yielded fairly positive results, but also served to identify the major pedagogical, linguistic, multimodal and technical problems of BBC Learning English. Furthermore, it has been demonstrated that the framework, despite issues related to problems of definition, differing levels of significance or subjectivity, is a valuable tool to evaluate a language learning website in terms of its overall usability.

The reasons for the choice of the topic are manifold. Given the fact that I study English and Computer Science, both subjects I will be teaching at a secondary school after finishing my studies, the topic appealed to me from a pedagogical, linguistic and technical point of view. In addition, due to my work experience as software tester, I was asked to help creating a language learning platform and contribute language learning content. At the beginning of the project, I was entirely intrigued by the idea of helping to create a completely new language learning website, but I soon realized several problematic issues. Despite the fairly appealing layout and overall functional correctness, the website had deficiencies in terms of design, function and purpose, which is why it did not appear to be a useful tool for language learning to me. This work experience not only increased my overall interest in how pedagogy, language and technology can interact, but also made me choose the topic of evaluating language websites my focus of study.

Despite the plethora of research on E-learning in general, my literature research focusing on evaluating language learning websites did not result in sufficient useful results, which is why creating a framework of evaluation myself appeared to be a logical consequence. The idea to combine pedagogical, linguistic, multimodal and technical theories for the framework resulted from the website selection process, in which it became apparent that many language learning portals did not manage to combine pedagogical quality with an attractive and effective page design.

All of these experiences made the focus of my research to assess language learning websites in terms of all the aspects that influence the way a learner retrieves, perceives and recalls information presented online. The insights I have gained in the course of conducting the theoretical and empirical research were both greatly valuable and truly captivating. Therefore, I want to provide important background information of various kinds that is necessary for a full comprehension of the subject matter, such as: What types of computer-assisted language learning materials are available? What are the advantages and disadvantages of digital learning materials? Which spheres of influence need to be considered when analysing language learning platforms? And what exactly constitutes pedagogical, linguistic, multimodal and technical usability?

In summary, in order to be able to analyse language learning websites in terms of their overall usability, it is important to combine theoretical aspects originating from four fairly distinctive disciplines. Furthermore, to fully understand issues related to computer-assisted language learning, it is helpful to examine historical and conceptual aspects of digital learning opportunities in more detail. All of these considerations will be further explored and discussed in the following chapters.

2 Computer-Assisted Language Learning (CALL)

This chapter focuses on the subject of computer-assisted language learning (CALL), which kinds of learning opportunities it provides, its history as well as its advantages and disadvantages.

2.1 What is CALL and where can we find it?

In order to fully understand the complexity of CALL, it is worthwhile to classify what exactly computer-assisted language learning is. Levy (1997:1) proposes the following description: "[T]he search for and study of applications on the computer in language teaching and learning." (Levy 1997:1, in Fotos & Browne 2004:3). Beatty (2003:7) suggests another definition for CALL: "[A]ny process in which a learner uses a computer and, as a result, improves his or her language." (2003:7).

In addition to mentioning the didactic component of CALL, both descriptions consider the computer to be the key element of computer-assisted language instruction, which, given the very name of this, is undoubtedly correct. However, to refer to the computer as the sole element might obscure the fact that CALL not only takes place with what most humans may have in mind when thinking of a computer, that is, a desktop or a notebook. Progress and innovation taken place in the field of media technology within recent years have led to the emergence of various other devices which may encourage or facilitate language learning, among them handheld devices such as mobile phones, PDAs or elaborate MP3 players. Naturally, one can argue that tools like these do constitute a particular kind of computer, but calling all of these devices 'computer' might be misleading to the average computer user. For this reason, it seems useful to suggest that CALL definitions should refer to the appliances in use as something else than merely as 'computers', for example 'programmable electronic devices' or any other term that fits the purpose.

The slightly tricky issue of how to define computer-assisted language already implies that CALL itself is a controversial but also highly fascinating subject. This is also due to the advancements in technology as well as the emergence of new language learning theories, both of which have led to a plethora of digital learning opportunities and materials. They comprise online and offline appliances, which in turn can be divided into both language learning opportunities designed and intended for language learning as well as "unintentional" learning opportunities. The market for online learning materials seems to be particularly popular since online materials have at least three major advantages: firstly, the content can be updated much more easily than, for instance, producing a new version of a language learning CD-ROM or DVD. Secondly, publishing learning materials online considerably facilitates the distribution of the materials and also enables the publishers to reach a target audience that is significantly

larger than the amount of offline customers. Thirdly, online learning opportunities become increasingly popular because, unlike traditional materials, the users are in many cases, but not all, not charged for basic services. The consequence of all these aspects, however, is that the internet provides an overabundance of content and services, which makes choosing the right materials exceedingly difficult and, sadly, often a matter of mere coincidence.

In the field of computer-assisted language learning, there seem to exist both fairly traditional as well as rather modern approaches to designing digital learning materials of all kinds. Furthermore, there are also a lot of services and applications which, despite not having been designed for CALL purposes, can also aid language learning. Considering this overabundance of materials, it is useful to provide an overview of some of the learning materials and opportunities that can be encountered with online or offline appliances. Both types of materials, the designated CALL materials in bold and the unintentional language learning materials in italics, are illustrated in *Table 1* below. Please note that the information provided in *Table 1* is solely based on my experience in the field of digital language learning materials. Services and applications which are not without of charge have been excluded from this listing.

writing	speaking	reading	listening
peer correction	peer voice chats	reading activities	listening exercises
peer chats			didactic podcasts
email correspondence	voice chats	newspapers &magazines	videos
forums		blogs	podcasts
chats		online books	online radio stations
blogs		English application	
social networks		settings	

vocabulary	pronunciation	grammar	other
gap exercises	peer evaluation	grammar explanations	didactic games
vocabulary check-ups	self-recording	gap exercises	computer games
vocabulary look-ups		yes/no tests	
online dictionaries		instructional videos	
encyclopedias in English			
search engines as corpora			
Instant search services			

Table 1 – overview of some digital language learning materials

As can be observed in *Table 1*, it is apparent that most CALL materials deal with vocabulary acquisition or extension. Vocabulary exercises of various kinds can be easily compiled due to the fact that it is comparatively simple to assess specific vocabulary knowledge. Many of the vocabulary exercises found on the internet are gap exercises of all kinds in which the learners have to find the correct expression for phrases illustrated in a picture, paraphrased words or the like. There are also online and offline vocabulary check-up tools which enable the learner to create digital vocabulary logs, categorize the words or use the application for individual vocabulary assessment based on the words entered into the tool. In addition, some sites, among them not only dedicated language learning pages, offer the feature of vocabulary look-ups which enable the learner to look up the definition of a word through moving the cursor over the word. And there is, of course, a great deal of free online dictionaries, many of which enjoy great popularity despite often lacking quality.

Moreover, in addition to specially designed vocabulary exercises and tools, one can also find various other online and offline services and applications which can be useful for vocabulary extension. *Wikipedia*, probably one of the best-known encyclopaedias, is offered in various languages because it is maintained by users from various origins. This is why much of the information about a specific topic is available in other languages too and described from the users' culture-specific point of view. Thus, a learner can also use *Wikipedia* as a reference work for idiomatic expressions through looking up the term on the *Wikipedia* portal available in his or her language (e.g. www.wikipedia.de) and then viewing the same page, if available, in English.

Another savvy way of utilizing internet resources for vocabulary extension is using search engines as corpora. Many search engines offer customized search options and *Google*, for example, also allows applying the wildcard character * which substitutes for other characters in a longer expression. Thus, a *Google* search like "to * information about" including the inverted commas provides millions of textual results containing suitable verbs instead of the wildcard character, such as "CTC has asked Royal Mail *to provide information about* their plans", "[...] it is possible *to obtain information about* a property" or "[...] terrorists were using the medium *to gain information about* [...]".

What is more, there are web-development techniques used to create interactive search fields which are applied in many major websites such as *Amazon* or *Google*. These

services can also be useful for broadening vocabulary knowledge because they can be used for providing search completions and suggestions. For example, an *Amazon* user entering the word "bike" is displayed all phrases containing the word "bike" at the beginning of the phrase, such as "bike lock", "bike rack" or "bike trailer". While this is actually intended for supporting users in their quest for specific information, Ajax is also valuable for familiarising a learner with common words and concepts related to his or her search phrase.

A lot of CALL materials also focus on grammar improvement, but the effectiveness of these materials is often questionable. In many cases, the material editors try to provide detailed descriptions and explanations of specific grammatical areas and complement these with follow-up activities such as gap exercises and yes/no tests. However, many of these online and offline CALL grammar materials cannot be used as effectively as printed materials. While detailed grammar explanations and language samples in written form may be useful for some learners in some circumstances, reading from a computer screen tends to be less comfortable and less efficient than reading from a hard copy (Kamil, Pearson and Barr 2000:782). Some researchers suggest that this reduced efficiency is reflected in a decrease of reading speed of about twenty to thirty per cent (Jacko 2007:384). Therefore, detailed grammar explanations presented on screens might tend to be less efficient.

The increasing popularity of online videos has also led to advancements in CALL with respect to dealing with grammar issues, which is why instructional videos seem to be provided more frequently. These often feature self-proclaimed language experts in typical learning settings pictured with blackboards or book shelves behind them, striving to explain grammar issues in traditional or unconventional styles. While the effectiveness of these instructional videos, just like any learning material, may be subject to individual evaluation, they are nonetheless an intriguing addition to classic CALL grammar materials. In addition, they pose an interesting alternative to written grammar explanations as instructional videos may also diminish the problem of decreased screen reading efficiency.

Table 1 also shows that there are some intended learning materials available for improving listening, reading and writing skills. Many listening and reading activities are devised according to a similar design basis: first, the textual or auditory content is presented and then the user is prompted to do a follow-up comprehension exercise, such

as selecting the right answer out of a list of possible responses or completing a sequencing task. These activities are easily assessable from a programming point of view because it is clearly and uniquely defined which of the provided answers are correct. In addition, the internet in particular provides learners with plenty of other opportunities for improving their reading and listening skills. There is a plethora of authentic written and auditory information in the world wide web, including online versions of newspapers and magazines, blogs, videos, podcasts, online radio stations and even online books which are accessible free of charge. Some major radio stations, such as the *BBC*, even offer specially designed didactic podcasts which are intended for language learners of different proficiency levels.

What is more, technical devices of various kinds also enable users to set the language of their appliances, such as their internet browsers, mobile phones, MP3 players or favourite websites, to English. Therefore, learners can explore the English language by performing familiar actions and handling well-known requests in English, such as "Compose a new message", "Skip to next track", "Do you really want to delete this folder?" or "Invite your friends to this event.". Thus, using English appliance settings may aid reading comprehension and can also improve other skills such as spelling, discovering and understanding grammatical concepts, extending vocabulary knowledge and more.

Nonetheless, the matter is more complex when it comes to facilitating and assessing language production. A solely computer-based approach to dealing with writing skills is a difficult matter because aspects like correctness, creativity or register are difficult enough to be assessed by humans, let alone computers. And speaking can only be meaningful if the subject who is being talked to is able to relate their answer to what has been said, put the reply in a meaningful context and show other invaluable human qualities. Despite the fact that computerized interaction and robotics have developed considerably, it seems as yet impossible for a technical device to interact to one hundred per cent as sensibly, intuitively and creatively as a human. From a personal, ethical point of view, this will hopefully never be achieved at all.

However, the increasing impact of social networks and other applications which facilitate interactive information sharing has paved the way for innovations in the context of CALL too. One example of a novel way to improve writing skills by means of computer-aided language learning materials is peer correction and peer

communication. While this idea as such is not new, neither in the field of Language Learning nor in that of CALL, the fact that social networking has become enormously popular has also led to the development of peer learning platforms like *Livemocha*¹. Its organizational design resembles familiar social web structures in that users are required to register and provide personal information that is then made visible to other users. In contrast to other social networks, however, *Livemocha* is mainly interested in which language(s) the user speaks as his or her mothertongue(s), which languages he or she has been learning and what their level of proficiency is. This information is then used to suggest language activities. Among these are also writing assignments and peer chats, both of which heavily depend on the feedback and cooperation of other users. The learners can complete writing tasks that are then corrected and commented on by other users who are either native speakers of that language or feel proficient enough to identify mistakes and other issues. In addition, many members also strive to improve their language skills through chatting or voice-chatting with native speakers of their choice.

Livemocha also offers peer feedback facilities for pronunciation by providing texts which the learners can record while reading aloud. The recordings are then posted to the platform for feedback. According to my own experience, the other members of the community are very eager to submit feedback on the submissions because they are rewarded for every peer review on the basis of a platform-internal credit system. This system of peer correction and communication works really well due to the fact that Livemocha has a sufficient number of users. While the platform itself does not provide any official member statistics, research completed in 2008 has shown that Livemocha features more than 350,000 users from over 200 countries (Harrison and Thomas 2009:116). Wikipedia even claims over 5 million members (11 Aug 2010, 12.38pm).

In addition to intended CALL materials, the internet also offers a lot of other communication opportunities that can be useful for improving writing skills. First to mention is email correspondence, which in the field of CALL has been described as such: "[... A]n effective medium for intercultural exchanges and collaborative writing projects between students in different countries, perhaps even assisting L2 learners corresponding with native speakers to notice and incorporate L1 discourse patterns into their writing." (Davis and Thiede 2000, in Hyland 2003:157). Other ways of

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¹ Websites mentioned in this paper, all printed in italics, are fully listed in the literature list at the end of the paper

communicating using internet technologies include various kinds of forums, chats, social networks or blogs, all of which can be used to establish or maintain written exchanges between learners or native speakers. *BBC Learning English*, the website that will be analysed for the empirical part of this research, even offers, among other writing opportunities for users, a student blog which enables learners to maintain a regularly updated blog that is commented and responded to by a teacher and the other users in the community.

Finally, I would like to point out the last group of CALL materials listed in *Table 1*. Didactic games, for example in the form of language learning games on CD-ROM, have been around for decades, but in recent years they have been challenged by online alternatives which are free of charge. Despite often being limited to less comprehensive activities, a lot of interactive language learning materials are available online, which suggests that they enjoy widespread popularity. In addition to using specially designed language learning games, players can also improve their language skills through installing and playing their favourite computer games in English. This is not only restricted to computers in the limited sense of desktops or laptops but can also be applied to console and mobile games. Similar to changing device settings to English, learners can explore the English language by using English game settings, a language discovery which is also enriched by auditory and pictorial information which helps to link the presented words to the relevant concepts.

The CALL materials presented in this chapter suggest that many CALL materials are easily accessible and can be highly useful for improving English language skills. Furthermore, it has been shown that language learning opportunities can also be encountered in rather unexpected digital contexts. The internet in particular provides enormous potential for CALL because it is a digital representation of the human world. As such, learners can get access to native speaker worlds and inside information that used to be reserved for people residing in these foreign places.

However, in spite of all this language learning potential, it is necessary to discuss which other judgements have to be made about CALL. Whether all of the above presented materials constitute a valuable addition to traditional materials and whether they can even replace the real-life teacher as such will be discussed in chapter 2.2. Yet to get a better understanding of why and how computer-assisted language learning has come into being, it is first useful to take a brief look at the history of CALL.

2.2 A brief history of CALL

The background information provided in this chapter is, unless stated otherwise, based on Levy (1997:14-42).

Frederic Skinner's influential behaviourist work *Verbal Behaviour* (1957), which illustrated the behaviourist theories of stimulus, response and reinforcement, had considerable influence on the ways of how language could be taught and learned. A popular approach to language learning based on his theories was the audio-lingual approach. It emphasized that speaking was practised most successfully through imitation and repetition, for instance by carrying out speaking drills which, in case of correct responses, were positively reinforced. (Larsen-Freeman 1986:43, in Levy 1997:14). Another leading approach to language learning in the late 1950s was programmed instruction, which promoted the use of teaching machines for individual instruction. Software developers soon comprehended that exercises based on these language learning approaches were easily implementable due to the "systematic and routine character" and "lack of open-endedness" of these practise drills. (Kenning and Kenning 1990:53, in Levy 1997:15).

One of the most influential computer-aided language learning programmes at that time was PLATO (short for Programmed Logic for Automatic Teaching Operations), which was developed at the University of Illinois in 1960. Despite major modifications and a series of extended functions added within the years of its existence, it was already recognized at the time of its first initiation that an automated learning programme could not cater for all the language learning needs, especially in the field of speech production and understanding. Despite its influential role in CALL, PLATO mainly served to practice more mechanical activities such as vocabulary and grammar drill. While drill exercises were also considered valuable in that they facilitated teachers to free class time for more communicative activities, it was clear that PLATO could not substitute teacher instruction and assistance (Hart 1981:12, in Levy 1997:16).

Another project initiated in 1971 was TICCIT (Time-shared, Interactive, Computer-Controlled Information Television) which originally allowed instructors to contribute to the types of materials that would be taught. At the beginning, a fairly prescriptive approach was adopted, since the authors could not influence how the materials were to

be taught. However, the system was later modified and enabled the authors to use the defined teaching models or develop their own. Nonetheless, researchers became somewhat dissatisfied with behaviourist approaches to language learning and so in the 1970s a new and far-reaching approach, Communicative Language Teaching (CLT) emerged.

CLT was regarded as a communication-centred response to behaviourist views and adopted the position that communicative competence should be the goal of language teaching. Thus, the teaching of the four language skills should be based on procedures which acknowledged the interdependence of language and communication rather than treating language in isolation (Richard and Rogers 1986:66, in Levy 1997:22). This new attitude to language learning as well as rapid changes in computing had considerable effects on the nature of computerized language materials. With the introduction of the microcomputer, the first workstation for personal use, the 1980s saw a boom in computer-aided language learning. It enabled motivated teachers to develop their own digital learning materials, most of which centred around one single activity and exercises such as text reconstruction, speed reading, gap filling, simulation and vocabulary games (Wyatt 1984, Underwood 1984, in Levy 1997:23).

Although the rise of personal computers saw a considerable increase in CALL programmes, researchers soon came to the conclusion that technology and Communicative Language Teaching were conflicting ideologies. Despite the fact that technical devices were regarded as having considerable potential for language learning, they nonetheless lacked the potential to advance communicative competence. With the rise of computer-mediated communication (CMC), for example through emails, discussion boards or chats, the scope of computer-aided language learning was extended to a new dimension. The potential of CMC for Communicative Language Teaching was soon realized, but also raised a number of new questions.

These issues will be discussed in more detail in the next chapters. Yet before moving on to a critical discussion of the options and issues of computer-aided language learning, it is worthwhile to conclude the historical view of CALL with the following quotation by Levy (1997):

Finding an appropriate role for the computer, in the light of technological options available at any given time, has remained an issue. [...] [D]etermining what computers can and cannot do, is as pertinent now as it was then. Given that change is likely to

continue, the role of the computer will need to be continually reassessed over time. Moreover, ascribing a role for the computer has implications for the role of the teacher, and for the ways in which material content and activities are distributed between the two, especially if work conducted at the computer and away from the computer is to be properly integrated. (Levy 1997:42)

Considering the fact that the publishing date of Levy's work *Computer-assisted Language Learning: Context and Conceptualization* was in the 1990s, the above quoted conclusion is accurately modern and still holds true. In addition, Levy (1997) also points out that computers, if employed sensibly, can be valuable tools for language learning (Levy 1997:33). Therefore, I will now turn to a detailed discussion of how computerized learning materials of various kinds can or cannot aid language learning.

2.3 Options and issues of CALL

The following chapter serves to give an overview of the options and issues of computer-aided language learning. The advantages of CALL materials will be discussed first.

When talking about CALL materials, it is worthwhile to point out that one of their major benefits is that they can cater for greater authenticity. But since the concept of authenticity tends to be a delicate subject for linguists, it seems worthwhile to establish what is considered to be authentic and what is not. Widdowson (1979) claims that authenticity is nothing that resides in texts as such, but that it can only be created by the user's interaction with the materials. This interaction should be based on "appropriate response" of the user in the sense that the text should incorporate the intentions of the user (Widdowson 1979:166, in Kramsch 1996:179). Kramsch (1996:178) further goes on to exemplify this argument by illustrating it through the following example: if learners of German are given a German menu to practice reading prices or to learn the endings of adjectives, this menu could not be considered authentic for the purposes of the learners. Despite its being a genuine text, it would not be used in the way the restaurant had intended nor in a way real customers would use it. (Kramsch 1996:178) She further emphasizes Widdowson's concern that "[u]ncritical acceptance of the need to present learners with "authentic data" can lead to an avoidance of pedagogic responsibility." (Widdowson 1979:171, in Kramsch 1996:179) and stresses the fact that it is somewhat problematic to adopt the social conventions of the target language society, as this is certainly no guarantee for acceptance or social integration (181).

In addition, Widdowson (1978:80, in Tomlinson 2008:198) also differentiates between what is authentic and what is genuine. As discussed above, for him 'authentic' is a quality that does not reside in the texts as such but is created through the user's response to the materials. 'Genuine', on the other hand, would be a fixed quality and refers to the materials as such, irrespective of the user's interaction with them. In a nutshell, authenticity, from Widdowson's point of view, is a quality that depends on both the text and the user's response to it. While it seems perfectly reasonable to distinguish between these two concepts, using the expression 'authentic' to refer mainly to a text's relevance for the user might be somewhat confusing. This is due to the fact that many SLA and ELT researchers, such as Hedge (2000), Celce-Murcia (2002), Tomlinson (2007) or Nguyen (2008), strongly argue for the use of 'authentic' materials, but use the term to refer to the quality Widdowson (1978) calls 'genuine'. Therefore, I will also use the term 'authentic' in Widdowson's sense of 'genuine'. Hedge (2000:67), for example, argues that learners who only deal with inauthentic materials in classroom often face demoralization when experiencing real language usage outside the classroom due to the contrasting level of difficulty and style. However, she also incorporates Widdowson's (1978) considerations about authenticity in her views and emphasizes that the materials should not just be authentic, but authentic in the sense of relevant to the needs of the learners (Hedge 2000:67).

The issues discussed above demonstrate that the concept of authenticity is complex and, due to the relative vague nature of the term 'authentic', tends to create confusion.

Personally, I do not agree with the assumption that an incongruence of intention and usage cannot be considered authentic. In my opinion, a menu, for example, is authentic for the needs of the learner if the learner can identify with its context and is interested in the subject, irrespective of whether he or she uses the menu according to what it has been intended for or not. For example, a cook might enjoy exploring grammar and reading prices with the help of a menu more than with any other text. To me, authenticity in the context of language learning cannot always be related to authentic use due to the fact that the learning setting cannot always be compared to the real world.

Yet Widdowson's fear of a thoughtless approach towards authentic materials is clearly legitimate with regard to CALL or to the dealing with online information in general.

This is why the teacher, despite the apparent total learner autonomy, plays an important role in CALL, which will also be discussed in this chapter later on. Nevertheless, while the degree of authenticity of a text might not be a simple thing to determine, it is a fact that computer-assisted language learning also implies that more authentic or genuine material is available because, as Nguyen (2008) puts it, "[t]he internet is a living thing." (Nguyen 2008:136). And this supply of materials can, if used wisely and critically, introduce learners to a whole new world of authentic information.

Another major advantage of computer-assisted language learning is that the use of technology creates motivation. Hyland (2003) states that "[e]vidence suggests that the use of computers provides a stimulating learning and communication environment [...]." (2003:172). Likewise, the use of the internet also seems to encourage learning according to Morall (1999) who carried out a study asking students about their attitudes towards the internet and learning. He points out that fifty-six per cent of the students thought that the use of the internet had increased their motivation to study (Morall 1999, in McGrath 2002:128). One reason why computers increase motivation to study might be the fact that many learners use computers and the internet in their leisure time and thus connect time spent in front of such a device with pleasure rather than work. Furthermore, computer-aided language learning might be regarded as less tedious because it involves colourful, eye-catching elements and requires the user to get actively involved by clicking and typing.

In addition, the internet in particular creates an incentive for the users to get involved more deeply and frequently because there are is always something 'fresh'. The somewhat irresistible appeal of this extensive variety of regularly updated information in turn might increase learner autonomy, because the motivational appeal of CALL materials can be high enough to encourage learners to engage with the materials autonomously. Egbert (2005:131) points out that computer activities can support 'flow', that is, the optimal learning experience and the feeling of having the touch (2005:131). She argues that 'flow' can contribute to more effective or more motivated language learning due to the fact that computer activities feature tasks which provide users with challenge and control at the same time (ibid.).

Moreover, when it comes to providing up-to-date content within a short period of time, updating digital materials is a matter that involves less effort or time than updating printed materials. Additionally, the comparatively simple maintenance of these

materials also has other positive effects: firstly, production and maintenance costs of websites can be kept fairly low, which also implies that users are often not charged for valuable information and services. As a result, users can access much of the content provided, for instance, by their favourite foreign newspapers or magazines free of charge and are thus not forced to spend a lot of money on costly foreign reading. Furthermore, the content can also be accessed via mobile devices, provided required technical preconditions are fulfilled. Finally, dealing with technical devices and computer applications may help learners to increase their overall computer literacy.

As regards a more pedagogical point of view, there are also a number of advantages which are worthwhile mentioning. Since computers can provide multimodal information, i.e. textual, visual or auditory information, CALL materials also tend to be beneficial for learners due to their ability to cater for various learner styles. Moreover, Egbert (2005:133) emphasizes that computers can also be beneficial for language learning because they provide nonjudgmental, immediate feedback, but at the same time allow learners to remain anonymous (2005:133). Additionally, this ability to provide immediate feedback can help learners to develop automaticity. As Derewianka (2007) points out, in the early days of CALL, computers were considered and applied mainly as drill masters. Though drilling nowadays has been replaced by more modern teaching methods, he argues that this facility can be made use of in order to help learners to individually develop automaticity with specific issues that need repetition. Therefore, the time saved by avoiding repetition exercises in class could then be used for practicing skills that actually require human interaction. (Derewianka 2007:201). One example of such CALL materials which help developing automaticity is the use of vocabulary check-up tools. These enable learners to keep individual vocabulary logs that they can also use for individual, automated vocabulary checks.

Yet also with regard to speaking, listening and writing skills, digital learning materials have plenty to offer. The internet provides learners with a lot of speaking opportunities with language peers or native speakers, for example via language learning platform voice chats or internet telephone services such as *Skype*. It is even simpler to establish written contact with users learning or speaking the target language, since services such as chats, forums or blogs can be easily accessed and used to facilitate learner collaboration. In addition, the internet also features numerous music, radio and video platforms that enable users to gain access to various auditory materials in English.

Furthermore, Derewianka (2007:208) points out that CALL materials can improve writing due to the fact that they facilitate some of the stages in the writing process which he describes as such: modelling the genre, demonstrating the process, brainstorming and researching, drafting, conferencing and revising and editing. The writing genre could be modelled through providing a sample text of the genre which can be easily obtained through the internet. To demonstrate the process, Derewianka (2007) suggests joint collaboration of the learners who could write a text together using a word processor or any other useful digital writing tool. Such a tool would also be beneficial for the drafting process because learners may dare to try out ideas more freely when changes can be easily made undone. And brainstorming and researching as well as editing could also be facilitated since the web is ideal for finding ideas and expressions, both for the initial stage of the drafting process as well as for editing, for example through the use of a concordance tool. (Derewianka 2007:208).

Nonetheless, in spite of all the praise of CALL it is also important to point out that computer-assisted language learning also poses several problems. I have mentioned earlier on that the internet, as one significant example of CALL materials, provides an enormous variety of useful and authentic content. However, the fact that the information gathered on the web is created by an unimaginable number of individual authors also raises questions of quality and ownership. As Derewianka (2007:215-216) indicates, the internet has created new definitions of ownership as text is hardly ever produced by one individual but often through some kind of collaboration (2007:215-216). Unfortunately, however, learning materials as well as non-didactic information do not always clearly indicate where the information has been gathered from, which not only causes confusion with the users but may also lead to copyright issues.

Another negative yet highly prominent aspect of CALL materials is the fact that the sheer variety of materials makes it a challenging and time-consuming task to distinguish between high-quality materials and inadequate content. While this certainly applies to general media content, the field of language learning materials is also affected by the overabundance of net information. A *Google* search of the phrase "learning English online" yields about 72,700,000 results (12 August 2010, 14:16, www.google.co.uk). With such a gigantic number of search results, how do inexperienced language learners know where to find CALL materials that strive to fit their needs rather than that of the creators? The position of the search result within the search engine context is not necessarily an indicator of quality or popularity, as it is becoming increasingly popular

to perform valid and invalid search engine optimisations in order to manipulate search result positions.

Other problematic issues include computer literacy and financial aspects. While CALL materials may fascinate technophiles and other technology enthusiasts, some learners might not feel comfortable with using technical devices for language learning at all, either due to personal attitudes or computer literacy deficits. Moreover, while computers and other appliances such as mobiles, PDAs and more may be highly beneficial for improving English language skills, purchasing these devices also presupposes a certain level of financial liquidity. At the same time feeling uncomfortable with CALL or being subject to financial constraints could also lead to increased group pressure and stigmatization, since the use of computers and other technologies in various areas of life has become a part of every-day life for many people. Stigmatization may also affect countries which lack the financial and educational standards commonly found in many Western countries.

A possibly less significant negative aspect of CALL, which should nevertheless be mentioned, is the fact that technical appliances, online services in particular, are always subject to the functional correctness of various other services. Therefore, technical problems may lead to slow access or even inaccessibility of the materials and, in turn, frustration of the users. Moreover, it should be borne in mind that despite the advancements in information technology, printed language learning materials still tend to be more robust, independent of energy resources and quite possibly longer-lasting as well.

In addition to looking at all these general aspects, it is also worthwhile to consider problematic linguistic and pedagogical aspects. While it has been pointed out earlier on that CALL materials and information gathered on the internet can help to improve listening, speaking and writing skills, this may not be the case for reading skills. Despite the fact that the internet offers valuable specifically designed reading materials and also other useful services such as online books, magazines and newspapers, many people still find reading printed information more comfortable than reading from screens (De Ridder 2003:1, Kamil, Pearson and Barr 2000:782, Chalhoub-Deville 2000:57). Computer screens are being continually improved and more practical reading appliances, such as E-Readers or tablet computers, are being developed. Yet it still

seems somewhat unrealistic that people will reject printed resources in favour of reading from screens.

Another, more serious issue is that computers cannot provide human-like feedback and thus are unable to replace human interaction partners. I have mentioned several methods of how to incorporate computer interaction into language learning, for instance Derewianka's (2007) view that programmed feedback can be useful for developing automaticity or that computers facilitate collaboration between learners through the use of interactive applications. The fact remains, however, that the computer is not a language feedback provider of its own right, but merely the medium of communication and distribution between human beings. Hyland (2003:172) puts it this way: "Computers do not represent a method but can be used to support a variety of methods." (Hyland 2003:172). Taking as example writing skills, he further claims that computer-assisted language learning should not take place completely autonomously. He states that "[...] the use of computers in a writing course is only effective when they are integrated into a sustained, coherent program that offers learners some control over their learning and guidance from teachers." (Hyland 2003:172).

Hyland's (2003) comment above also implies that computers, irrespective of their usefulness for language learning purposes, cannot replace teachers, "but crucially depend on them." (Hyland 2003:172). Loveless (2003:199) points out that teachers are not just important with respect to the provision of information, the retrieval of which computers can facilitate, but also key figures as regards the "guided construction of knowledge". (Loveless 2003:199). However, the increasing use of digital learning materials leads to a change in perspective as regards the role of the teacher. Arndt et al (2000:219) emphasize that teachers should be aware of the fact that their role has changed and accept this role by emphasizing that "[...] teachers should perceive themselves not as founts of received wisdom about language, but rather as those who help their learners to become, like themselves, explorers of language." (Arndt et al 2000:219).

What Loveless (2003:199) describes as "guided construction of knowledge" also involves another crucial challenge for teachers: to make learners aware of the content issues that internet exploration for learning purposes may raise. Nguyen (2008:138) mentions the problems of inappropriate content and plagiarism. He points out that, while the internet also features websites that are useful for learners, it also includes

inappropriate content in abundance, such as sexist, racist or ideologically loaded content. He further states that, due to the plethora of information and the often inadequate way of labelling original authors, learners are easily tempted into neglecting copyright issues and thus committing plagiarism. (Nguyen 2008:138). Consequently, teacher guidance in CALL is an important aspect because learners should be made aware of their responsibility to deal with internet information in a sensible and mature manner.

Another problematic aspect of CALL is linguistic style and appropriateness. Crystal (2006:26) emphasizes the varying aptitude of computer-assisted language learning and the linguistic challenges it poses to learners by stating the following:

There are [...] certain traditional linguistic activities that [the internet] can facilitate very well, and others that it cannot handle at all. There are also certain linguistic activities which an electronic medium allows that no other medium can achieve. How do users respond to these new pressures, and compensate linguistically? (Crystal 2006:26)

He suggests that the language used on the internet has developed to become a new style of its own which he calls 'Netspeak', i.e. "writing the way people talk" (Crystal 2006:27). He points out that there are significant differences between spoken speech and Netspeak, as the latter is also subject to several genre-specific influences, such as time delay and the user's need to create a paralanguage to be able to express him- or herself more clearly. (2006:28-37). Crystal (2006:49-51) also explains that Netspeak in certain aspects differs from written language too. Therefore, he concludes that "[n]etspeak is identical to neither speech nor writing, but selectively and adaptively displays properties of both." (Crystal 2006:51), which makes dealing with this new and hard to classify language style somewhat difficult. Lotherington (2005:121) highlights some other problems of CALL in terms of linguistic appropriateness by asking what appropriate digital language is in "these times of creative wavering norms" or what the new reference guides should be given these changing norms. He also emphasizes the problem of which sources learners who are striving for naturalness should prefer. (Lotherington 2005:121)

Lotherington (2005:122) also emphasizes that the use of spell and grammar checkers may have considerable influence on pedagogical aims. The problem with these computerized language tools, she argues, is that writing programme users are often not aware of the spell checker and thus do not notice changes that are being made in the

process of writing. Therefore, learners would be deprived of the necessity to realize and reflect on their errors (ibid.). Beaumont and O'Brian (2000:63) mention a similar problem in their research diary: "Because a document printed out from the word processor looks good, the idea of working at a deeper level was hard for many [students of the researched learner group]." (Beaumont and O'Brian 2000:63). And since the use of writing programmes and spell checkers has become increasingly popular, Lotherington (2005:122) further expresses the concern that literacy soon might be regarded unnecessary at all.

The above discussion has shown that the use of digital learning materials proves a highly complex issue, because CALL can be both beneficial and valuable as well as somewhat problematic for language learning. Moreover, it still seems too early to form a conclusive judgement about CALL due to the fact that the use of digital materials, the world wide web in particular, is a relatively new approach to language learning. Huh and Hu (2005:15) state that, because of the novelty of many CALL materials, teachers tend to be easily impressed too. Therefore, they emphasize the need to always strive to find a tool's limitations, irrespective of how confident a teacher feels about a CALL appliance and stress not to take any material's value for granted just because it is new. (Huh and Hu 2005:15). Given the increasing popularity of information technology, this seems to be a highly valuable remark that is worthwhile remembering, especially when it comes to using or evaluating CALL materials.

Therefore, adequate teacher training, critical discussion, thorough evaluation and intelligent integration are some of the key elements of successfully integrating computer-assisted language learning into traditional approaches to language learning and teaching. Both the positive as well as the negative aspects of CALL should always be borne in mind whenever dealing with computer-based language learning.

Nevertheless, despite all the problems that have been encountered and probably still will be encountered when dealing with computer-assisted language learning, this chapter has also illustrated that digital learning materials of various kinds can prove a valuable addition to classical learning approaches. In this light, this research paper is further concerned with how language experts can evaluate language learning materials in terms of their overall usability.

3 Research issues

3.1 Creating a framework of evaluation

In order to evaluate language learning websites, it is important to take into consideration relevant theoretical aspects of various domains. Firstly, when talking about language learning, it is naturally inevitable to access substantial insights gained from second language acquisition (SLA) theory, but also from general learning pedagogy. Furthermore, like printed course books, online materials feature pictures and graphics that also influence the intake to a certain degree, which is why it is also valuable to consider multimodality and visuality when analysing the impact of any language learning materials. In addition to these aspects, the digital representation of learning materials adds yet another dimension to an evaluation, namely the consideration of various technical aspects.

Thus, a language learning website evaluation is not a straightforward matter, which, on the one hand, is due to the fact that various theories from different disciplines with differing focal aspects have to be regarded for one investigation. On the other hand, testing theories in practice is a tricky matter, especially in the context of the Humanities. Designing an evaluation framework ideally means breaking down theoretical aspects into easily answerable units. The concept of language, however, seems more indeterminate in comparison to the natural sciences. For this reason, it seems reasonable to combine two different approaches to website evaluation based on a classification made by Tomlinson (2007) who distinguishes between materials evaluation and materials analysis. For him, an evaluation is a subjective assessment of materials that focuses on the users of the materials and their effects on them. An analysis, on the other hand, is objective and factual and typically consists of a set of questions that can be answered only with "yes" or "no" (Tomlinson 2007:15-16).

In spite of Tomlinson arguing that, due to their strongly differing natures, these two approaches should be handled separately (Tomlinson 2007:16), I will combine both methods for my analysis. A language learning website examination cannot be simply classified as either evaluation or analysis for the sole reason that any insights drawn from an examination should be guided by theory which in this case originates from very distinct disciplines representing even more distinct approaches. With several rivalling

language learning theories, SLA and language learning in general are very complex issues and thus it is not possible to provide a finite set of principles for language learning (Lightbown & Spada 2006:45-46). This indeterminate nature of language already implies that in most cases it is only meaningful to assess SLA usability on the basis of an evaluation as defined by Tomlinson (2007). On the other hand, Computer Science is based on a more finite set of rules and a logic according to which elements can mostly contain two possible values, namely "true" or "yes" and "false" or "no". This approach implies that it is only relevant and meaningful to deal with determinate elements and features, which is why it seems more useful for computational issues to conduct an analysis rather than an evaluation. For the purpose of my research featuring both analytical and evaluative elements, it therefore appears reasonable to combine analysis and evaluation. However, as the main purpose of my investigation is to judge linguistic and pedagogic aspects and for the simple reason of avoiding further confusion, I will henceforth refer to my research as an evaluation.

Lastly, I would like to stress that the framework of evaluation has been developed with due care and diligence. Nonetheless, it may be the case that some criteria overlap with theoretical approaches other than those they are assigned to. In addition, there might also be evaluation criteria bearing resemblance to criteria examined in other sections of the framework. All this is due to the fact that, though the criteria derive from four different theoretical approaches, some considerations are based on similar ideas. This may be particularly evident in the case of principles from the field of pedagogy and Second Language Acquistion as well as with criteria based on multimodal and technical theory. This occasional blend of ideas, however, should not be regarded as a research limitation, but may rather be considered to be a proof of how intricate language learning websites are and how closely the underlying theoretical concepts are sometimes related.

3.2 Research aim and methodology

The aim of this research is to create, on the basis of arguments from current theories, a framework for website evaluation which serves to make a reliable judgment on pedagogical, SLA, technical as well as multimodal and visual aspects of usability and to verify the framework by testing the created usability components with two language learning websites. Pedagogical usability implies that the website should consider

general conditions of didactic environments. Linguistic usability, or sometimes referred to as SLA (Second Language Acquisition) usability, is intended to cover how the website deals with general issues related to language learning, in particular dealing with grammar and writing. Multimodal usability is concerned with how textual, auditory, visual or animated information is presented and whether the website takes into consideration the interchanging influence of multimodal information. Technical usability means that the website should fulfil certain conditions of providing a well-implemented, user-friendly, functionally and organizationally correct web application.

The criteria for this framework of evaluation are based on significant theoretical aspects from pedagogy, language teaching and Second Language Acquisition, multimodality and Computer Science. These aspects are discussed in more detail in the respective chapters (5 to 8) and are then used to compose four different sections of the framework, all of which contain a list of criteria which in total are numbered from 1 to 78. Each of the criteria is listed as a polar question together with four evaluation options ("Yes", "No", "Yes+No", "N/A"), one of which needs to be checked per question. "Yes" can be specified if the condition is fulfilled, "No" if the criterion could not be verified, and "Yes+No" if the condition is at least partly fulfilled and "N/A" if the criterion is not applicable, for example due to technical errors or the unavailability of a service. The four sections put together in one table constitute the complete framework (see the appendix)

In order to confirm that the framework of evaluation is a useful tool to examine language learning websites, it has been tested by trying out the usability criteria in a website test. The website used for this trial evaluation is the language learning site *BBC Learning English*, of which a user profile as well as detailed website test results are provided in this paper.

3.3 Limitations

Despite the fact that the theoretical part of this paper has been thoroughly researched and the test has been performed with particular precision, there are a number of limitations to this research project.

Firstly, although the main focus of this paper is to investigate issues of English Studies, not all the skills and topics of English language teaching could be covered. This is because of the fact that integrating other topics, such as teaching speaking, reading or vocabulary, or assessing and testing language would have been highly interesting and valuable, but by far too extensive to be included in this investigation. Furthermore, as regards multimodality theory, my choice of multi-modal analyses relies mainly on Moreno and Mayer (2007) and Derewianka (2007). Multimodality is not a study subject of mine, which makes literature research outside my familiar subject area slightly more difficult. With respect to technical theory, it needs to be pointed out that information technology is ever-changing because even popular theories tend to be outdated fairly quickly, which is why it makes literature research a tricky issue. What is more, scientific approaches in technical usability studies appear to be, from my point of view, not as comprehensive as comparable studies in the field of the Humanities. A lot of literature seems to be based on independent recommendations proposed by computer experts. Nonetheless, it also needs to be mentioned that more comprehensive literature probably exists in the field of Human-Computer Interaction, a domain that has not been included in my theory research.

Another problem to consider is the frequent and often unpredictable changeability of websites. Websites, especially popular and excellent ones, are updated on a regular basis, not only with respect to the content but also in terms of the layout, design and content structure. This makes testing websites of all kinds a fairly complicated matter because services and content analysed one day might disappear the very next day. Therefore, the results of my website test, which has been carried out between March and July 2010, refer to this specific time frame in which the website has not been changed except for minor content additions to some learning courses. Whoever might wish to reproduce the test results should bear in mind that some features or possibly even the whole website may have changed since the evaluation was carried out. However, in order to facilitate reproducing my findings, detailed descriptions and several screenshots have been included in this paper.

It is also worthwhile to mention in this context that a website test, especially for a language learning platform of such large a scale, can hardly be performed for all the features and sub features of the page. This is due to the fact that it is almost impossible to test the seventy-eight criteria, which all serve to analyse topic-specific aspects of the web page in detail, on each and every sub page. This is particularly difficult if there is

only one evaluator, as it is the case in my research project. Therefore, I have focused on evaluating content-unrelated sub-pages and have excluded testing similar sub-pages or pages with the same design structure. The fact that the website evaluation was carried out by one evaluator only might also affect representativeness, as some of the results may not be representative of a general opinion. One suggestion to improve representativeness for any follow-up website evaluation would be to increase the number of evaluators and also include a number of learner evaluators.

4 User profile of BBC Learning English

This section aims to provide a user profile of *BBC Learning English* in order to become more familiar with the structure of the website chosen for the test evaluation.

BBC Learning English is a free online service maintained by BBC World Service which provides English language learning materials for learners free of charge. A sub-category of this service also offers teaching materials for English language teachers which has not been included in this research. The site seems to be maintained by several content editors responsible for different content sections and this team is introduced in the "About us" section. While browsing the content it is not always clear which editor maintains which sections of the website, the dissimilar layouts and design styles suggest that the content for the learning programmes is created by different editors.

A 'course' or a 'programme' is the term used on *BBC Learning English* to describe specific learning materials for which new content is published on a regular basis. One example of such a programme is 'Talking Business', a course which, according to the introduction of the programme, "[...] gives you useful language and phrases to improve your spoken communication skills in English in different business situations". Another example is 'Grammar Challenge', "[...] the programme where we help language learners use tricky grammatical structures.". These two courses are only a small selection of a wider range of dedicated language programmes.

Despite occasional introductory statements such as those quoted in the above paragraph, the website does not contain any explicit indicators of which target group it is intended for. This makes evaluating *BBC Learning English* a complicated matter in case the

evaluator wants to assess whether the page is suitable for a specific age or proficiency level. Furthermore, two information requests, sent to *BBC Learning English* with the intention to learn more about the website, have not been responded to as of this date. Frequently accessing the materials, however, has reinforced the conclusion that the content is most probably intended for learners of varying age levels and of a proficiency level between B1 and B2. B1 comprises, according to the *Common European Framework of Reference for Languages*, the following skills in a language:

B1: [The language user c]an understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. (http://www.coe.int/T/DG4/Portfolio/?L=E&M=/main_pages/levels.html)

Proficiency level B2, on the other hand, is defined as such:

B2: [The language user c]an understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.

(http://www.coe.int/T/DG4/Portfolio/?L=E&M=/main_pages/levels.html)

The language courses provided on *BBC Learning English* tend to be based on two types of scenarios. On the one hand, the courses deal with real-life situations encountered in English-speaking countries, such as travelling, asking about every-day information or talking about personal issues with friends. On the other hand, some programmes also focus on specific Business communication skills. From a cultural point of view, *BBC Learning English* seems to focus on replicating typical situations in the lives of young and middle-aged British adults, but also strives to incorporate intercultural elements by enabling their international users to contribute culture-specific information such as reports about traditional holidays or their favourite national dishes.

Thus, users can contribute to the content to some extent by posting comments in return to a specific question or sending in submissions such as pictures or recipes for particular

programmes. They can even apply for participating in a learner-teacher blog which is maintained by one individual student and one teacher over a period of time. Yet compared to the overall amount of programmes on the website, these active participation opportunities are limited to few activities and, what is more, this means of contributing also raises some issues. Firstly, the users need to register with the platform in order to be able to post comments, which seems justified given the fact that public comment areas are subject to being spammed easily. Furthermore, whenever users are invited to send in written or multimedia contributions via email, neither the submission requests nor the published user contributions contain detailed publication information. Thus, it remains unclear if the users receive individual, written feedback in return and whether the published contributions have been corrected.

In addition to contribution opportunities, the content range provided on *BBC Learning English* comprises textual, pictorial, audio and video information as well as interactive applications. The materials mainly deal with issues related to reading and listening comprehension skills and vocabulary knowledge, but also include specific grammar activities and some other learning tasks. It will be analysed in more detail in how far these materials are beneficial for improving English grammar and writing skills and whether the presentation of the materials is based on a satisfactory approach towards pedagogical, multimodal and technical usability. First, however, it is worthwhile to discuss why considering aspects beyond mere linguistic theory is important for creating an inclusive framework of evaluation.

5 Evaluating the pedagogical usability of a language learning website

5.1 Important theoretical aspects from pedagogy

As already indicated earlier on, my language learning website evaluation will combine theoretical aspects from differing disciplines. One major aspect of the research lies in judging whether a specific website provides a learner-friendly environment and although a detailed analysis of this environment depends on various impacting factors, one important judgement is that of the general pedagogical usability. This term is supposed to refer to the quality of the instructional material and its design regardless of its specific content. This section presents current approaches in pedagogy which have been included in the framework of evaluation and introduces the criteria for evaluating pedagogical usability.

There are various theories in pedagogy about how materials should be designed in order to facilitate learning, Brian Tomlinson seems to have been particularly influential whenever guidelines are needed - not only for creating but also evaluating learning materials. His 2007 book *Developing Materials for Language Teaching* contains valuable articles by him and fellow researchers on designing teaching materials which provide useful considerations for materials design. His first article in the book, "Materials Evaluation" (2005), summarises the, from his point of view, major findings in learning theory as well as in Second Language Acquisition. Some of the latter, however, are also relevant for instruction in general. Tomlinson's ideas provide the basis for my evaluation criteria for general pedagogy, but other important research aspects have also been included.

What needs to be mentioned first in the context of research into learning theory is the demand that learning materials should be inclusive. Inclusiveness means that the learner is strongly involved in the learning process, which is achieved when the language of the instructive data has a personal character or reflects informality. Tomlinson (2005) stresses that this personalization is also important in order to avoid creating a sense of superiority over the learner and can be accomplished by the use of informal discourse features such as contractions, ellipses and informal vocabulary. According to research, he argues, yet another way of adapting the materials to the needs of the learner is to use

the active voice rather than the passive voice in instructional texts. (Tomlinson 2005:19-20) This idea is also supported by Moreno and Mayer (2007) who, in listing four design principles for interactive and non-interactive learning materials, state that the information given to the learner should be presented in a conversational style, which they call personalization principle. (Moreno and Mayer 2007:316) Tomlinson adds yet another dimension to the set of requirements for learning materials and argues that they should be concrete, which would imply that examples and anecdotes should always be provided, and he also stresses that materials should contain clear instructions. (Tomlinson 2005:19-20)

With reference to recent findings in Second Language Acquisition (SLA), Tomlinson (2005:19-20) also states that the learning materials should consider other important aspects, such as the ability to create wholeness, help the learner to feel at ease and provide more detailed outcome feedback. Wholeness can be achieved, he argues, through creating a link between the instructor and the instructed by sharing experiences and opinions, while the learner is put at ease through creating a link between him/her and his/her world by providing illustrations and texts related to the learner's background and culture. Tomlinson also stresses that learners are put at ease by the use of sufficient white space in order to provide visual relief. In addition, he argues that research has shown that materials should cater for detailed outcome feedback that not only provides information on whether something is or is not correct, but also communicates whether, through a particular utterance, the learner has achieved another, more basic aim such as a communicational aim. (Tomlinson 2005:21) Although this last specification might not seem to be a relevant general instructional requirement at first sight, it is nonetheless a valuable necessity for any kind of learning material to include detailed feedback in response to any learner submission.

Another relevant aspect of designing useful learning materials is to cater for learner variation. Tomlinson highlights the importance of considering differences in learner styles (Tomlinson 2007:20), a view which is also shared by Hyland (2003) who points out possible learner variation. Learners, Hyland argues, do not only have different cultural backgrounds but might also prefer different approaches to learning and so he distinguishes between cognitive, field-dependent, affective and perceptual learners. Cognitive learners are analytical and thus prefer exact rules and clear instructions, while field-dependent learners are co-operative and favour experiential learning. Additionally, there are also affective learners relying on their emotions rather than logic and

perceptual learners who can have a strong preference for either combination of their visual, auditory, tactile or kinaesthetic senses. (Hyland 2003:45) Naturally, any individual could be classified as more than just one of those learner types, which is why it is essential to cater for all the different needs in any case. In the context of digital learning opportunities some learner styles cannot or can hardly be catered for, for instance the tactile or kinaesthetic sense, but on the other hand technical devices also provide for a wider variety of possibilities to cater for visual or auditory styles, which is why it is important to consider the aspect of learner variation for a pedagogical website evaluation of any kind.

When talking about digital learning materials, it is valuable to consider not only their "internal" characteristics such as the ones discussed in the paragraph above but also "external" features that might affect the learners' intake such as visual components. The impact of visuality and multimodality is a rather complex issue which is why this will be discussed in detail in a separate chapter later on in this paper. From a general point of view, the influence of the physical appearance of learning materials can also be discussed from another, more general point of view. Tomlinson (2005:19) argues that it is important to form a judgment about the overall appeal of learning materials which might influence the learners' affective engagement with the content. Hyland (2003:103) further elaborates on this view and suggests that the physical appearance of materials has a significant impact on intake, as an appealing layout can attract the learners' attention and encourage engagement with the materials. Judging in how far something is attractive or not is of course a rather subjective matter, but according to common sense there seem to be some cultural predispositions about the appeal of a layout. These are, for example, the degree of effort that has been invested in designing the layout or in how far elements are nicely and clearly arranged. Kitao (2002:73) even suggests that "[t]he criterion of simplicity can also be applied to page aesthetics." (2002:73). He further states that dividing content into logical units is another way of enhancing page aesthetics (2002:73), while this also serves to facilitate scanning.

Stranks (2007:330) points out yet another important issue that is relevant when analysing pedagogical usability. He argues that it is highly important for materials writers to consider the age and proficiency level when designing materials for learners (2007:330, cf. also: Tomlinson 2005). He points out that it is vital to create varied activities matching the learners' attention span, which is considerably influenced by the learners' age, and emphasizes that the content should be cognitively challenging

(2007:31). Thus, the implications for digital learning materials are that they should also contain information about which age group or learner proficiency group they are intended for in order to be able to form a judgment about whether they contain varied activities for the specified audience. In case of a non-specified target group, it seems justifiable to expect the content to be devised for a wide range of learners in terms of both age and proficiency. Should this expectation not hold true one might conclude that the learner level aspect has not been considered at all.

The last implication drawn from pedagogical theories that I would like to mention is the factor of background knowledge. With reference to findings derived from schema theory, Derewianka (2007:204) points out that the background knowledge of a reader has a major influence on comprehending what is read. This implies that additional information is often not only useful but also necessary to fully understand something that is read. In printed course books, on the other hand, additional information can lead to the deterioration of the page layout since the simplicity of the design is not given any more, causing an overflow of information. Therefore, so Derewianka suggests, with online materials it is useful to provide additional background information on demand, for instance by flashing pop-ups, in order to enable the learners to access extra information only when it is needed or when the timing is right. (Derewianka 2007:204). This information, speaking from a general pedagogical point of view, can be facts of any kind, but in the context of language learning websites one useful application of this principle could be, for example, on-the-spot vocabulary definitions.

As we have seen in this chapter, pedagogical considerations provide a lot of useful insights that can be applied to an evaluation of learning websites of any kind. Though there may be other important pedagogical principles which would be worthwhile mentioning, I have included those which seemed most important for my study purpose. In addition, it also needs to be born in mind that a website evaluation for pedagogical purposes is a highly time-consuming matter given the extremely complex character of extensive learning websites with their steadily changing content and design. It therefore seems reasonable to focus on a more easily manageable yet significant set of criteria that enable the researcher to form a reasoned overall judgment of the pedagogical usability of a website.

5.2 Creating and applying pedagogical usability criteria

In the previous chapter we have seen that it is possible to draw various important implications from pedagogical theory that are applicable for evaluating digital instructional material. All of these criteria are included in my evaluation framework and are summarised, in the form of questions as in Table 2 below.

1. GENERAL PEDAGOGICAL USABILITY: DO THE MATERIALS ...

- 1. reflect inclusiveness through the use of informality and personal language (e.g. by featuring informal discourse features such as contractions, ellipses or using the active voice)?
- 2. feature concreteness, e.g. by using examples or anecdotes?
- 3. create wholeness, i.e. sharing experiences and opinions?
- 4. contain clear instructions?
- 5. achieve impact / attract attention / encourage engagement?
- 6. help the learners to feel at ease?
- 7. cater for the cognitive needs of the targeted learner groups?
- 8. cater for learner variation?
- 9. provide more detailed outcome feedback?
- 10. divide content into logical units to facilitate scanning?
- 11. incorporate relevant background information on demand?

Table 2 – pedagogical usability criteria

As already noted in chapter 3 ("Methodology, research aims and limitations"), the aim of this research project is to create a framework of evaluation that enables a researcher to form a reasoned judgement about the usability of language learning websites. To achieve this aim, the core of the research is based on a sound theoretical background, but in order to conclude whether the framework is actually applicable in a real website test, the validity of the evaluation framework also needs to be assessed by means of applying its criteria in a website test. Therefore, the above part of the framework has also been checked by applying the criteria to a website test of the language learning website introduced earlier on, namely *BBC Learning English*. It is important to bear in mind that the primary purpose of this website test is not to form a judgment about the selected website, but to test the general pedagogical part of the framework in terms of

its applicability for a real website evaluation and to discuss the results in terms of their implications for the final design of the framework.

1. GENERAL PEDAGOGICAL USABILITY: DO THE			
MATERIALS	YES	NO	YES+NO
1. reflect inclusiveness through the use of informality and personal			
language?	1		
2. feature concreteness, e.g. by using examples or anecdotes?	1		
3. create wholeness, i.e. by sharing experiences and opinions?	1		
4. contain clear instructions?	1		
5. achieve impact/attract attention/encourage engagement?	1		
6. help the learners to feel at ease?	1		
7. cater for the cognitive needs of the targeted learner groups?			1
8. cater for learner variation?			1
9. provide more detailed outcome feedback?	1		
10. divide content into logical units to facilitate scanning?			1
11. incorporate relevant background information on demand?	1		

Table 3 - website test results

criteria	total value	%
total	11	100
fulfilled:	8	72.73
partly fulfilled	3	27.27
not fulfilled:	0	0

Table 3 provides an overview of the results obtained by testing the pedagogical usability criteria in the evaluation of *BBC Learning English*. As far as the test results are concerned it is obvious that *BBC Learning English* mainly seems to meet the criteria established for pedagogical usability, with 72.73 percent of the requirements fulfilled and only three conditions partly fulfilled. Yet it is much more interesting to take a closer look at how these results were achieved, if and to what extent the criteria in Table 3 proved applicable for the website test and whether this part of the framework might require any remodelling. The individual criteria of the framework will henceforth be referred to as 'condition x', with x being their number and position in the framework, in this case Table 3.

Condition 1 was verified by analysing the language of the instructions in terms of their level of informality or closeness and their voice. While the instructions appear fairly polite and thus contain hardly any informal register or ellipses, there are frequent

instances of personal addresses to the reader, contractions and consistent use of the active voice. The language used in the instructions also seems to mimic real-life conversations, which is in line with Moreno and Mayer's personalisation principle mentioned earlier on (Moreno and Mayer 2007:316). Closely connected to the issue of inclusiveness is the creation of wholeness, condition 3, which is, similarly to condition 1, fulfilled by means of personalising the instructions, yet in this case through sharing personal experiences with the learner. Condition 2 could be verified since the website features a lot of programmes that seem to be maintained by many individual authors, each of them pictured in their programmes, and therefore often contains personal opinions and personal references, for example "Every organisation, I felt, is a different mix of the same four basic cultures [...]" (The Handy Guide) or "I have some friends from the US who come over to London every year or so and stay with me - so I regularly take some time off and have a staycation." (Keep your English up to date -'Staycation'). Yet another way of personalising the materials, namely by featuring concreteness, is also applied on the website. Most of the content is preceded by examples or anecdotes in order to highlight the relevance of the presented topics, which also serves to create authentic goals for the learners to achieve in similar real-life situations. Examples of such utterances were "Imagine you are calling a company and want to speak to someone who works there" (Talking Business – 'Connecting'), "So, if you are coming to visit, or live, in London or you want to find out more about what the city has to offer - then this course may be for you" (Welcome to London), "What if you are at a bus stop and you need to know what time it is now?" (How to ... - 'Asking the time'). Image1 below shows a sample page of the evaluated website that features instances of conditions 1 and 2.



Welcome to Get That Job!

Finding a job can be a complicated and tiring process. Sometimes you just don't know where to start looking, let alone how to persuade a company that you are the best person for the job!

This site is full of activities and quizzes to build on your knowledge of career-related vocabulary and offer some tips on things like how to put together a good CV or come across well in an interview.

You can work your way through this site step by step, from 'Job Search' to 'Interviews' - just click on 'What's next?' on the right of the page each time you have completed an activity. Or you can go straight to whichever units are of most interest to you by using the links at the top of the page.





Happy job hunting!

Image 1 – programme featuring personalised language and real-life examples

The next question of the framework is concerned with whether the instructions featured on the evaluated website are clear or not. At this point, it is noteworthy to mention that, while Tomlinson (2005) emphasizes to evaluate the clarity of instructions, he does not provide his readers with a definition of what 'clear' means to him. Therefore, I used my own interpretation of clarity for the verification of condition 4: clear instructions should be short and straight to the point while still being able to inform the reader about every detail that is essential for carrying out the task. In my opinion, the instructions featured on BBC Learning English meet this requirement really well, while it is also fair to point out that the comprehension of instructions might be a rather subjective matter, which might make the analysis of this criterion a slightly more complex matter compared to the other criteria discussed so far. Furthermore, it needs to be stated that the creation of clear instructions in digital materials differs from traditional approaches to giving instructions. The fact that the introductions of a task, instructions for it and the actual task can be split by putting them on different pages and linking them hierarchically also allows for a more clearly specified focus in the instructions. However, a too complicated hierarchy might make the overall design of the task too complex.

Whether the materials achieve impact, attract attention and/or encourage engagement proves to be yet another fairly subjective matter. In the website test this condition was verified on the grounds that the programmes are very colourful and feature interesting pictures, which is why it seems safe to say that the website definitely attracts a user's

attention and makes them curious about the contents. Whether this lively mix of colours and images is used to the right extent and for the right purpose, however, will be discussed in more detail in the chapter dealing with multimodal usability. In the case of condition 6, however, it was much more difficult to decide whether the materials make a learner feel at ease. This is due to the fact that the definition of 'to feel at ease' seems even more subjective than that of a website's ability to attract attention. The website achieves to create a link between the learner and his/her world by including realistic situations from daily life as well as images and situations taken from many different cultures and therefore condition 6 seems fulfilled. But the question of whether there is sufficient white space is difficult to answer since the definition of 'sufficient' white space is quite problematic as such.

Condition 7 is concerned with whether the materials cater for the cognitive needs of the targeted learner groups and in the case of *BBC Learning English* this is somewhat difficult to decide. The website does not specifically state who the content is designed for and neither do many activities include a specification of the target group, so it is hard to judge whether the content is cognitively challenging when not knowing the intended target groups. In some courses the aim of the programme is stated and thus it could be possible to test the condition for these. However, it does not seem viable to make an overall judgment about condition 7 due to the fact that there is definitely no clear outline of who the activities are intended for. Whether this requirement could be fulfilled even if a targeted audience was specified does not seem to be a simpler issue, since the level of cognitive effort involved highly depends on individual strengths and weaknesses. It is therefore the duty of the researcher carrying out the website evaluation to tackle the degree of difficulty of the analysed activities and put him- or herself into the position of a learner targeted for the materials.

Another interesting issue is that of learner variation. The website contains a lot of activities which rely on visual and acoustic elements and also includes many activities that probably appeal to field-dependent and affective learners because of its featuring emotional and experiential elements. There seem to be, however, hardly any activities suitable for cognitive learners because the focus does not appear to be on providing explanations for learners preferring logical reasoning, which is why condition 8 is not fully fulfilled. A similar matter is that of the division of the content into logical units. Firstly, it is useful to suggest a definition of a unit as an area that is clearly distinguishable from others as being an entity of its own, while a logical unit thus means

that similar elements are grouped in a unit. The website partly divides content into logical units, for example by picturing elements such as words, icons or pictures in boxes or simply by dividing units through borders. However, the layout is not consistent and so sometimes there is no visual differentiation at all or elements of different types are grouped as a unit. This does not result in facilitating scanning but, quite clearly the opposite, thereby making it fairly difficult for the reader to process the content. Image 2 is an example of successfully established logical units, i.e. equally coloured text boxes using the same font style, while image 3 serves to point out inconsistencies in the design of clearly distinguishable entities, that is, hardly any graphical distinction between the different text areas.

The Reading Group



Image 2 - content is logically structured into units

Learning English - Working Abroad



Image 3 – inconsistent structure, logical entities are hard to perceive

The last two conditions devised for the pedagogical part of the framework are concerned with the provision of detailed outcome feedback and the incorporation of background information on demand. The former requirement, condition 9, could be verified since in most cases the site provides detailed outcome feedback, especially when the individually tested items need further explanation. For matching exercises there was no feedback, which seems reasonable given the fact that these depend on the negotiation of meaning by means of trial and error. But even when there was no extensive feedback provided, the very basic feedback reflected a personalized note, with sentences such as "Sorry, you got this question wrong." thus going beyond a mere "Correct" or "Incorrect" utterance. Images 4 and 5 illustrate what detailed outcome feedback exactly looked like. Condition 10 was also verified, as the websites features expandable vocabulary lists for some tasks (image 6).

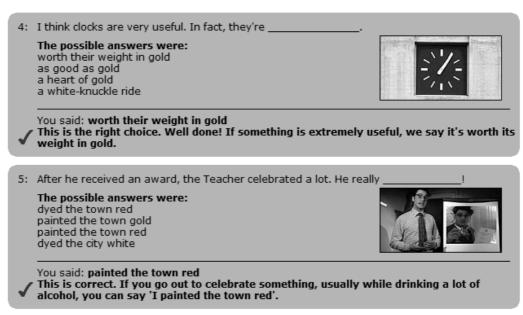


Image 4 – detailed outcome feedback for a colour idiom exercise

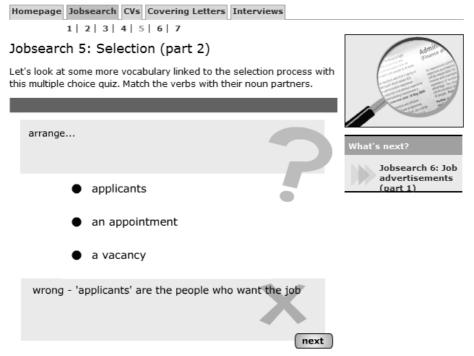


Image 5 - feedback on a vocabulary exercise

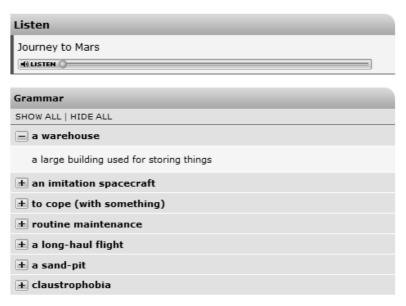


Image 6 - expandable vocabulary list

5.3 Conclusion about the pedagogical usability criteria

The website test has shown that, all in all, the pedagogical part of the framework is quite useful but has also served to point out some of its weaknesses. Some of the conditions sound convincing when reading them for the first time, but it is evident that it is highly important to scrutinize each condition in detail before applying the criteria in a real website test. What is particularly significant is to get to the bottom of each of the requirements and provide, either by means of conducting a more extensive theory research or by means of logical reasoning, a clear definition of the declared condition in order to know what exactly needs to be examined in the test.

Furthermore, the first part of the website test has also revealed that subjectivity is an important issue when evaluating pedagogical usability, as some criteria seem more difficult to verify than others due to their rather subjective nature. However, subjectivity should not just be seen as an obstacle in terms of achieving conclusive results quickly and easily, but it also indicates that it seems worthwhile to let various people evaluate a website by means of this framework in order to obtain comprehensive results. All in all, the pedagogical usability conditions have facilitated to point to the relative worth of the website.

6 Evaluating the SLA usability of a language learning website

6.1 Important theoretical aspects from SLA and language learning theory

Having discussed considerations taken from general pedagogy, it is now time to look at significant aspects of English language learning theory. The concepts discussed in this chapter deal with some basic principles of language learning as well as key factors in dealing with English grammar and writing skills. It is important to point out that other highly valuable aspects from SLA and language learning theory, such as considerations about reading, speaking and listening skills, vocabulary extension or language testing, are not included in this framework, since this would have exceeded the limits of this research. Lastly, it needs further stressing that, as with pedagogical theory, SLA and language learning theory provide relevant insights for this framework for website evaluation, but likewise there are also some aspects that possibly prove more difficult to evaluate than others. Therefore, I would first like to draw attention to some interesting findings which are included in the framework of evaluation but might be considerably more difficult to evaluate in a website test.

Socio-cultural theory, as Moll (1992) points out, is the basis for some significant considerations found in modern education and was heavily influenced by Vygotskyian approaches. He points out that one of Vygotsky's most important contributions was his belief that children should be regarded as active rather than passive agents in the learning process. Vygotsky emphasized that children were not merely receiving objects in the learning process but actively contributed to it through socio-cultural interaction, such as orientation received from an adult, and independent effort. (Vygotsky 1987, in Moll 1992:50) One aspect of this socio-cultural presumption is helping the learners to develop confidence, which is emphasized by Tomlinson (2007) who argues that this can be achieved by pushing the learners to a level that lies slightly above that of their actual proficiency. In addition, he points out that materials should encourage the learner to engage with the contents repeatedly since processing and strengthening the input might not be achieved by a one-time engagement with the materials (Tomlinson 2007:20-21). These conditions are similar to those of Rutherford & Sharwood-Smith (1988) who take

the idea of engaging materials yet further and point out that materials should encourage learner self-investment by means of enabling them to make discoveries about the language that are guided by themselves rather than anybody or anything else. This would also be beneficial since learners would then have to take responsibility for their decisions (Rutherford & Sharwood-Smith 1988, in Tomlinson 2007).

Tomlinson (2007:24) also argues that, with reference to Schmidt (1992, in Tomlinson 2007), it is important to draw the learners' attention to specific, important features of the input to engage them in a noticing process. This view is supported by Derewianka (2007:201) who, basing his claims on Chapelle (1998), further elaborates on the concept of salience by stressing that computers play an important role in directing learners' attention towards specific items as they make it considerably easier to enhance input. Likewise, Simard (2009:124) also argues for making specific features more salient by means of textual enhancement as the modification of the physical appearance of text would draw learners' attention to specific linguistic features.

Another important aspect of language learning theory is to provide a meaningful context, which has been stressed by various authors, including Singhal (1999, in Derewianka 2007), Celce-Murcia (2002) and Hedge (2000). The latter provides examples of how contexts can be created - for example through visuals, dialogues, text, songs or videos (2000:159). While these authors merely emphasize the importance of establishing a context, Ellis & Batstone (2009:195-196) argue that traditional text books, which often introduce something new to the presupposing pre-existing knowledge, provide certain contexts that are often too implicit for learners, such as dialogues or visual clues. Therefore, they claim that it is important to make the context more explicit by making specific linguistic cues more salient, for example by means of repetition, irrespective of creating a less communicative or less authentic task. (Batstone & Ellis 2009:195-196).

In addition, researchers have suggested other general criteria for creating useful language learning materials. Singhal (1999, in Derewianka 2007:205) suggests that electronic reading materials should make use of a variety of different genres and registers, probably in order to familiarize learners with the wide range of available texts. He also claims that reading digital materials can be facilitated by including on-the-spot vocabulary look-ups (2007:203). Batstone & Ellis (2009:199) argue that learners need to practice what they have learned in real-life, communicative situations, which is

similar to Tomlinson (2007:21) who points out that materials should provide learners with sufficient opportunities for applying the target language to achieve communicative purposes. This is in line with Stranks' (2007:331) view that materials should include and also motivate realistic language that is similar to what learners are likely to produce in a real-life situation. To maintain this level of realness, he therefore suggests that highly artificial language samples should only be included when really necessary, e.g. in case of samples with a high level of difficulty. (Stranks 2007:338).

There are many views on how to teach grammar as well as how grammar is learned, yet many of these seem to be competing with one another, which is why it is a somewhat difficult matter to merge opposing theories into one coherent framework of evaluation. However, there seems to be consensus about some aspects, and these are also included in the framework. One important aspect is that of drawing learners' attention towards relevant grammatical features. As has been discussed above, it is useful to create salience with specific features that require the learner's attention, which in turn has implications for presenting grammar. In proposing the "awareness principle", Batstone and Ellis (2009:197) maintain that, when teaching specific grammar items, it is important to direct the learners' awareness explicitly towards these, as a specific item might not be processed even if it appears with a high frequency. Similarly, Nassaj and Fotos (2004:12) argue that this is an essential condition for a learner to successfully acquire a specific grammatical item. However, Batstone and Ellis (2009:197) also point out that that drawing the learners' attention to specific items should not obstruct the equally important principle of discovery-based learning, but rather support it. Thus, learners not only have to be encouraged to be aware of specific features, but also to independently reflect on them and construct their own rules about them.

The importance of discovery-based activities is also stressed by Celce-Murcia (2002:123-132) who argues to move away from the classical grammar approach of presenting contrived grammar rules in isolation to enabling students to discover the grammar themselves by establishing a context and letting them analyse language use on their own. Likewise, Hinkel (2002:185) argues that grammar learning should always be based on a discovery-based approach as many learners seem to have difficulties establishing a connection between learned grammar rules and applied grammar. Therefore, she too maintains that it is necessary to teach grammar by means of discovery tasks and authentic texts. For example, she refers to the commonly encountered problem of correctly applying the English tenses and emphasizes the

usefulness of discovery-based activities and authentic texts for facilitating understanding tense usage, (Hinkel 2002:185).

Hedge (2000:159) also maintains that grammar materials should contain both terminology and meta-explanations. While the use of terminology depends on the learner's level of competence, she argues that it is useful to include terminology alongside meta-explanations (ibid.). Using terminology is beneficial because learning a language also involves thinking or talking about certain aspects of the language as well as categorizing similarities and differences, which can be achieved more easily by means of applying the same, well-known terms to the same features. Nassaj and Fotos (2004:12) point out that a learner should have repeated meaningful exposure to input that contains the target forms, which is also supported by Lightbown and Spada (2008:181). Lastly, Tomlinson (2007:331) also stresses that materials writers should always consider any difficulties that learners might expect when dealing with grammar, which is why materials for grammar teaching should provide some kind of help for specific grammar items.

Hyland (2003:27) discusses various valuable considerations for designing useful materials for writing. According to him, writing is a non-linear and complex process, which is why it is not sufficient to merely provide any kind of writing task introduction for a writing task (Hyland 2003:27). Instead, the materials designer should consider several important aspects. Firstly, one cannot assume that every learner is indefinitely creative or has an unlimited set of ideas, which is why it is important to include reference texts as stimuli for pre-writing input (2003:104). Likewise, it cannot be expected that a learner is familiar with a specific topic and so the task should contain sufficient elements for topic familiarization (102). In addition, a materials designer should adapt the writing tasks to the students' individual needs (110), such as their learning styles, their interests or their culture, which implies that digital learning materials should provide a learner with a wide range of tasks to choose from. Similarly, due to learner variation, some learners prefer a high level of guidance whereas some want to express their ideas freely (131), and therefore materials writers should also consider different levels of guidance for their materials. Since an equal level of knowledge and experience of every learner cannot be presupposed, it is also important to include tasks that draw on different levels of knowledge and experience (102). However, one aspect that applies to all kinds of learners is that tasks should have a clear context so that the learners understand the purpose of what they are expected to write

(102). Lastly, Hyland argues that the tasks should be relevant to the intended audience (102), which suggests that, for example, a language learning website that specializes in Business English, should include writing tasks relevant to Business context.

As we have seen in this section, language learning theory provides a wide range of important theoretical aspects that can be used to evaluate the degree of usability of a language learning website. In how far all the criteria discussed above are applicable in a website test and what implications they have for applying them in a test will be discussed in the next section.

6.2 Creating and applying language learning usability criteria for a website test

SLA USABILITY: DO THE MATERIALS ... 12. help the learners to develop confidence? 13. encourage repeated engagement with the materials? 14. aid learner self-investment? 15. engage the learner in noticing by highlighting salient features? 16. provide a meaningful context? 17. introduce a variety of genres and registers? 18. provide the learners with meaningful, communicative opportunities for practice? 19. feature and stimulate realistic language examples? 20. contain highly contrived language samples only where appropriate? 21. facilitate reading by featuring on-the-spot vocabulary look-ups? 22. for grammar direct and raise the learner's attention towards relevant grammatical features? 23. for grammar reflect authenticity for the needs of the user? 24. for grammar provide repeated meaningful exposure to input containing the forms? 25. for grammar contain discovery-based activities? 26. for grammar provide help with difficulties that could arise with specific grammar items? 27. for grammar contain both the use of terminology and meta-explanations? 28. for grammar provide the learner with sufficient opportunities for practice? 29. for writing reflect meaningful contexts and have authentic purposes? 30. for writing enable learners to communicate effectively in writing by not only providing a topic? 31. for writing provide the learners with writing strategy hints? 32. for writing include reference texts that may serve as stimulating pre-writing input? 33. for writing provide the learners with sufficient opportunities for choice of tasks? 34. for writing provide the learners with opportunities for topic familiarization? 35. for writing cater for guided and non-guided learning needs? 36. for writing include writing tasks that have a clear context? 37. for writing include writing tasks drawing on various learners' knowledge and experience? 38. for writing include writing tasks that are specific and relevant to the genre and the audience?

As can be seen in Table 4, the insights from SLA and language learning theory discussed above have been used to establish criteria for evaluating the language learning usability of CALL websites. The results of the linguistic usability evaluation are illustrated in Table 5 and discussed underneath. Despite the fact that the majority of criteria, namely 62.96 per cent, could be positively identified, unlike the prior analysis this test also reveals that six out of twenty-six criteria have not been fulfilled. Furthermore, 14.81 per cent of the criteria have only been partly fulfilled.

1. LANGUAGE LEARNING USABILITY: DO THE MATERIALS	YES	NO	YES+NO
12. help the learners to develop			
confidence?			1
13. encourage repeated engagement with the materials?			1
14. aid learner self-investment?	1		
15. engage the learner in noticing by highlighting salient features?			1
16. provide a meaningful context?	1		
17. introduce a variety of genres and registers?	1		
18. provide the learners with meaningful, communicative opportunities for			
practice?	1		
19. feature and stimulate realistic language examples?	1		
20. contain highly contrived language samples only where appropriate?	1		
21. facilitate reading by featuring on-the-spot vocabulary look-ups?		1	
22. for grammar reflect authenticity for the needs of the user?	1		
23. for grammar direct and raise the learner's attention towards relevant			
grammatical features?			1
24. for grammar provide repeated meaningful exposure to input containing			
the forms?		1	
25. for grammar contain discovery-based activities?	1		
26. for grammar provide help with difficulties that could arise with specific			
grammar items?	1		
27. for grammar contain both the use of terminology and meta-			
explanations?	1		
28. for grammar provide the learner with sufficient opportunities for			
practice?		1	
29. for writing reflect meaningful contexts and have authentic purposes?	1		
30. for writing enable learners to communicate effectively in writing by not			
only providing a topic?	1		
31. for writing provide the learners with writing strategy hints?		1	
32. for writing include reference texts that may serve as stimulating pre-			
writing input?	1		

33. for writing provide the learners with sufficient opportunities for choice			
of tasks?		1	
34. for writing provide the learners with opportunities for topic			
familiarization?	1		
35. for writing cater for guided and non-guided learning needs?		1	
36. for writing include writing tasks that have a clear context?	1		
37. for writing include writing tasks drawing on various learners'			
knowledge and experience?	1		
38. for writing include writing tasks that are specific and relevant to the			
genre and the audience?	1		

Table 5 – results of the language learning usability evaluation

criteria	total value	%
total	27	100
fulfilled:	17	62.96
partly fulfilled	4	14.81
not fulfilled:	6	22.22

According to Tomlinson (2007), a learner can be helped to develop confidence (criterion 12) by pushing him or her to a level that is slightly above his or her actual proficiency. Despite the fact that a user profile has been created for this evaluation, it is somewhat impossible to decide whether the aim of developing confidence has been achieved due to various reasons. Firstly, the degree of difficulty varies strongly among the courses, which is why it would be highly time-consuming to establish a sound conclusion for each and every programme. Moreover, this criterion is very subjective and thus depends on the individual's strengths and competences, so assessing this from a global user's point of view would not apply to other users. Therefore, the criterion might be more easily assessable for a website that clearly establishes a target audience and possibly also be more applicable for less complex websites which feature a smaller range of materials.

Criterion 13 too is a rather subjective criterion because whether a website encourages someone to engage with its contents varies according to individual taste, at least as far as factors relying on emotional appeal are concerned. However, it may be concluded that the website encourages the learner to engage with the programmes repeatedly in the sense that it offers content which updates on a regular and predictable basis, such as learning programmes that are designed as series for which episodes are published on a regular basis. There is, for example, a learning programme called 'The Flatmates' which

features comic characters and issues in their personal lives that the user is curious to learn more about in the following week. Other examples of such repeatedly encouraging programmes are the learner blog, recipes and other specials that regularly invite the users to participate and send in their contributions. Thus, it may be argued that *BBC Learning English* does encourage repeated engagement with the materials, but whether users feel inclined to engage with the materials at all strongly depends on personal taste. Therefore, criterion 13 is marked as both achieved and not achieved.

Learner self-investment, criterion 14, implies that the learners are encouraged to make discoveries about the language that are guided by themselves. What is problematic about this definition is the fact that it is somewhat vague and leaves open the question of what is really meant by a self-guided discovery. Do the learners discover the language by themselves only if they are not prompted to reflect on it? Does self-guided language discovery imply that the learners need to deal with non-didactic materials rather than materials intended for teaching purposes? Or can it also take place with materials that stimulate reflection but do not guide the learners too strongly? For this research, I have decided to adopt the latter point of view because a reflection hint cannot be considered absolute guidance that is being provided, but may rather be seen as a thought-provoking impulse which may also lead to other language discoveries. On the basis of this extended definition it can be concluded that the analysed language learning website features elements that aid learner self-investment. The programme 'The Flatmates', mentioned earlier, features an example of such elements supporting my conclusion. Image 7 shows an episode of The Flatmates in which a dialogue between the characters can be read by enlarging expandable fields and which also invites readers to take part in a poll about a language point. Firstly, the expandable dialogues serve as a means to aid learner self-investment because the learner is prompted to reflect and possibly also predict the next phrases before actually expanding the next field. In addition, the poll at the end of the text invites the learners to make judgements about some phrases in the text without receiving any hints, which also serves to let them discover the language on their own. It might be argued that, because of peer pressure, the phrase that has received the majority of votes is likely to be chosen by other learners too, but due to the fact that the correct solution is only revealed in the next episode one can assume that returning readers learn from their mistakes.

The Flatmates



Last updated at 14:11 BST, Thursday, 16 April 2009

Episode 192: A street survey

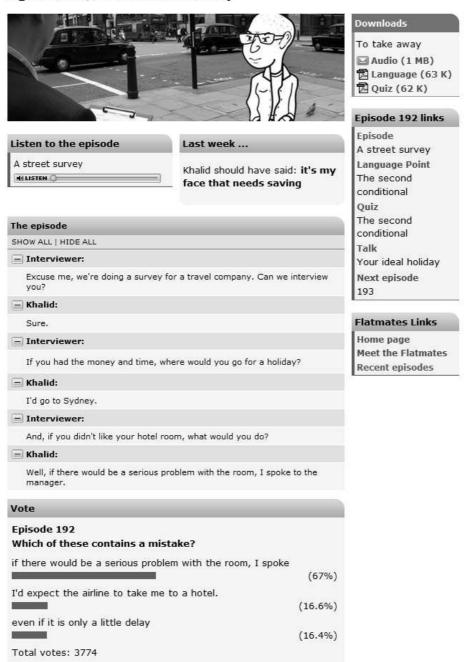


Image 7 – reading exercise aiding learner self-investment

With regards to the analysis of criterion 15, it can be concluded that this specification, the highlighting of salient features, is only partly fulfilled. A salient feature is "the most important" one (Collins Cobuild 2006:1276), but this raises the question of what is important in which context. If, for example, a grammar programme deals with the English conditional, it seems safe to argue that conditional forms have particular

salience in that context and would thus benefit from being highlighted in order to increase noticing. The analysed website, however, does not reflect a consistent system of highlighting. On the one hand, text enhancement is used for layout purposes, for instance in the form of sub-headings printed in bold. On the other hand, many vocabulary items are also printed in bold, probably in order to be noticed and processed more deeply by learners and also to signify that these words can be looked up in the expandable vocabulary links at the end of the page. Thus, it seems that the website partly makes use of the highlighting strategy of salient features, but this approach is only implemented consistently in the case of vocabulary items.

As regards the provision of a meaningful context the website strives and succeeds to achieve this aim, as it includes a lot of images, sound files and in some cases even videos that are closely linked to the respective context. Therefore, it can be argued that criterion 16, the provision of a meaningful context, is fulfilled. Image 8 gives an example of context achieved through a video. However, it needs to be borne in mind that a mix of modes, such as text, sound and animation, can also have an unwanted influence on intake, which is why issues related to multimodality will be discussed in the next chapter.



Image 8 – the content is contextualised through a video

BBC Learning English makes use of different genres and registers. The variety of genres is particularly extensive, as the content ranges from newspaper articles to student blogs, user recipes, Business communication or animated series. The website also introduces different registers for different language purposes, which is why this

condition, criterion 17, can be regarded as fulfilled. In this context, it might be worthwhile mentioning that with respect to the register of the instructions only one type of register could be identified. The instructions maintain a personalized and friendly, polite tone through the use of both every-day English constructions and more refined expressions.

Moving on to criterion 18, it is useful to recall chapter 2.3, "Options and issues of CALL" which has aimed at illustrating the strengths and weaknesses of computer-aided language learning. The limited range of meaningful practice opportunities, especially in older CALL programmes, has been identified as one of the major problems of computer-aided materials. Drill exercises should not be the only components of practice of language learning websites but, as is suggested by criterion 18, there should also be meaningful and communicative opportunities for practice. BBC Learning English attempts to provide for such opportunities by offering their users the possibility to send in their contributions in order to publish these on the website. Thus, learners can share recipes, book discussions, holiday experiences and much more with all the other users by either sending their contribution to a dedicated BBC email address or posting a comment at specified entries. The possibility of contributing to the content serves to identify a clearly specified purpose, which is why it can be argued that this kind of practice is both meaningful and communicative. Furthermore, the website has lately published another programme, the student blog, which enables one user per month to write regular blog entries about subjects he or she is interested in which are then commented on by teacher who also provides advice on how to improve the learner's writing. Despite the fact that some of these practice opportunities might appear somewhat selective in terms of their limited submissions, the large amount of published learner submissions on the website suggests that practice opportunities are both very popular and frequently used.

Condition 19 is slightly more difficult to verify, as the analysis of the whole content provided on the website would prove too extensive, which is why it is not easy to conclude whether there are exlusively realistic language examples on the website. But the overall impression suggests that the language samples encountered so far reflect the kind of language a learner can be expected to encounter in a real-life situation, as the expressions used and presented appear neither outdated nor highly artificial. The programmes are always situated in representative contexts with realistic aims and purposes. In addition, whenever there are highly contrived language samples, these are

only used alongside more authentic expressions in order to clarify the meaning of more complex matters, which is why it seems safe to say that condition 20 can also be verified.

As regards condition 21, it has been discovered that the analysed website does not feature on-the-spot vocabulary look-ups, although this technique is already commonly used. This may be due to the fact that the layout and overall design of *BBC Learning English* sometimes appears slightly old-fashioned compared to more modern web appliances. Despite the fact that expandable vocabulary lists are available, condition 21 thus cannot be verified, as on-the-spot look-ups, which are more convenient for the reader, are not featured on the website.

Criterion 22 has been included in order to verify the authenticity of the materials, but as has already been discussed in the theoretical part of this section, the concept of authenticity is not a straightforward one (cf. chapter 2.3). It has been established that *BBC Learning English* has not defined a target learner group and thus it can be concluded that the best way of providing authentic materials for their users would be to provide content that is authentic to the needs of various learner groups. In my opinion, the website succeeds to do so by supplying realistic content that is taken from manifold areas of interest. By means of providing materials ranging from personal to professional interests as well as differing text and exercise types the needs of a versatile user group are tackled. Naturally, it needs to be stressed again that variety too can be a subjective matter, but the diversity of the materials is strongly convincing. One example of authentic materials, a news report, is illustrated in Image 9.

Words in the News

The Hollywood actress Lindsay

Lohan has been sentenced to 90

days in jail. A judge in California ruled that she had violated probation, following a drug case

Last updated at 17:09 BST, Wednesday, 07 July 2010

Lindsay Lohan sentenced to jail

GETTY IMAGES Lindsay Lohan arrives at court

Click to hear the report:

Downloads To take away: Report (550 K) Words (1.2 MB) E Text (30 K)

Related BBC links

Actress Lindsay Lohan jailed for probation violation BBC News

Report

Reporter:

Peter Bowes

Summary

7 July 2010

three years ago.

In 2007 Lindsay Lohan **pleaded guilty** to two counts of being **under the influence of** cocaine and **no contest** to two **drunk driving** charges.

She went to jail but spent only 84 minutes **behind bars**. She was also ordered to complete a series of **alcohol education courses**.

But she failed to do them **on time** and missed a number of meetings. When the judge announced that she was now **sentencing** Lohan to 90 days in jail, the actress **burst into tears**.

Latest reports

Lindsay Lohan sentenced to jail 7 July 2010 Nadal wins Wimbledon for the second time 5 July 2010 Deal agreed on Australian mining tax

Image 9 – material authentic to the user: a news report

Evaluating the more general conditions of this part of the framework has been somewhat problematic, but looking at how the website deals with grammar is also a somewhat tricky issue. Firstly, the focus of the page seems to be on improving reading comprehension, fluency and vocabulary acquisition rather than concentrating on grammar teaching. In addition, the overall didactic design of the website seems highly inconsistent. The first point I have mentioned is of course not negative as such because grammar is taught implicitly through the other skills, but some users might prefer explicit grammar descriptions and activities in favour of implicit grammar teaching. In addition, the issue of implicit grammar teaching is the difficulty of finding out which specific subject matters the courses aim to teach. Therefore, the analysis of criterion 24, the provision of repeated meaningful exposure to input containing the forms, is limited to examining only exercises that are more or less clearly identifiable as explicit grammar exercises. The evaluation has revealed that the specification of providing repeated meaningful exposure to input containing the forms cannot be verified. Whenever a specific form is dealt with explicitly, the exposure is often limited and not contextualised, which is why it is hard to describe it as meaningful. An example of this

is illustrated in image 10 which shows the repeated yet not well-grounded exposure to the phrasal verb "check out". Although the form is somehow contextualized through the quotation at the beginning, the other examples seem somewhat random and are not placed in a meaningful surrounding.

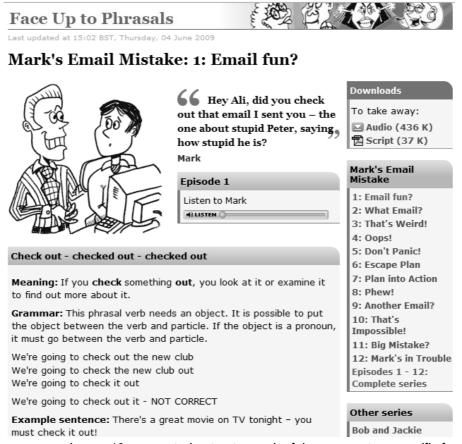


Image 10 - repeated yet not meaningful exposure to a specific form

In the paragraph above I have raised the issue of implicit grammar teaching which could also be termed discovery learning, as the grammar is not explained explicitly but needs to be reflected on individually by the user. Although the evaluated language learning website contains traditional grammar explanations and exercises too, many of the activities are also non-guided and thus leave the reflective effort to the learner. As a result, it seems justifiable to conclude that criterion 25 can be verified since the website contains activities that force the learners to make discoveries about the language on their own. However, in discussing theoretical aspects about second language acquisition, it has also been pointed out that learners' attention should be drawn to forms that are intended to become intake, as they are likely to remain unnoticed otherwise. Therefore, it seems to make sense to combine self-guided language discovery with

textual enhancements or reflection hints in order to point the learners' attention in the right direction without giving away too much. This is partly achieved on the website, especially with specific vocabulary exercises which invite the learner to read texts that include expressions printed in bold, the definitions of which can, but do not necessarily have to, be accessed after the reading. *BBC Learning English* also includes traditional approaches to grammar, but since the self-guided discovery of the English language seems to be one focus of the website, it appears legitimate to consider criterion 25 as verified.

Another distinctive feature of the analysed language learning website is the help provided in case of difficulties arising with specific grammar items, criterion 26. Although much of the design of the page is, as already mentioned, confusing and inconsistent, it also contains the dependable feature called "Ask about English". This course enables learners to ask questions about specific grammatical or lexical issues they have encountered and provides them with detailed explanations and feasible examples. The questions that have been sent in as well as the experts' answers are then published, collected and categorized in the programme so that every user can browse the contributions when grammatical help is needed. Despite the fact that the illogical page design serves to diminish the effectiveness of this course, it is nonetheless a useful means of providing individualised and user-centred help. In addition, this programme as well as other grammar activities also fulfil criterion 27, as both terminology and meta-explanations are used.

The last grammatical aspect to be discussed is whether the website provides sufficient opportunities for practice. Again, one faces the issue of how to define a fairly vague term, this time "sufficient". What might be enough practice for one learner, could be clearly too little for another. One solution to this problem of definition is to suggest that the materials should contain a really large amount of exercises. Since some exercises, due to their level of difficulty or complexity, might require the learner to engage with them repeatedly, it is furthermore important to supply more than one exercise for the same feature, which in turn at least doubles the already large amount of exercises. Naturally, since there are many language points about English that are worthwhile looking at and practising, this implies that a useful language learning website has to provide a considerably great amount of exercises, which in turn means a lot of server space required. In the case of *BBC Learning English*, however, the sheer amount of programmes available on the site suggests that server space does not seem to be an

issue. It is therefore rather surprising that criterion 28, the provision of sufficient practice opportunities, could not be verified. While there are sufficient exercises for some issues, especially for vocabulary acquisition and extension, some topics do not receive the same extent of attention. Furthermore, the inefficient organization of content makes it almost impossible for the user to look for specific practice opportunities.

Moving on to the topic of writing skills, it first needs to be mentioned that the focus of the analysed website does not seem to be on improving writing skills. However, as has already been noted before, it does include activities that enable learners to submit their own texts. Earlier it has been pointed out that writing materials should reflect meaningful contexts and have authentic purposes, and the website clearly fulfils this criterion. Though sometimes hard to find, there are various specials which invite the learners to submit their own contribution, such as reports about costumes and celebrations in their countries, their favourite recipes or book discussions. The tasks are meaningful because they have a clear and authentic purpose and due to the publication of the submissions, the users are motivated to put extra effort into their contributions. Therefore, criterion 29 has been positively verified.

When taking a closer look at the writing tasks, one can make some interesting observations: Criterion 30 can be considered to be fulfilled because the writing tasks not only provide a topic, but also include an introduction to the topic (e.g. "This series gives you an opportunity to taste some of the popular dishes from all over the world - and of course to practise you 'culinary' English!"), motivational expressions like "and don't forget that you can be the star of this show too." and contextual phrases like "Bon appetit!" (all quotes taken from the course 'Recipes from around the world'). By displaying and promoting the other users' texts, the writing tasks also include reference texts that serve as stimulating pre-writing input. However, in most cases there are no strategy hints for the learners (criterion 31). One exception is the student blog which is regularly updated by one learner and also regularly commented on by a teacher who supplies strategy hints. Nevertheless, the tasks do not contain writing tips and specific hints to help them communicate more effectively.

Similar to another criterion discussed earlier on, the requirement of providing "sufficient" opportunities for the choice of tasks is a tricky issue. Before, this problem has been tackled by means of interpreting "sufficient" as "plenty". On the basis of this extended definition, criterion 33 cannot be verified due to the fact that there are simply

not many writing opportunities for learners. Despite the fact that the page does include writing activities, the focus is obviously not on writing, which is why the writing activities do not form a category of their own but can mostly be found in the category 'Specials'. Although users often have the possibility to post comments for certain tasks or in response to a specific content-related question, there are nonetheless only few real writing opportunities. Moreover, some of these writing specials appear in monthly intervals and do not allow too many learners to contribute to the final content, which suggests that only a few out of many learners can really make use of these opportunities. There is, therefore, definitely a need for more practice opportunities.

Despite the limited amount of practice opportunities, the tasks nevertheless fulfil many of the conditions established for writing tasks, as they familiarize the learners with the topic through publishing others' contributions (criterion 32), establish a clear context (criterion 36), draw on the learners' knowledge and experience by referring to their individual culture and costumes (criterion 37) and thus prove relevant to the genre and the audience (criterion 38). However, although these context-specific conditions can be verified, the tasks nonetheless fail to fulfil another, more didactic criterion. The writing tasks are often designed in a straightforward manner that allows the learner to contribute creative texts without limitations. Yet this approach does not fit the needs of learners who require more guidance for a writing task and would benefit from more detailed task descriptions. Similarly, such learners would require discussion questions or text samples illustrated by an expert, not a learner. Therefore, it can be concluded that criterion 35, the catering for guided AND non-guided learning needs, has not been fulfilled.

6.3 Conclusions about the language learning usability criteria

Similar to the criteria for general pedagogical usability, the language learning usability criteria have proved more complex than anticipated. Analysing and categorizing language is not always a straightforward matter and the same complexity applies to issues that arise within the context of language learning. While some criteria have proved highly important and quite clear from a theoretical point of view, the test has shown that the same criteria prove equally important but less easily assessable when applying them in a website test setting. As a result, these results indicate that in order to establish whether particularly subjective aspects, such as motivational value or appeal,

can be verified or not, it would be highly worthwhile to obtain evaluation results not just by linguists, teachers or other experts. After all, the question of whether a learner wants to engage with specific materials and why this is the case can be best answered by a learner him- or herself.

Furthermore, the trial investigation has served to show that for some criteria the underlying definitions were sometimes insufficient or incomplete, which is why in the course of testing some definitions had to be analysed in more detail. It seems that for some criteria, an unplanned modification can be useful since unforeseen features of the analysed website may influence the test, which is why the flexibility and occasionally indeterminate character of some test criteria enable the tester to adapt the criteria to unanticipated changes. Applying the criteria in the website test has also revealed that some criteria nonetheless may benefit from improvement in order to ensure the validity of the evaluation framework.

7 Evaluating the multimodality usability of a language learning website

The preceding chapters have revealed interesting and important insights into pedagogical and linguistic issues which constitute the core of the evaluation framework due to the fact that these are the main aspects of language learning. However, an evaluation of any kind of materials should also consider the influence of pictorial and in the case of digital materials also auditory and animated information on intake. Therefore, this chapter discusses researchers' considerations about how multimodality affects the way information is perceived and what is suggested in terms of combining different modes in the most useful way.

7.1 Important theoretical aspects from multimodality theory

It has already been discussed that textual as well as pictorial or animated background information can be useful to establish a context. However, while this may be beneficial for the learner to a certain extent, an overload of multimodal information can also prove disadvantageous for intake. On the basis of multi-modal processing theory by Chun and

Plass (1997) and multi-channel communication theory by Mayer and Sims (1994), Derewianka (2007) illustrates several considerations about multi-modal processing of electronic materials. He emphasizes that it is important to consider whether the information that is provided by text and graphics is mutually supportive, that is, relevant to each other. However, he also points out that a dissonance between the meaning of the text and the graphical information can be productive too, as unlikely and rare contrasts may lead to critical reflection. (Derewianka 2007:205).

Furthermore, Moreno and Mayer (2007:316) claim that any unessential information should be excluded. Derewianka (2007:205) suggests that non-relevant graphical information should be avoided, as it is likely to pose a distraction to learners, particularly younger ones. Beaumont and O'Brian (2000), who carried out a writing project at a Secondary school, consistently experienced the problems of distracting advertisements and banners in their project and relate about these in their research diary, among other issues that occurred. The following extract from their research diary supports Moreno and Mayer's (2007) as well as Derewianka's (2007) above stated claims:

You have messages like 'Click here.' And what do the children do? They click here! You have a mixture of visual and textual messages too. Often the children were drawn towards the visual. Even when you're typing your message, the colours and flashing buttons are there inviting you in. (Beaumont & O'Brian 2000:61)

Another important issue Derewianka (2007) raises is that of redundancy. He points out that graphical information, despite its appeal and motivational value, can be superfluous if it illustrates exactly the same idea as the textual information (2007:205), a contention which is also highlighted by Moreno and Mayer (2007:316). Schnotz further elaborates on the idea and emphasizes that it is also important to avoid triple redundancy, that is, the parallel presentation of pictorial, auditory and written text. He argues that thus attention would be split because the learner has to concentrate on three different modes of information. (Schnotz 2005:62). Derewianka argues that a non-feasible combination of media, that is, a too large extent of different media, can also be overwhelming for the learner (2007:205). However, both Derewianka (2007:205) and Schnotz (2005:62) state that redundancy can be useful for learners with fairly low levels of proficiency. Despite the fact that these researchers' ideas about redundancy generally seem useful for the sake of avoiding split attention or an overwhelming amount of information, their rather

vague approach to the presentation of information should not be adopted uncritically. While a combination of different types of information might be superfluous from a multimodal point of view, it might be helpful to facilitate understanding unclear information such as ambiguous pictorial information. Nevertheless, the redundancy principles can certainly be a useful means to identify unnecessary information.

Derewianka (2007) goes on to mention the task-specific appropriateness of particular media. He claims that some media are more suitable for certain tasks than others. Therefore, with reference to Chun and Plass (1996, in Derewianka 2007), Derewianka argues that graphical information is more beneficial for vocabulary tasks than videos, since more effort is required for interpreting graphical information, while videos can be more suitable for creating understanding of cultural issues. Animations can be useful to demonstrate how something is done, while illustrations may serve to make particular features of the text more salient. (Derewianka 2007:205-206). Additionally, Schnotz (2005:65) points out that it is important not to combine auditory information with pictures that are not relevant for the target audience, which is particularly important when, unlike in the language learning materials evaluated in this paper, a definite target audience is specified.

Another significant aspect of multimodality theory concerns not only which media are presented, but also the spatial and temporal proximity between them. Moreno and Mayer (2007) argue that pictures need to be placed in close spatial proximity to written text and that sound needs to be presented immediately with pictures whenever there is a combination of auditory and pictorial information. This idea is also supported by Schnotz (2005:65), who suggests that likewise, animations should be combined with spoken text.

While the presentation of multi-modal information as such is already a fairly complicated matter in terms of what proves beneficial and what is disadvantageous, it is yet a more complex issue when the mix of media are implemented as interactive materials. Moreno and Mayer (2007) analysed the topic of interactivity with digital materials and on the basis of their findings propose several suggestions. Firstly, they argue that interactive materials should provide guidance, as learners perform better if they are prompted to participate actively in the task. (2007:316). While by 'guidance' the authors mean a "guiding pedagogical agent" (Moreno and Mayer 2007:316), this criterion may also be extended to interactive tasks as to feature extensive guidance of

any kind throughout the task. Moreover, the authors also state that learners should be able to control the pace of the interactive tasks in order to enable them to have more time for deep-processing (317). As regards the outcome of interactive tasks, Moreno and Mayer suggest that the task outcome should contain explanatory rather than corrective feedback and, when providing the results, the materials should also prompt the learners to reflect on the learning outcome (316-317).

7.2 Creating and applying multimodality usability criteria for a website test

As before, the theoretical aspects discussed above have been included in the established framework in order to enable the researcher to evaluate in how far multi-modal aspects have been considered in the design of the web-based language learning materials.

Again, this part of the framework has also been examined in terms of its validity by applying the criteria illustrated in Table 6 in the website test.

1. MULTIMODAL USABILITY: DO THE MATERIALS ...

- 39. provide textual and graphical information that is mutually supportive?
- 40. avoid non-relevant graphics that may pose a distraction to (particularly younger) learners?
- 41. contain redundant information only when needed (i.e. for low-proficiency materials)?
- 42. avoid a non-feasible combination of media?
- 43. feature types of media that are most appropriate for the task?
- 44. combine animations with spoken text?
- 45. add task- and audience-appropriate pictures to auditory text?
- 46. present pictorial information in close spatial proximity to written text?
- 47. present pictorial information in close temporal proximity to auditory text?
- 48. avoid triple redundancy (i.e. pictorial, auditory AND written text)?
- 49. provide guidance for interactive materials?
- 50. enable learners to control the pace of an interactive task?
- 51. cater for explanatory rather than corrective feedback on interactive task outcomes?
- 52. prompt follow-up learner reflection on interactive task outcomes?

Table 6 – criteria for multimodality usability

The first multimodality condition to verify is concerned with whether textual and graphical information presented in the materials are mutually supportive. As I have mentioned earlier on, the large amount of data available on the website proves challenging, not only because the learner is somehow unlikely to have a solid overview of the content, but also because a large amount of information makes it more difficult to

evaluate the website. Therefore, the overwhelming amount of content presented on a website may affect the verification of criterion 39, which also applies to this website test. Furthermore, another issue frequently mentioned in this paper plays a major role in the test, namely that of subjectivity. While a certain image looks more or less familiar to one user, it may create different ideas and memories with another user.

Consider, for example, images 11 and 12. Image 11 shows a part of a vocabulary quiz dealing with army lexicon that seeks to elicit the word 'superior'. The picture displayed alongside the gap text is actually quite clever, as it shows an army person from an inferior's perspective and so it could be argued that both pictorial and graphical information are mutually supportive. On the other hand, this way of illustrating superiority could also be too subtle and even misleading, which is why one may also argue that picture and text represent different ideas. Image 12 shows an extract of a similar quiz eliciting the word 'pre-owned'. While the text conveys information about a pre-owned dress, the picture illustrates neither the concept of second-hand clothing nor does it show a dress at all. Thus, it could again be argued that textual and pictorial information are not mutually supportive. And yet on the other hand one might also claim that it is supportive enough to show a content woman who proudly presents a clothes item, as it is done in the exercise. Naturally, the website also provides a lot of pictures that tend to be less debateable but in a nutshell, it is obvious that the interpretation of pictorial content is clearly a subjective matter. Therefore, the first criterion of the multimodal evaluation has been marked as both fulfilled and not fulfilled.

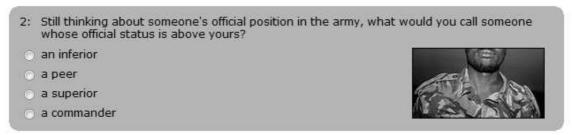


Image 11 – army vocabulary quiz

 I got this fantastic dress in the charity sh but you'd never guess it, would you? 	op for practically no money at all. It's
second-owned	ASS
o pre-owned	TI VI
o post-owned	1200000
after-owned	An-mines

Image 12 - eliciting the word "pre-owned"

While *BBC Learning English* contains some images that might not relate to the textual content all very well, there are, at the same time, no images that may pose a distraction to the learner. The website does not feature any advertisements, banners or flicking images, which is why the user's attention stays focused on learning-related content. With many free online learning materials, the avoidance of irrelevant graphics cannot be taken for granted as the availability of these sites often depends heavily on sponsored advertisement. In the case of *BBC Learning English*, however, this is no issue at all.

When it comes to redundant information, one of the theories discussed earlier on argues in favour of redundancy only for low-proficiency materials. The user profile I have created for the learning website suggests that the materials, despite the fact that much of the content resembles an overall intermediate proficiency level, are designed for different levels of proficiency. As a result, it is almost impossible to establish whether the pictures are suitable for the users' proficiency level. Additionally, and unlike classroom textbooks, online learning materials are often used by learners of differing age and proficiency levels. This makes the provision of audience-related multimodal information somewhat impossible because if no target audience is defined, it cannot be established who really makes use of the materials. For these reasons, criterion 41 has been considered fulfilled as the overall amount and nature of redundant information appears suitable for the comprehensive learning context.

As regards the feasibility of the media combined in the language learning materials, it seems safe to say that the analysed website in general avoids an overwhelming amount of media. Although some programmes include several types of media, such as textual, auditory, pictorial and video information, it never seems to be too much. This is also due to the fact that the additional information is not provided automatically but can be accessed on demand, for example by means of an audio player, expandable text items or videos. However, the media are not always used in a task-appropriate way. It seems that videos and animations in particular are used for almost everything new irrespective of the exercise type. On the whole, however, the use of pictorial and auditory information tends to be task-appropriate, as they are frequently employed for vocabulary acquisition and cultural understanding.

Criterion 44 is based on the condition that animations should be combined with spoken text. At the time of the research only one programme, 'The Flatmates', featured

animations. Originally featuring only few cartoon-like illustrations of the characters alongside the main text, the programme must have achieved considerable popularity, as with the progress of the various episodes came animated adaptations of the programme. These lightly animated spots were put online on the video platform *YouTube* and contain spoken text in the form of spoken character conversations as well as sometimes spoken background sounds. As a result, condition 44 can be considered fulfilled and verified in the evaluation.

The next condition of the framework is concerned with the combination of task- and audience-appropriate pictures and auditory text. Like in many other cases related before, the issue of the target audience for the website under investigation for criterion 45 is a rather tricky one. For that reason, the verification of the appropriateness is based on evaluating task appropriateness only, and the website test results suggest that this condition can be regarded as fulfilled. The pictorial information is always aimed at relating to the content and/or context of the tasks and links nicely with the spoken text. Consider, for instance, Image 13, a screenshot of one episode of 'Keep your English up to date' in which the phrase "staycation" is explained by spoken text as well as aptly summarized by the characteristic picture of a British stay-at-home vacation. Furthermore, as it has been argued that verbal and non-verbal information, if combined, should be presented both in close spatial as well as temporal proximity, this condition can also be verified for the verbal and non-verbal media examined, with Image 13 being one example for close spatial proximity between verbal and non-verbal text. However, Image 13 also illustrates that condition 48, the avoidance of triple redundancy, cannot be considered fulfilled. In the theoretical part of the multimodality chapter, it has been pointed out that a combination of textual, pictorial and auditory information proves less effective due to the split of attention, yet this type of multimodality is employed with a fairly high frequency on the evaluated website. As one can see in Image 13, the learner can obtain spoken information about the expression "staycation", analyse the picture in more detail or read the text, but the rather lengthy written explanation of the word appears somewhat redundant and might cause confusion with the user as to what to focus on first. In addition, the text provides sufficient and more easily obtainable information about the English expression to make the listening activity dispensable, which might not be the effect the designer of the activity has intended. Triple redundancy can be found frequently on the website and possibly also contributes to the general overload of information.

Keep your English up to date Last updated at 09:48 GMT, Tuesday, 05 January 2010

Staycation



Image 13 – pictorial, auditory and written information

The last matter of investigation in multimodal theory to be evaluated is that of interactivity. Researchers have argued that interactive materials should provide guidance, enable learners to control the pace of progress with the materials, provide explanatory rather than corrective feedback and also prompt the users to reflect on their results after completing the task. The results of analysing some interactive activities presented on the evaluated language learning website show that the first three of these criteria can be considered to be fulfilled, as guidance, pace control and explanatory feedback are provided. However, guidance in my research does not refer to a guiding pedagogical agent (a famous model of which would be the Office Assistant *Clippy* prominent in older Microsoft Office® versions), but to instructional guidance for the interactive materials in general. Examples of such guidance include game play tips, slidable or expandable instructions.

Similarly, the exercises do not feature traditional pace control like buttons to stop and resume the activity, but for speed-based activities the pace can be adjusted by means of configuring a level of difficulty, such as easy, medium or difficult, before starting the activity. Although one might argue that thus, pace control is restricted to the beginning of the activity only, it is understandable that the aim of time-controlled activities lies in the uninterrupted completion of certain tasks within a limited amount of time. Therefore, enabling the learner to specify the pace only at the beginning of the interactive activity appears perfectly reasonable. Likewise, explanatory feedback is constantly used instead of only pointing out whether something was correct or not. In

addition, the activities not only feature explanatory feedback in the sense of definitions, but some exercises, such as the language puzzles, also create a reasoning gap by forcing the learner to investigate the language point through only providing hints in which language programme of the website the information may be found. Creating a reasoning gap such as this may also be regarded as fulfilling criterion 52, the provision of a prompt for learner reflection on the task outcome, but since this is only implemented in one specific interactive task, condition 52 can only be considered as partly fulfilled.

All in all, as presented in Table 7, the website test results indicate that the majority of criteria for multimodality usability, namely 71.43 per cent, have been fulfilled, 21.43 per cent have been partly fulfilled and only one out of the fourteen conditions could not be verified.

1. MULTIMODAL USABILITY: DO THE MATERIALS	YES	NO	YES+NO
39. provide textual and graphical information that is mutually supportive?			1
40. avoid non-relevant graphics that may pose a distraction to (particularly younger)			
learners?	1		
41. contain redundant information only when needed (i.e. for low-proficiency			
materials)?	1		
42. avoid a non-feasible combination of media (i.e. overwhelming)?	1		
43. feature types of media that are most appropriate for the task?			1
44. combine animations with spoken text?	1		
45. add task- and audience-appropriate pictures to auditory text?	1		
46. present verbal and non-verbal information in close spatial proximity?	1		
47. present verbal and non-verbal information in close temporal proximity?	1		
48. avoid triple redundancy (i.e. spoken, auditory AND written text)?		1	
49. provide guidance for interactive materials?	1		
50. enable learners to control the pace of an interactive task?	1		
51. cater for explanatory rather than corrective feedback on interactive task			
outcomes?	1		
52. prompt follow-up learner reflection on interactive task outcomes?			1

Table 7 – website test results multimodal usability

criteria	total value	%
total	14	100
fulfilled:	10	71.43
partly fulfilled	3	21.43
not fulfilled:	1	7.14

7.3 Conclusions about the multimodality usability criteria

As we have seen in the discussions of the previous parts of the framework, evaluating multimodal usability is not always a clear-cut matter. Some aspects about multimodal information, such as the idea a source of information is trying to convey, are always subject to individual assessment. Analysing how a variety of different media affects the perception of information is nonetheless valuable and the proposed catalogue of evaluation questions has proved a helpful tool to uncover more interesting aspects of the tested language learning website. In addition, the test has also shown that it is a time-consuming matter to evaluate all the different media on a website, as the variety of images, videos, auditory information and other media is even harder to obtain and assess than purely textual information. This indicates not only that the website is too complex and features too much content, but also that the multimodality usability criteria are more suitable for a detailed website evaluation rather than enabling the evaluator to get an immediate overall impression of its multimodal usability. We will now move on to our last field of interest in language learning website evaluation, that is, the issue of computerizing information.

8 Evaluating the technical usability of a language learning website

The issues discussed so far were more or less concerned with mainly educational aspects: in how far a website reflects general pedagogical usability, whether the applied language learning concepts are consistent with current findings in SLA and language learning theory and if multimodality is employed in the most efficient way from a didactic point of view. Yet a website evaluation of any kind would be incomplete if one did not consider technical aspects too, since the way information is implemented in a website influences if and how a user accesses this information and what he or she does with it. Moreover, the quality of a page's navigational system, its layout design and the support features also plays a decisive role in attracting, maintaining and regaining users. Irrespective of how useful language learning materials are and how skilfully they have been assembled, unless they motivate the learner to engage with them for a longer period and/or repeatedly, the materials are unlikely to achieve their full potential. Therefore, the way computerized information is technically implemented also plays a

crucial role in designing and evaluating digital language learning materials. Technical website aspects include the page layout, the navigational design, organisation of information within the overall page framework, functionality and efficiency, data-related problems such as loading times or display issues and user friendliness. Some important technical considerations will now be discussed in more detail.

8.1 Important theoretical aspects from Computer Science

Unlike in many other areas of research, it is somewhat difficult to find academic contributions to website usability evaluation, as many of the publications tend to be independent guideline books rather than academia-related discussions. Some of these guidelines, however, can be regarded as scientific contributions in their own right, as they are based on long-term research and experience, though not always on pre-existing theories. Many of the authors publishing a set of guidelines for website usability are experts of web applications, web design and software testing and thus appropriately base their claims on their specialist knowledge of the subject. Naturally, however, there are also published documents which are less useful despite their being produced by experts of the field, which is why website usability literature needs to be reviewed particularly critically.

A review of the existing literature on website usability evaluation suggests that many considerations are based on approaches originally proposed by Jakob Nielsen, who is one of the best-known web-design usability consultants. Despite having been criticised for some aspects of his theories in the past (cf. Olsen 2002), Nielsen's views of usability are still very popular. The core of his usability concept is that of "heuristic evaluation", which for Nielsen means a "systematic inspection of a user interface design for usability" (Nielsen 1999:155) based on usability principles derived by him. While some of these criteria were not relevant to my evaluation, I have included most of his major ten principles proposed in his 1994 article "Heuristic Evaluation".

According to Nielsen (1994:30), some of the most important aspects of technical usability are: matching the system and the real world, allowing user control and freedom, maintaining consistency and standards. In addition, he emphasizes the significance of presenting error information, aiming for flexibility and efficiency of use,

providing help and documentation and striving for an overall aesthetic and minimalistic design. Matching the system and the real world implies that the system should make use of the natural, non-technical language of the user and try to represent concepts and conventions that are familiar to those that can be found in real life. In order to allow for user control and freedom, it is important to facilitate navigation through the content so that, in case the user gets lost in the navigation, clear exit strategies are close at hand. Consistency and standards can be maintained by ensuring that the platform follows consistent principles in terms of wording, layout or any other actions. Presenting information about errors that have occurred on the website not only means that the user should have some kind of notification of the error but that is also important to inform the user in an appropriate way, that is, by means of understandable language, error definitions and implications, all of which should be presented immediately. Aiming for flexibility and efficiency of use implies that acceleratory items should be available in order to enable more proficient users to navigate through the content more quickly and thus tailor their actions according to their needs. Nielsen also suggests that it is important to provide for help and documentation at all times in order to fully support the user in his or her quest for information. And lastly, he claims that any website should aim for a minimalistic and thus aesthetic design. (Nielsen 1994:30)

While Nielsen's criteria presented above may serve well as the basis of any technical usability evaluation, it is also important to gather other, more detailed evaluation aspects in order to cater for a more comprehensive analysis of the subject. One important aspect of technical usability is the creation of a good navigational design. Shapiro (2005:321) argues that sitemaps can be useful, especially for larger platforms, as users are likely to get lost in the overabundance of information. A sitemap is a graphical representation of all the content that is available on a website and of how it is organized, for example how it is linked to other content. An example of such a sitemap can be seen in Image 14. McGrath (2002:135) states that, "[a]s with a book, an index can be invaluable.", which is why he also suggests the use of a site map or other navigation aids, such as categorized indices or timelines, for the improvement of the site navigation. Brinck, Gergle and Wood (2002:413) propose that a good navigation design includes a logically ordered and clear navigation bar, consistent information about where the user is at the moment and clearly marked links to the main page at any time. They also stress that a good navigation design allows efficiency of use through faster procedures and few, comprehensible steps (2002:413). Derewianka (2007:204) adds a

pedagogical component to the navigation design by stressing that a good navigation design is vital for facilitating reading comprehension.

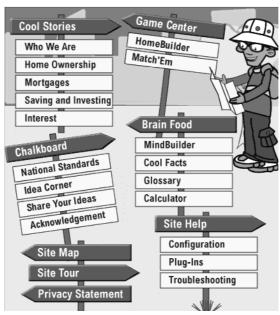


Image 14 - Example of a sitemap, taken from http://www.ginniemae.gov/homezone/index.html

Another issue that is closely related to navigation design is link efficiency. McGrath (2002:135) suggests that sufficient links are required in order to guarantee wellarranged content. Well-arranged means that content should be organized logically and predictably, which, according to Kitao (2002:73) is achieved through dividing the content into logical units, establishing a hierarchy of importance among these and using this hierarchy to structure relations among units. He also argues that it is important not only to establish a content-related, but also a visual hierarchy, which is why he deems it highly important to have a consistent scheme of visuals as regards graphics and colour themes (Kitao 2002:73). His view is supported by Brinck, Gergle and Wood (2002:412) who, in addition, state that the use of too many colours should be avoided. They also claim that elements should be grouped effectively and logically (413). Both Kitao (2002:73) and Brinck, Gergle and Wood (2002:412) propose that contrast should be used in order to strengthen visual hierarchies and consistency. The former also stresses that it is vital to emphasize the most important elements of a page (Kitao 2002:71), which is similar to Brinck, Gergle and Wood's (2002:413) suggestion that each page should have a clear focal point.

While an excellent navigational design and logical content organization are highly significant aspects of a website, other factors such as content properties are important too. The chapter on multimodal usability has already dealt with the combination of

pictures not only as sources of information but also from a technical point of view. Depending on their quality and properties, images can have large file sizes affecting loading times, which is why Kitao (2002:73) recommends avoiding the heavy use of images for the sake of both loading time and minimalistic page aesthetics. Nonetheless, Gergle and Wood (2002:412) also emphasize that images should have adequate quality in favour of fuzzy pictures and, should the browser due to various reasons be unable to display the images, also include alternate texts. Another relevant issue pointed out by them is that the pages should never exceed the window size (Brinck, Gergle and Wood 2002:413), as constant scrolling is both distractive and bothersome for the user. In order to make the finding of content easier rather than inconvenient, they suggest using search fields as well as ensuring legible text at all times (2002:413).

As already mentioned earlier on, Nielsen (1994:30) has pointed out that, in case of occurring errors, users should be immediately and appropriately informed about these. At the same time, he emphasizes that, first and foremost, systems should aim at preventing errors rather than mitigating them (30), since the functional correctness of a website is one of its most crucial functions. Therefore, a website should contain neither broken links nor broken images or media of other kinds, a view that is also shared by Brinck, Gergle and Wood (2002) who propose a set of other website constraints. In order to ensure a smooth flow of operations, the user should be presented with a confirmation check before heavily loading actions – the same holds true for costly or risky steps. Yet the requirement of a non-standard plug-in that would just be needed for the purpose of one specific website application does not call for the user's confirmation, but is best avoided at all. In any case, loading time should not exceed three to fifteen seconds in order to keep waiting time appropriate (Brinck, Gergle and Wood 2002:413).

8.2 Creating and applying technical usability criteria for a website test

TECHNICAL USABILITY: DO THE MATERIALS ...

- 53. reflect a good navigation design?
- 54. make use of link efficiency through connecting multiple pages by many links?
- 55. have a consistent visual hierarchy/visual layout?
- 56. emphasize the important elements?

57. organize the content logically and predictably? 58. make use of contrast to establish hierarchy? 59. avoid heavy use of images for the sake of loading time? 60. reflect an overall functional correctness? 61. reflect an efficiency of use? 62. contain search options? 63. avoid exceeding the window size? 64. reflect a clear focal point on each page? 65. use grouping of elements effectively and logically? 66. use images of adequate quality? 67. contain images that include an alternate text? 68. avoid too many colours? 69. contain legible text? 70. include confirmation checks before risky, costly or heavily loading actions? 71. feature useful error pages if errors occur? 72. contain help pages? 73. reflect appropriate maximum loading time of about 3-15 seconds? 74. contain no broken links? 75. contain no broken images? 76. support various browsers? 77. avoid the requirement of non-standard plugins that are not useful? 78. contain wholly non-technical, user-centred language? 79. aim at a minimalistic design?

Table 8 – technical usability evaluation criteria

The technical aspects discussed above have been integrated in the framework of evaluation by means of creating the fourth and last part of the framework. The summarized technical usability evaluation criteria can be seen in Table 8. Again, the validity of these criteria has been assessed in a website test which has proved considerably easier than any of the preceding tests due to the more easily determinable nature of the study subject. The detailed results as well as figures of the website test will be presented and discussed below.

The first question presented in Table 8 is concerned with the quality of the website's navigational design. In the course of this paper, it has been pointed out several times that the navigation aids of the website are poorly arranged, but only the technical part of this study allows for a deeper insight into why the navigation design fails to fulfil its duty of providing guidance for the users. Despite the fact that *BBC Learning English* features some kind of navigation board, this link index is not appropriately structured.

The navigation board, presented in image 15, contains a clickable overview of the main contents and each of these sections can be clicked in order to reveal the subordinate content links. The main heading 'General & Business English', for example, expands sub-sections like '6 Minute English', 'Talk about English' or 'Talking Business', each of which again can be clicked in order to be directed to the courses bearing that name. However, there are several problems with this kind of navigation. Firstly, as it can be observed in Image 15, only one main section can be expanded at one time. Given the considerable number of programmes provided on the website, this can be problematic as users might get lost fairly easily when looking for specific information. A solution to this problem would be to provide a site map which gives a clear overview of the content to be found on the page. But despite the fact that BBC Learning English contains a sitemap, it is relatively hard to find and also contains too much textual information, which makes it rather difficult to gain a comprehensive overview of the content.

Another idea to improve the navigational system of the website would be to split the navigation bar into several,

Home General & **Business English** Grammar, Vocabulary & Pronunciation Words in the News The Teacher News English Extra News about Britain Pronunciation tips Ask about English How to... Keep your English up to date Face Up to Phrasals Grammar Challenge Funky Phrasals Quizzes The Flatmates Community For teachers Specials About us Downloads

image 15 - BBC Learning English navigation bar

more meaningful categories and label them more clearly according to which subsections they contain. However, the sections presented in the navigation bar are neither well-chosen nor clearly labelled. What exactly, for example, is meant by 'General English' and why is 'Words in the News' not also part of general English? Why does the programme 'The Flatmates' get a section heading in the navigation bar of its own when, since it is dealing with grammatical issues, it might fit into the Grammar section

just as well? These are just some questions a critical user could ask and indeed the organization of the content in the navigation bar might be more confusing rather than supportive.

While navigation seems to be a highly problematic issue of the website, criterion 54, on the other hand, could be verified, as link efficiency poses no problem at *BBC Learning English*. The user can swiftly flick through the content because of the satisfying amount of links provided on each page. While other sub aspects of navigation, which will be discussed further on in this paper, may affect user friendliness, the link efficiency facilitates browsing the content without interruptions or obstructions. Yet this cannot diminish the fact that the next criterion, providing for consistency in terms of layout and hierarchy, could not be verified. Colour can serve as a stimulus for engagement with the materials, which is why the motivational value of colour should not be underestimated. The use of several different colours may lead to unnecessary confusion of the user though. The use of colour contrast in different sections of the content is often applied to help the user identify similarities and differentiate between content items. But using the same colour for objects taken from different categories or not applying it consistently, both of which occurs on the analysed website, does not seem particularly beneficial.

This in turn leads to a related criterion, namely whether the appliance of too many colours is avoided, which could not be confirmed either. Consistency in terms of the visual layout and hierarchy has not been verified either, since the website features too many differing colour and font schemes, which leads to an overall inconsistent appearance of the content presentation. Nonetheless, there are also a number of criteria which could be verified. Important elements of the site are emphasized and contrast is used to establish visual and conceptual hierarchies. Furthermore, images are not used too heavily but those included in the website are both of adequate image quality and also feature alternate texts, which is why criteria 56, 58 and 59 could be verified. Even so, this does not alter the fact that the content does not appear to be organized logically or predictably.

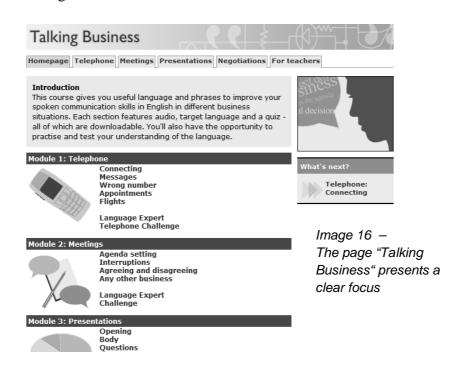
Testing the functional correctness of a website is a tricky issue because it not only involves assessing all parts of a website but also checking these in specific, alternating scenarios with differing starting points and various data and input combinations. However, as this test mainly serves the purpose of verifying the framework of evaluation, functional correctness can also be tested by ensuring that all used and

frequently accessed activities of the website work at a given point of time. This condition could be verified because the materials did not show any deficiency in terms of functionality at any time. This also implies that criterion 71, the inclusion of useful error pages in case of occurring errors, could not be tested at all, which is why this criterion has been listed as "non applicable".

The test has already served to point out significant weaknesses of the web page in question. Nevertheless, it is a somewhat pleasurable experience to browse the language learning materials, not only because of the appealing content. Despite some deficiencies mainly in terms of organization, problematic aspects related to colour and other issues of visuality, various technical usability aspects of the website could be verified. The implementation of a search option, for instance, enables the users to access specific content more quickly and conveniently. In case of arising difficulties with the materials, a designated help page provides support with frequently asked issues. Furthermore, although a fairly large amount of content is available on the platform, link efficiency also has the positive effect of not exceeding the standard window size. And although the general navigation does not always seem logical, the elements on a page are grouped effectively and logically in most cases.

Other positive aspects are concerned with functionality. As already mentioned earlier on, no instances of functional incorrectness were given at any time. Furthermore, the website did not contain any broken links or broken images either. As regards the more sophisticated applications, such as the flash-based games, non-standard plug-ins are not required for any of the applications. The use of flash for animated or moveable objects such as games or videos has become a standard for frequently accessed online applications such as YouTube or Facebook, so it seems safe to argue that the flash-based applets on BBC Learning English may well be regarded as using standard plug-ins. In addition, none of the materials, not even the more sophisticated applications, require massive loading time. Naturally, one can argue that loading times heavily depend on the speed of a user's internet connection, but since the tests were carried out at different locations with average WLAN bit rates, condition 73 could also be verified. What is more, the website is also compatible with different browsers, as it has been successfully tested with mainly Firefox 3.6.8, but also Internet Explorer 7.0.6002.18005, Chrome 4.1 and Safari 5. These browsers have been used as they tend to be used most commonly according to my own experience.

While the above described criteria were fairly easy to verify due to their quite determinable nature, the complexity of some other technical aspects made a critical assessment more difficult. First to mention in this context is criterion 64, the existence of a clear focal point on each page. Some courses seem to present a clearer focus than others, which again seems to be mainly due to the inconsistent webpage design. Consider, for example, the website screenshots shown in the figures below which illustrate how BBC Learning English both manages (Image 16) and fails (Image 17) to establish a clear focal point. Image 16 demonstrates how the main concept of the programme can be made lucid by providing a clearly identifiable introduction to the topic and grouping the main activities according to their hierarchy within the page. The hierarchy in 'Talking Business' is also intensified by means of applying the same format, colour and design patterns to elements of the same hierarchical level so that, as a result, all elements are clearly distinguishable from each other and the focal point of the page is established. In contrast to 'Talking Business', it is interesting to examine the page 'Funky Phrasals', shown in Image 17. Apart from the heading and the phrasal navigation, no focal point is established. Though a bold font has been chosen to highlight specific words in the text, this technique does not make all elements clearly distinguishable from each other.



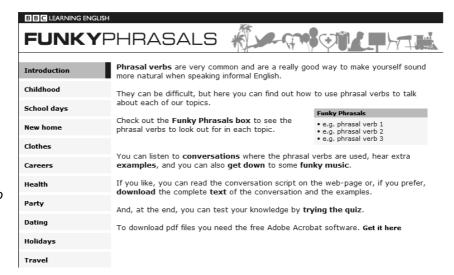


Image 17 –
"Funky Phrasals"
requires more effort to
see the focal points

Similarly variable results have been achieved from testing criterion 69, the legibility of the displayed text. While adequate legibility of most texts could be verified, some contents were displayed in a dissatisfactory manner, either because of a badly chosen font size or font face. Criteria 70 and 71 could not be verified at all, yet not due to inadequacies as regards the website architecture, but merely because neither errors occurred nor risky, costly or heavily loading actions were required. Therefore, these two criteria have been recorded as "not applicable".

Finally, I want to mention the last three test results that have not been discussed so far. The use of user-centred language on the analysed website is one of the few things that have been applied consistently. Computational terms have been avoided completely in order to cater for the needs of less-experienced users. Furthermore, efficiency of use could be verified as learners who feel confident enough with the materials are granted the flexibility to adapt the activity progress to their speed of processing. An example of such flexibility and efficiency of use can be seen in Image 18, which shows a matching exercise that enables the learner to accelerate the exercise outcome by letting him or her skip each part of the exercise. This can be done through clicking numeral links underneath the content tabs to get to the next exercise. Therefore, a user who might have already completed the exercise earlier, who is not sufficiently challenged by the task or simply not interested in this part of the topic, is given the opportunity to proceed to the next stage of the exercises without being forced to complete the matching exercise.



Image 17 – catering for efficiency of use

The last criterion displayed in Table 8, on the other hand, could not be verified due to the fact that the website does not aim at a minimalistic design. Quite contrarily, it mostly seems to be the case that the page designers strive for an enormous variety of content, layout techniques and colour patterns, which also constitutes the major technical issue of *BBC Learning English*. These stylistic inadequacies and inconsistencies suggest that the website is maintained mainly by language experts rather than computer professionals and, as will be discussed in the final conclusions of this research paper, this can be perceived both as an advantage and disadvantage.

1. TECHNICAL USABILITY: DO THE MATERIALS	Υ	N	Y+N	N/A
53. reflect a good navigation design?		1		
54. make use of link efficiency through connecting multiple pages by many				
links?	1			
55. have a consistent visual hierarchy/visual layout?		1		
56. emphasize the important elements?	1			
57. organize the content logically and predictably?		1		
58. make use of contrast to establish hierarchy?	1			
59. avoid heavy use of images for the sake of loading time?	1			
60. reflect an overall functional correctness?	1			
61. reflect an efficiency of use?	1			
62. contain search options?	1			
63. avoid exceeding the window size?	1			
64. reflect a clear focal point on each page?			1	

65. use grouping of elements effectively and logically?	1			
66. use images of adequate quality?	1			
67. contain images that include an alternate text?	1			
68. avoid too many colours?			1	
69. contain legible text?			1	
70. include confirmation checks before risky, costly or heavily loading actions?				1
71. feature useful error pages if errors occur?				1
72. contain help pages?	1			
73. reflect appropriate maximum loading time of about 3-15 seconds?	1			
74. contain no broken links?	1			
75. contain no broken images?	1			
76. support various browsers?	1			
77. avoid the requirement of non-standard plugins that are not useful?	1			
78. contain wholly non-technical user-centred language?	1			
79. aim at a minimalistic design?		1		

Table 9 – technical usability evaluation test results

criteria	total value	%
total:	27	100
fulfilled:	18	66.67
partly fulfilled:	3	11.11
not fulfilled:	4	14.81
not applicable:	2	7.41

Table 9 gives detailed information about the verification of the test criteria and also provides overall figures for the technical usability website results. As with the other tests, the technical usability evaluation resulted in most of the criteria being fulfilled, with eighteen out of twenty-seven verified usability criteria. Only four out of 27 criteria are recorded as not fulfilled, which equals 14.81 percent of the overall criteria. Even less, 11.11 per cent of the criteria, are listed as being partly fulfilled, as three out of twenty-seven conditions were both verified and not verified. Two criteria could not be assessed at all due to the unavailability of specific aspects, which is why two out of 27 criteria, equalling 7.41 per cent, are recorded as not applicable.

8.3 Conclusions about the technical usability criteria

When compared to verifying the other three main aspects of this research, evaluating the technical usability of the analysed website has proved less difficult. This is due to the

fact that most of the proposed criteria relate to visual, organisational or purely technical aspects. Therefore, the test did not involve too many subjective issues and thus could be completed fairly quickly. However, while it was not such a major issue in the other tests, it soon became apparent that the technical criteria carry unequal significance. Take as example criteria 53, 60 and 67. Among other important aspects, the quality of the overall navigation design, as stated in criterion 53, strongly determines the success of a website, particularly a larger one. The user needs to be supported in his or her quest for specific information by being provided with clear guidance. Yet when there is no comprehensive overview of the website content or the user does not know his or her position at any time, this can lead to utter confusion and frustration and, ultimately, failure of the website. Therefore, criterion 53 carries more significance than, for instance, criterion 67 which deals with the provision of alternate texts for images. Providing redundant textual information so that, should the image not be displayed, the user can still imagine the missing pictorial information seems justifiable, but might not be as vital for the user as knowing where to find what.

Moreover, certain aspects such as criterion 60, the functional correctness of a website, can be subjective in terms of their significance. This is due to the fact that, while it is undoubtedly highly important to ensure functional correctness, it is frequently a difficult decision to establish who or what is responsible for a functional breakdown. Internet applications are complex systems and depend on various subservices and conditions, which implies that it is sometimes hard to identify the source of the error and therefore often also not justifiable to give the website administrator the blame. In this light, the significance of functional correctness may be debatable.

All these aspects suggest that it might be worthwhile to extend the overall framework of evaluation by means of adding some measure of significance to the criteria and taking account of this factor in the test results. However, while creating a measure of significance might be fairly simple in the case of some criteria, it may be significantly more difficult or possibly even impossible to grade other criteria. Nevertheless, it also needs to stated that the technical usability criteria as such have proved worthwhile because the results indicate that, overall, technical usability can be confirmed, which goes in line with my subjective impression.

9 Discussion

The website tests have produced valuable insights about the utility of the framework as such as well as about the overall usability of *BBC Learning English*. A final discussion of both will be provided in this chapter.

9.1 Discussing the framework

The website test has yielded some interesting results which allow us to draw general conclusions about both the validity and quality of the evaluation scheme and its major strengths and weaknesses.

As regards the criteria for evaluating pedagogical usability, the test has revealed that it would be useful to base some criteria on a more extensive theoretical approach. Some usability conditions, such as criterion 10, i.e. dividing the content into logical units to facilitate scanning, sounded fairly convincing and comprehensible when reading them. Yet in the course of applying these criteria in a test it became apparent that further research into specific conditions would have been highly useful in order to avoid vagueness or ambiguity. However, the pedagogical test results also indicate that designing a flexible framework can be largely constructive too, as in some cases it is necessary to adapt the framework to the content, for example when unexpected website conditions are encountered.

Furthermore, issues of subjectivity frequently occurred with some parts of the framework, especially in the case of the pedagogical and linguistic criteria. This may not be considered a major problem as such, since subjectivity forces the researcher to reflect upon certain issues from several points of view, not just his or hers. However, combining both a subjective and objective (i.e. in the sense of incorporating more than one opinion) approach can be problematic in terms of wanting to achieve objective results such as exact figures. Subjective assessment implies that a certain conclusion cannot be extended to general opinion, which is why the representativeness of figures might be affected when combining individual judgement with a framework of a more determinate nature. This in turn suggests a modification of the evaluation methodology: the framework might only reach its full potential when being applied not only by one

researcher, but rather more evaluators, among them preferably a group of learners. Thus, representativeness could be considerably increased by means of basing any conclusions on the opinions of not just one, but several evaluators. A further improvement of this modified research methodology might be achieved through splitting the whole framework of evaluation into different parts for researchers and learners. The researcher's opinion, such as that of a language expert or a teacher, might be more relevant for highly complex, certain theory-based or other parts of the framework. On the other hand, learner-specific issues, such as motivation, appeal or difficulty, are best assessed by the learners themselves.

Another issue that has been encountered in the website tests is concerned with the amount of content available on a language platform. As it is the case with *BBC Learning English*, websites can accumulate large quantities of text, images, videos and more. This can be a major advantage for the user due to the fact that it enables him or her to get access to a large selection of possibly relevant data. At the same time, it not only poses a problem in terms of intellectual overload and redundancy, but also complicates an evaluation of the website, since the researcher faces an amount of data that is simply too excessive to analyse. Therefore, it is advisable to become well-acquainted with the structure of the website before actually testing it. A systematic approach to certain content assessments such as evaluating pictorial information in a multimodality test not only is useful for the overall evaluation but also saves time.

Lastly, it should again be pointed out that the framework of evaluation might also be improved with respect to the inequality of the criteria's significance. As has been demonstrated in the technical usability section, there is an imbalance of significance between the criteria, since some criteria might verify more important issues than others. Therefore, it has been suggested that it would be useful to modify the framework by means of adding a rate of significance in order to achieve more representative test results. Moreover, it also seems to be a reasonable idea to adapt the other sections of the framework to a system of significance rate. The idea for this additional evaluative measure, borne in the technical usability section, can also be applied to the other sections, since a difference of significance is likely to occur in any other area of the evaluation.

In spite of these potential points of improvement, the website tests have demonstrated that, in my opinion, the framework of evaluation is a useful tool to form profound

judgements of the overall performance of a website. While before the test I was hardly sceptical about *BBC Learning English*, probably also due to the high esteem I hold towards any *BBC* products, I have now taken on to a more critical perspective of the language learning site. Trying out the framework of evaluation with this website has demonstrated that it is necessary to adapt a more remote and professional point of view to language learning materials in order to avoid partiality or prejudice. Thus, the framework of evaluation has proved a valuable instrument to form a more rational and plausible opinion about the analysed language learning website. It has helped to expose the major strengths and weaknesses of the online materials and has demonstrated the effectiveness of combining theory and practice in one efficient device.

9.2 Discussing the usability of 'BBC Learning English'

In addition to verifying the validity of the framework, the website test has also served to draw meaningful conclusions about *BBC Learning English*. The page adopts a colourful and authentic approach to teaching English online, with a great variety of appealing courses and real-life situations. The website editors focus on designing user-centred materials and want to enable learners to take part in the language learning community by contributing to the content. Furthermore, many programmes aim at encouraging repeated engagement by means of ensuring regularity. From a negative point of view, one of the major issues of *BBC Learning English* is the lack of consistency in various areas which often results in a confusing layout and design and also didactic methods. On top of that, the content is not always logically ordered and thus cannot be easily accessed by the user. And despite the large amount of available data, there are still some inadequacies which I am now going to discuss in more detail.

USABILITY CRITERIA	General Pedagogy	Language Learning	Multimodality	Information Technology
fulfilled	8	17	10	18
partly fulfilled	3	4	3	5
not fulfilled	0	6	1	4
not applicable	0	0	0	2
fulfilled	72.73 %	62.96 %	71.43 %	66.67 %
partly fulfilled	27.27 %	14.81 %	21.43 %	11.11 %
not fulfilled	-	22.22 %	7.14 %	14.81 %
not applicable	-	-	-	7.41 %

Table 10 – overall test results for the entire framework of evaluation

Table 10 provides an overview of the total test results for each usability category. The figures illustrate the evidence that the website achieves the highest rate of usability in terms of general pedagogy, with all of the criteria partly (27.27 per cent) and in most cases even predominantly (72.73 per cent) fulfilled. Issues that have been encountered were mainly concerned with the lack of a clearly defined target group, partial catering for learner variation and inconsistent implementation of logical units. As regards linguistic usability, the website has reached the lowest of all achievement rates, since only 62.96 per cent of the criteria could be positively verified. Similarly, it has also been revealed that, compared to the other evaluation sections, the largest amount of conditions have not been fulfilled, as six out of seventeen criteria (22.22 per cent) could not be verified. Consequently, it was overall easier to form definite judgments about the criteria, as only 14.81 per cent have been recorded as partly fulfilled.

The framework helped to identify some deficiencies in terms of linguistic usability, most of which are issues of modernity, practice exposure and writing. The website does not feature spot-on vocabulary, which may not be considered a highly serious issue, but it shows that there is a need, or at least a potential, to adapt the website to modern technologies in web applications. More problematic, however, seems to be the fact that there is little grammar practice or grammar sample exposure which, even when there is exposure, in many cases does not appear highly meaningful. Likewise, there is a lack of sufficient and clearly labelled practice opportunities. In addition, though there are some writing activities, these are also often unsatisfactorily presented. The test has shown that missing writing strategy hints and lacking learner guidance as well as insufficient task choice of the website may impede the learner's writing performance.

As regards multimodal usability, the website test has yielded comparably positive results, with 71.43 per cent of the criteria, the second highest achievement rate of the tests, fulfilled. Similarly, only 7.14 per cent of the criteria have been recorded as not fulfilled, which again is rather low compared to the other negative results. However, there was a relatively high amount of partly fulfilled criteria, which is mostly due to implementational inconsistencies of the multimedia information. One of the most striking issues appears to be the seemingly random choice of media, which results in occasional triple redundancy, only irregular coherence between pictorial and textual information and seemingly unplanned use of media for different purposes. Moreover,

the interactive tasks featured on the website could be considerably improved by providing more detailed feedback for the user, enabling him or her to keep track of the progress made and linking the topics assessed in the activities more clearly to relevant courses on the website. Nonetheless, despite these imperfections, the multimodal information provided on the website certainly causes curiosity with the learners and most probably encourages them to engage with the materials. Moreover, the interactive tasks, of which there are quite a few, are probably particularly entertaining.

Concerning the technical usability of BBC Learning English, the figures presented in Table 10 suggest that, while again the majority of conditions (66.67 per cent) could be verified, the test results are not particularly extraordinary compared to the other three categories. Yet what is striking is the fact that the technical usability evaluation has achieved the lowest rate of partly fulfilled criteria, namely 11.11%, which suggests that most of the criteria could be assessed fairly easily, especially in comparison to the other evaluations. Nonetheless, as has already been pointed out in chapter 8, the overall technical performance of the website did not feel convincing, which is probably due to the unequal significance the evaluation criteria carry. Several technical problems were encountered, most of which are related to inconsistencies in terms of the visual hierarchy, the layout, the navigation and the overall organization of the content. The use of colour and other graphical elements as well as the placing of information in various parts of the website seemed, again, fairly random or at least not well-planned. However, due to several positive aspects, such as the general functional correctness and quicker content access through the use of the search function, the website test largely yielded positive results. For all that, there is considerable potential for improvement from a technical point of view.

Summing up the results gained from the website test, *BBC Learning English* fulfils most of the criteria suggested for a valuable and helpful language learning website, in particular with respect to pedagogical and multimodal usability. However, there are many aspects of the website which would require improvement, especially in the field of linguistic and technical usability. The major issues found in all areas of the research are the general inconsistencies, poor organization of the content and the lacking simplicity of form. These issues lead to an overall lowering of quality and affect other aspects of the website too. Thus, in spite of the otherwise appealing features and many positive aspects of the website, it seems evident that *BBC Learning English* would benefit from comprehensive redevelopment.

Ultimately, I would like to emphasize that the results obtained from the website evaluation have also served to highlight the important issue of how web technologies are being handled nowadays. Despite its increasing popularity and people's increasing familiarity with its applications, the World Wide Web is still a fairly novel means of getting access to and providing information. What is more, internet technologies are ever-changing, all of which implies that both dealing with web applications as well as designing them is a fairly complex matter which not only requires expertise of the matter, but also frequently updated knowledge of the subject. Therefore, the conception of a learning website requires both linguistic and language teaching skills as well as web design expertise. Moreover, it is neither adequate nor sufficient to let a web developer provide the basic structure of the website and have several language experts "fill up" the site with content. Ideally, an excellent language learning website is based on a collaboration of these two expert groups working closely together in order to ensure usability in form and content. Given the irresistible attraction of easily creatable and highly lucrative internet start-ups, more language learning websites based on this collaboration principle would be both a rare, but highly valuable sight.

10 Conclusions

The aim of this paper has been to provide deeper insights into the concept of computer-assisted language learning (CALL) and to create a framework of evaluation. This aim have been achieved through the provision of detailed information and critical discussion of theoretical concepts, empirical research and personal reasoning on the basis of pedagogical, linguistic, multimodal and technical concepts and beliefs. The pedagogical considerations are mainly based on insights from the field of materials evaluation and socio-cultural theory. Linguistic theory includes research from Second Language Acquisition (SLA), English Language Teaching (ELT) in general and, more specifically, Communicative Language Teaching (CLT). Insights from multimodality theory comprise aspects from multi-modal processing theory and multi-channel communication theory. The technical considerations are mainly grounded in the field of Usability Evaluation.

The framework can be used to assess the usability of language learning websites and its practicability has been verified by means of applying it in a language learning website test. The website the framework has been tested with, BBC Learning English, has been chosen due to its apparent popularity with both learners and teachers and also in order to investigate whether its seemingly appealing design could match with the usability requirements. Applying the created framework of evaluation to the selected language learning website has yielded valuable results. Firstly, it has been shown that modern technical applications in the field of language learning should never be approached uncritically due to the fact that the novelty and appeal of these appliances can considerably influence subjective assessment. Secondly, the framework of evaluation has proven a useful tool to form reasoned judgments about the benefits of digital language learning materials for the improvement of English grammar and writing skills. Thirdly, however, the test has also revealed that some of the established usability criteria might require revision, are heavily dependent on subjective impressions or reflect differing levels of significance. Therefore, in some cases the framework may benefit from revision, especially in terms of creating a measure of significance. Moreover, it also appears to be highly constructive to define the target evaluators as a group of several language experts learners, as the empirical research has shown that issues of subjectivity could thus be lessened. In addition, despite the fact that the main aim of this research has been to verify the quality of the framework, the website test has also demonstrated that significant improvements can be achieved in the design of BBC Learning English. Although the website has achieved fairly positive overall test results, key weaknesses have been identified in terms of consistency, practice exposure, modality choice, colour and contrast design and general navigational structure.

Summing up, it seems safe to say that the discussed concepts of CALL as well as the created framework of evaluation serve as a useful basis to raise awareness and establish a constructive approach towards computer-assisted language learning.

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Abstract (English)

The increasing use of technology in education has lead to the emergence of a variety of computer-aided learning devices and materials, among them also an increasing number of language learning websites. The aim of this paper is to create a framework of evaluation for analysing English language learning websites, with a focus on grammar and writing. In order to achieve this aim, deeper insights into the concept of computerassisted language learning (CALL) are provided. Furthermore, the framework is based on the critical discussion and inclusion of appropriate theoretical concepts, empirical research and personal reasoning on the basis of pedagogical, linguistic, multimodal and technical concepts and beliefs. These considerations include insights from the field of materials evaluation and socio-cultural theory, Second Language Acquisition (SLA), English Language Teaching (ELT), Communicative Language Teaching (CLT), multimodal processing theory, multi-channel communication theory and Usability Evaluation. In order to ensure the applicability of the framework, it has been tested by applying the evaluation criteria in a website test of the language learning website BBC Learning English. This website test has proven that, in spite of issues such as subjectivity or representativeness, the framework of evaluation is a valuable tool to assess the overall usability of language learning websites. In addition, the test results also indicate that, while achieving relatively high overall usability rates, the tested language learning website might benefit from restructuring in specific areas.

Abstract (German)

Der zunehmende Einsatz von Technologie im Bildungsbereich hat zu einer steigenden Anzahl von digitalen Lernmaterialien aller Art geführt, darunter vermehrt auch Webseiten, die sich auf das Verbessern bestimmter Sprachkenntnisse spezialisieren. Das Ziel dieser Diplomarbeit ist es, einen Analyseraster zu entwerfen, der es ermöglicht, derartige Sprachlernwebseiten hinsichtlich ihres Nutzens für den englischen Spracherwerb zu evaluieren. Der Fokus des Analyserasters liegt dabei auf dem Evaluieren von Grammatikerklärungen und Schreibübungen und umfasst dabei die Auswirkung verschiedenster Einflüsse auf die Gesamtperformance der Website. Hierfür werden verschiedenste Herangehensweisen aus der Pädagogik, Linguistik, multimodalen Interaktion und Informationstechnologie kritisch analysiert und, sofern geeignet, als Grundlagen für die Kriterien des Analyserasters herangezogen. Um die Anwendbarkeit des Analyserasters zu gewährleisten, wurden die Kriterien des Analyserasters in einem Webseiten-Test der Seite BBC Learning English ausprobiert. Dieser Test hat einerseits bestätigt, dass der Analyseraster, trotz einzelner Schwierigkeiten wie Subjektivität oder Repräsentativität, ein nützliches Hilfsmittel zur Evaluierung von englischen Sprachlernwebseiten ist. Darüberhinaus hat sich gezeigt, dass BBC Learning English trotz insgesamt relativ guter Testresultate ein gewisses Optimierungspotenzial besitzt.

Appendix

The complete framework of evaluation

1. GENERAL PEDAGOGICAL USABILITY: DO THE MATERIALS ...

- 1. reflect inclusiveness through the use of informality and personal language?
- 2. feature concreteness, e.g. by using examples or anecdotes?
- 3. create wholeness, i.e. sharing experiences and opinions?
- 4. contain clear instructions?
- 5. achieve impact / attract attention / encourage engagement?
- 6. help the learners to feel at ease?
- 7. cater for the cognitive needs of the targeted learner groups?
- 8. cater for learner variation?
- 9. provide more detailed outcome feedback?
- 10. divide content into logical units to facilitate scanning?
- 11. incorporate relevant background information on demand?

2. SLA USABILITY: DO THE MATERIALS ...

- 12. help the learners to develop confidence?
- 13. encourage repeated engagement with the materials?
- 14. aid learner self-investment?
- 15. engage the learner in noticing by highlighting salient features?
- 16. provide a meaningful context?
- 17. introduce a variety of genres and registers?
- 18. provide the learners with meaningful, communicative opportunities for practice?
- 19. feature and stimulate realistic language examples?
- 20. contain highly contrived language samples only where appropriate?
- 21. facilitate reading by featuring on-the-spot vocabulary look-ups?
- 22. for grammar direct and raise the learner's attention towards relevant grammatical features?
- 23. for grammar reflect authenticity for the needs of the user?
- 24. for grammar provide repeated meaningful exposure to input containing the forms?
- 25. for grammar contain discovery-based activities?
- 26. for grammar provide help with difficulties that could arise with specific grammar items?
- 27. for grammar contain both the use of terminology and meta-explanations?
- 28. for grammar provide the learner with sufficient opportunities for practice?
- 29. for writing reflect meaningful contexts and have authentic purposes?
- 30. for writing enable learners to communicate effectively in writing by not only providing a topic?
- 31. for writing provide the learners with writing strategy hints?
- 32. for writing include reference texts that may serve as stimulating pre-writing input?
- 33. for writing provide the learners with sufficient opportunities for choice of tasks?
- 34. for writing provide the learners with opportunities for topic familiarization?
- 35. for writing cater for guided and non-guided learning needs?
- 36. for writing include writing tasks that have a clear context?
- 37. for writing include writing tasks drawing on various learners' knowledge and experience?
- 38. for writing include writing tasks that are specific and relevant to the genre and the audience?

3. MULTIMODAL USABILITY: DO THE MATERIALS ...

- 39. provide textual and graphical information that is mutually supportive?
- 40. avoid non-relevant graphics that may pose a distraction to (particularly younger) learners?
- 41. contain redundant information only when needed (i.e. for low-proficiency materials)?
- 42. avoid a non-feasible combination of media?
- 43. feature types of media that are most appropriate for the task?
- 44. combine animations with spoken text?
- 45. add task- and audience-appropriate pictures to auditory text?
- 46. present pictorial information in close spatial proximity to written text?
- 47. present pictorial information in close temporal proximity to auditory text?
- 48. avoid triple redundancy (i.e. pictorial, auditory AND written text)?
- 49. provide guidance for interactive materials?
- 50. enable learners to control the pace of an interactive task?
- 51. cater for explanatory rather than corrective feedback on interactive task outcomes?
- 52. prompt follow-up learner reflection on interactive task outcomes?

4. TECHNICAL USABILITY: DO THE MATERIALS ...

- 53. reflect a good navigation design?
- 54. make use of link efficiency through connecting multiple pages by many links?
- 55. have a consistent visual hierarchy/visual layout?
- 56. emphasize the important elements?
- 57. organize the content logically and predictably?
- 58. make use of contrast to establish hierarchy?
- 59. avoid heavy use of images for the sake of loading time?
- 60. reflect an overall functional correctness?
- 61. reflect an efficiency of use?
- 62. contain search options?
- 63. avoid exceeding the window size?
- 64. reflect a clear focal point on each page?
- 65. use grouping of elements effectively and logically?
- 66. use images of adequate quality?
- 67. contain images that include an alternate text?
- 68. avoid too many colours?
- 69. contain legible text?
- 70. include confirmation checks before risky, costly or heavily loading actions?
- 71. feature useful error pages if errors occur?
- 72. contain help pages?
- 73. reflect appropriate maximum loading time of about 3-15 seconds?
- 74. contain no broken links?
- 75. contain no broken images?
- 76. support various browsers?
- 77. avoid the requirement of non-standard plugins that are not useful?
- 78. contain wholly non-technical, user-centred language?
- 79. aim at a minimalistic design?

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