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Audiovisual Translation and Language Learning: The Promotion of Intralingual Subtitles

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ABSTRACT

The double function of intralingual subtitles as accessibility and didactic aids is considered from a linguistic and cultural perspective, in order to highlight the importance of intralingual subtitled videos as language learning tools. Empirical and theoretical insights are complemented by an experimental teaching programme being carried out at Pavia University.

KEYWORDS

Intralingual subtitles, multimedia didactic tools, teaching methodology, language acquisition, memory, cognition.

BIOGRAPHY

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1. Introduction

This paper is a preliminary survey of a comprehensive piece of research on the use of within-language subtitled videos or TV programmes to enhance foreign language learning[1]. It conveys some general results of an experimental teaching and learning project which is being carried out at Pavia University in collaboration with a group of 15 students of English as a foreign language. Feedback is considered extremely important in this experiment because it gives students useful insights into their progress as well as providing teachers with information about the usefulness of their pedagogical approach. Careful examination of the results is compared with theoretical and experimental literature on screen translation, memory tests and language learning, in order to evaluate the effectiveness of multimedia subtitled learning tools and to improve teaching methodology and techniques. Consequently, students are involved in a number of pre-viewing activities, based on language explanations and problem solving, and after-viewing activities, the main objective of which is to assess their reactions in terms of memory storage of the integrated communicative systems they have been exposed to and of language retrieval.

The initial phase of this research project is to focus on the difference between subtitles as accessibility aids and as didactic aids, seen from a linguistic and cultural perspective, to underline the importance of intralingual subtitling in language learning. Intralingual subtitled videos are used as teaching and learning tools to analyse and test the information-carrying capacity of the students' memory. During the testing activities that have been carried out so far, students have shown their individual ability to remember linguistic and contextual information from the subtitled audiovisual programmes (Unsworth and Engle, 2005). The theoretical foundations of pre-viewing and after-viewing activities are based on integrated testing principles, but the emphasis is very much on recognition memory tests (Landauer, 1986; Benjamin, 2005), where the conscious, intentional recollection of recent experiences is measured against some probable unintentional, non-conscious retrieval of information. In other words, students' memory is tested on the grounds of their explicit memory, measured by recognition and recall, combined with their underlying implicit memory. This approach makes it possible to assess the amount of information each student is able to encode and retrieve (Unsworth and Engle, 2005).

The students' feedback has shown a range of variables which can be exploited by the teacher to help them understand their memory processes, in order to improve the quality of their recollection processes. To reach this goal, captioned videos and television programmes are supported and complemented by appropriate preparatory teaching materials. This approach facilitates learners' listening and reading comprehension, enhances retrieval of information and increases self-confidence. The use of preliminary didactic aids, together with the conscious involvement of students in the experiment, helps turn teaching and learning hours into entertainment hours.

2. Intralingual subtitles as accessibility and didactic aids

Monolingual or intralingual subtitling is a form of screen translation which involves the transfer from oral language into written language. There are two kinds of intralingual subtitling: one is used as an accessibility aid for a target audience which is deaf or hard-of-hearing, the other is used as a didactic aid for those who are not familiar with the language spoken in the audiovisual text. When target viewers are deaf or hearing-impaired, subtitling is a mixed intra-semiotic and inter-semiotic type of audiovisual translation, which involves the transcription of oral discourse as well as of supra-segmental traits formed by intonation, inflexion, tone, timbre, and other features of vocal execution, extra-linguistic sound effects or any kind of audible cues crucial to the pragmatic communication of the scene. People who are deaf or hard-of-hearing can see the actors' expressive movements but they cannot hear either the vocal execution of their acting nor the audible non-verbal part of the soundtrack. Therefore, intralingual translation of the oral text is accompanied by the verbal synthesis of what

is going on in the motion picture environment. The distinguishing feature of subtitling as an accessibility aid lies in its supplementary and complementary nature as compared with the prototext. Example 1 below is not taken from a film script but created to show a variety of linguistic descriptions that might be added to captions for hearing impaired people. The name of the hypothetical character is Jim.

Example 1
     (a knock at the door)
     J: (in a loud voice) Come in!
     (shouts in the street) (car door closes) (alarm bell ringing) etc.

When the target audience are second language learners not affected by sensorial disabilities, intralingual subtitles function as didactic aids. In such contexts the original soundtrack is directly accessible to the viewers, who only need to understand better the dialogue exchanges they are exposed to in a second language. Their challenge rests with their listening comprehension ability to grasp all the words pronounced by the actors, because they have to interact with a language they are not able to master at various expressive levels simultaneously. The transfer from the spoken text into written form aims to facilitate the viewers' fruition of the exchanges as they are, thus linking pronunciation to the written form and the mental division of sounds into single words. It is the intentional combination of the phonological expression of the foreign language with its written form that acts as a complementary aid to language comprehension. In fact, experiments carried out by the Research Centre for English and Applied Linguistics of the University of Cambridge in the UK showed that simultaneous presentation of sound and text rather than sound or text separately enhances spoken word recognition and recognition memory (Bird and Williams, 2002). This type of subtitling is usually offered centered, at the bottom of the screen, and must be in keeping with space and time restrictions.

3. Language, culture and intralingual subtitling

In his *On Linguistic Aspects of Translation* (1959), Jakobson defines intralingual translation or rewording as the interpretation of verbal signs by means of other signs of the same language.[2] If the concept postulated by Jakobson is applied to audiovisual within-language translation, the definition is rather inappropriate, because the professional subtitler is not asked to make the text intelligible by means of verbal explanation or rewording. Example number two, taken from the subtitled DVD version of *How to Lose a Guy in 10 Days*, reproduces Benjamin's cue as it is in the script. The original cue may be paraphrased for learning purposes, to make the students' comprehension of the idiomatic expression less difficult.

Example 2

They will not ace me out of this (original dialogue/subtitle)
*They won't get rid of me that easily. (paraphrasing only for learning purposes)

Simplification and omission of small portions of text are allowed to serve technical constraints such as the screen space available, the duration of the subtitle, the speed of the original dialogue, and the average viewer's reading speed, which tends to range between 150 and 180 words per minute. Example number three compares the full text of the cue of Andie, the main female character in *How to Lose a Guy in 10 Days*, with the reduced subtitle.

Example 3
I want to write about things that matter,
like politics and the environment (subtitle)

I want to write about things that matter, like politics, the environment and foreign affairs. (original dialogue)
[foreign affairs is the phrase omitted in the subtitle]

It shows that the aim of the professional subtitler is to produce a good understanding of the story-line with a minimum number of deletions.

When subtitles are meant to be accessibility aids, the source text combines visual and verbal information, which is often within the same linguistic and cultural tradition.[3] On the other hand, when they are meant to be didactic aids, the contact with a different linguistic and cultural context opens a window on cultural self-definition, which is processed in relation to what is perceived as different from one's own cultural identity.

Every act of understanding involves an act of translation of one kind or another (Steiner, 1975), and monolingual subtitling used for learning purposes represents one of the many ways through which second language learners are helped to overcome the challenges of listening comprehension. It is a way of reinforcing foreign language understanding through the support of the written reproduction of the oral text during a recreational activity. A film, or any other kind of audiovisual programme, offers examples of simulated authentic interpersonal communication, where extra-linguistic phenomena and other entities of non-linguistic order interact to create an environment that imitates real life situations.

In order to be fully effective, subtitles must be highly legible because they should distract the viewers as little as possible from the moving pictures. It is acknowledged that readers familiar with subtitles absorb the information conveyed by written dialogues subconsciously, while non-accustomed viewers are busy watching and listening to the audiovisual product, and their reading speed is likely to be reduced because only part of their time is spent on reading. Consequently, the layout of the subtitle

is crucial. Subtitles have to be easily read and the choice of typeface is likewise important, since a spelling mistake in a subtitle is very disturbing to the viewer.

The following data show that the practice of intralingual subtitling is by now a must for most TV channels. In the UK, monolingual subtitling covers around 100% of BBC1 and BBC2 programming. Smaller BBC channels, such as BBC3, BBC4, and BBC News 24 are also among the leaders in subtitling with about 50% of their programming.[4]

In Spain the 1st National Accessibility Plan, scheduled to be implemented between 2004 and 2012, is based on the motto *Achieving Equal Opportunities and Full Participation through Design for All*. One of its goals is to boost accessibility through new technology, and strategy number 11 advocates the promotion of services and technologies to improve sensorial accessibility. The aim of the plan is to provide closed captioning for the deaf and the hearing impaired population which will gradually cover 100% of TVE programming.[5]

Italian RAI, the public network which extracts the payment of an annual fee from all television viewers, including the deaf and the hearing impaired, offers a very limited number of subtitled programmes spread among its three channels – about 70 hours per week – and has started live subtitling the evening news in response to hearing impaired users' requests.[6]

SKY TV is by now subtitling 80% of SKY Box Office films, 40% of the other movie channels, 60% of SKY One, and 20% of SKY Sports.[7] Other international operators also are resorting to the use of open and closed captions, but due to technical issues most of the subtitled transmissions are films and pre-recorded productions. Live programmes and the news are rarely subtitled.

It has already been pointed out that the primary aim of monolingual subtitling is to cater for the needs of hearing-impaired or deaf users, who must be given the same opportunities as the rest of viewers when choosing the television programmes they want to watch. Moreover, there is ample evidence that captions have also proved to be particularly relevant for the language learning and training of deaf children. The importance of the educational dimension is evident when we consider the function that subtitled multimedia products have in our societies. Subtitles are one of the most powerful learning tools for a deaf child, just as a hearing child would learn from things heard. Captions also give hearing impaired adults the opportunity to enrich their vocabulary. The learning benefits enjoyed by the deaf community are now being extended to foreign language viewer-learners, who can also enjoy the educational opportunities offered by captioning. People who regularly watch captioned TV have an opportunity to improve their vocabulary and oral reading

fluency. Children, who on average spend over thirty hours a week watching TV, can also improve their reading as well as their language and vocabulary skills significantly.

4. Intralingual subtitling for second language learning purposes

A considerable number of studies based on observations and feedback from students of English as a foreign language (Vanderplank, 1988) show the positive effect of monolingual subtitles on viewer-learners. In an intentional learning/teaching context, this type of screen translation helps viewer-learners in the language acquisition process by providing them with written comprehensible input, which adds confidence and security, thus creating a low affective filter (Krashen, 1982). This motivates them to continue watching and encourages them to extend their intake of the language.

Positive learner reaction is also due to the fact that monolingual subtitles transform intersemiotic reception, using the two channels of visual perception of images and hearing, into multi-semiotic reception. In the case of foreign language viewers, this involves hearing, reading, and visual perception of images. When oral dialogue is simultaneously transferred into written textual material the result must be an accurate, though very often abridged, transposition of the source text that combines with the audiovisual make-up of the film or TV programme. This is the crucial point in monolingual subtitling for learning purposes, because if there is no biunique correspondence between spoken text and written text, comprehension is undermined and students' feedback is exposed not only to phonological and orthographic inaccuracies but also to semantic confusion. The examples below, taken from the film *Bend it like Beckham*, show that the reduction of the subtitle as well as the use of different linguistic expressions to the ones heard may create confusion in the viewer-learners, unless they are guided by the explanations of a teacher.

Example 4
    Everybody can cook aloo gobi but who can bend the ball like Beckham? (original dialogue)
    They all cook "aloo gobi", but
    how many score goals like Beckham? (subtitle)

Example 5
    Why don't you just play and don't tell them? Pinkie has been sneaking off for years with Teet and now she's getting married. Nobody cares. What parents don't know won't hurt them. (original dialogue)
    Play, and don't tell them./
    Pinkie has been secretly going
    with Teet for years/
    and now she's marrying him.
    Nobody can say anything./
    What your folks don't know

won't hurt them./ (subtitle)

Example 6
    Why should I lie? I'm not sleeping around with anyone. (original dialogue)
    Why should I lie?
    I'm not sleeping around!/ (subtitle)

Simultaneous presentation of soundtrack and written text improves recognition memory for spoken words and can aid novel word learning, as assessed by explicit and implicit memory tests (Bird and Williams, 2002: 509). Memory and learning are closely related. The term *learning* is often used to refer to processes involved in the initial acquisition or encoding of information, whereas the term *memory* refers to later storage and retrieval of information. However, this distinction may be merged in the *learning/memory process* considered by psychologists as a means of incorporating all facets of encoding, storage and retrieval. Memory researchers have discovered that sometimes past events influence our present behaviour without our conscious awareness that this is occurring. Such memories are called implicit memories, because the existence of the memory for the event is *implied* by the subject's behaviour, even though the subject may not be consciously aware of remembering. This form of memory must be inferred from priming effects, or facilitation of performance on tasks that do not require conscious recollection of experience. Explicit memory, on the other hand, refers to conscious, intentional recollection of recent experiences. Explicit memory has typically been measured using direct memory tests such as recall or recognition. Implicit memory has typically been measured using indirect memory tests.

Explicit and implicit memory tests account for patterns of experimental data within different theoretical perspectives such as *two factor theory* (Jacoby *et al.*, 1993; Jacoby and Kelly, 1992) and *global memory models* (Hintzman, 1988; Murdock, 1982). In spite of the development of data-driven theories, memory processes are not fully open to introspection and the various intuitions about how retrieval from memory operates remain incomplete. Yet experience supported by patterns of experimental data may lead to predictions that can be tested against new data.

A group of fifteen pre-intermediate university students of English have voluntarily attended a series of experimental class modules on intralingual subtitled videos, since April 2005. The experiment is in its early stages and the students, after the first module of lessons, have already been tested on lexical, semantic and visual recognition memory, after viewing intralingual subtitled videos. The general analysis of their answers has shown that positive results are achieved only if the quality of the product (in our case intralingual subtitles) is linguistically loyal to the source dialogue and appropriately tailored to the semantic and pragmatic markedness of the plot, speed of images and scenes.

The use of imagery and text as an elaborative study task is examined to determine its effects on tests that are adapted to an explicit recognition memory perspective. The tests are based on word-stem completion, dialogue completion, paraphrasing completion, questions on context, colour/object association, true/false questions, old/new questions, yes/no questions and summary completion. The first provisional results have made it clear that explicit test performance significantly improves after students perform an imagery study task. Imagining the referent of visually-presented words and sentences has given hints of progress in the students' performance on the explicit test of memory. These results can reach a level of significance when the subtitled product is in keeping with its optimal requisites. Such requisites demand the professional ability of the audiovisual translator, who has to transfer the relevant verbal dialogues into the written representation of the same language.

It has already been pointed out that the professional intralingual subtitler is not asked to paraphrase the cues, but rather to transfer what is said in a concise way by eliminating redundancies, if necessary, and safeguarding the kernel message which is crucial to the understanding of the scene. Only if these rules are followed appropriately does intralingual subtitling improve reading and listening comprehension, vocabulary acquisition, word recognition, and overall motivation to read among students who are learning English as a foreign or second language.

5. Learners' reactions to intralingual subtitling in the foreign language classroom

The natural approach to language learning outlined by Krashen and Terrell (1983) maintains that a new language should be taught in the same manner as the first language. Consequently, it is of paramount importance to examine the methods that enhance first language learning and the types of activities and environments that positively affect the learning process. Language acquisition continues to develop from childhood into adulthood, serving communicative purposes which are in keeping with the gradual progression of human beings towards maturity. Nowadays watching TV or videos may rank among people's most common experiences that influence the way they think, speak and behave. Multimedia products represent a generalized type of entertainment which bears the unintentional character of naturalness. If intralingual subtitles are added to all films and TV programmes, they maintain their entertainment character with a touch of intentional purposefulness that turns them into effective devices aimed at enhancing second/foreign language learning opportunities. They may be considered natural language acquisition experiences that can favour language learners of any age. In the field of neurolinguistics and cognitive neuroscience researchers maintain that humans are scheduled to acquire language when they are young and scholars like Nash (1997) consider that the

ability to learn a foreign language undergoes a steady decline after the age of six, because after this period the brain becomes slowly less plastic and by the time a child reaches adolescence the brain cannot normally develop any new cognitive system, including language. In fact, Kuhl (2004) has demonstrated, after many years devoted to research, how early language exposure alters the mechanisms of perception.

Theories on the optimal age for undertaking the study of a second language have fixed the early years of human life as the period during which the high plasticity of the brain can develop new cognitive systems. Begley (1996) states that the learning window for total language learning is from birth to ten years of age. Nash (1967) writes that the window for acquiring syntax may close as early as the age of five or six, while the window for the addition of new words may never close. In real life, people learn languages at any age and the age barrier in language acquisition is directly linked to psychological as well as neurophysiological factors (Krashen, 1976). Each foreign language student has a unique intelligence profile and a unique way of approaching learning. Consequently, a pluralized teaching approach is needed to tap into a wide range of learners' needs and preferences.

If teachers choose same-language subtitles in foreign/second language learning situations, the educational benefits of this teaching/learning device may be augmented by prior preparation which can then compensate for the gradual lack of plasticity of the human brain. Preparation before viewing videos is useful, independently of the mental processes of understanding and learning of each individual learner. Since the aim of teachers is to get the highest performance from viewers/learners, they should prepare handouts highlighting important key-words or structures in the monolingual subtitles, and pointing out any omissions from the soundtrack. After viewing the film, students' global comprehension is tested with either written or oral questions about the video's plot, the meaning and structure of single words and phrasing, and any other activities which are in keeping with the teacher's theoretical approach.

The experiment carried out at Pavia University combines the teacher's didactic experience with research on memory and learning. Learning activities based on subtitled audiovisual products stimulate different types of memory. Two in particular are of interest for our experiment. *Iconic memory*, which is the kind of sensory memory that perceives visual information as interpreted by the visual system, and *echoic memory,* which is activated by aural stimuli, also known as *haptic memory* when relating to touch. Information is passed from sensory memories into *short-term* or *working-memory* by attention; stimuli are then filtered, sometimes manipulated, and only those which are of interest at a given time are transferred to *long-term-memory,* which may be, in turn, *episodic* or *semantic*. Unlike short-term or working-memory, long-term

memory is intended for storage of information over a long time and the information in semantic memory is derived from information stored in our episodic memory. In this way, we can learn new facts and concepts from our experience. Since recognition is an easier stage of memory than the recall stage, the first testing phase relies more on theoretical perspectives of recognition memory, which provide a wide range of data over a number of experimental variables and tasks.

6. The phases of the teaching and learning programme

The programme of the Pavia experimental classes is phased as follows. First, students are shown a film in English without subtitles followed by an oral activity and a written exercise aimed at testing their comprehension of the plot. Then, they are given handouts based on relevant lexical, structural and idiomatic expressions taken from the film soundtrack. They discuss the content of the handouts with the teacher and the following lesson they view the intralingual subtitled version of the same film. At this stage they are given a series of tests which enable them to quantify how much they have learned through listening, reading, and viewing, making it possible for the teacher to assess their performance. The first tests are based on stems of contextualised keywords taken from the film script, which are given to students for completion, and other key words which must be defined by synonyms or paraphrases. The second type of test requires a gradual shift from lexical items to sentences and paragraphs. At this stage students are asked to tackle a series of written exercises ranging from dialogue completion to paraphrasing completion, questions on context, colour/object association, true/false questions, old/new questions, and yes/no questions. The final task is a written summary of the film using the language they have already processed in the tests. The results of the work done are then discussed with the teacher, and students are asked to evaluate their individual process of memorisation by comparing the three main activities related to long-term memory: storage, deletion and retrieval of information. If students are aware of the phases of their learning process and are trained to organise information into associative chunks, they are likely to increase their short-term and long term memory capacity.

It is argued that improved comprehension of the storyline and retention of vocabulary and phrasing is to be credited to good reading comprehension rather than to listening comprehension. As far as my personal experience is concerned, the actions of listening to the soundtrack and simultaneously reading subtitles help students associate aural and written forms of words more easily and facilitate the acquisition of correct pronunciation, though I have to point out that this practice generates some stress. The crucial point concerning the effectiveness of viewing videos with same-language subtitling for learning purposes rests with listening comprehension. Post-screening tests can assess clearly whether students have improved language learning in terms of new words, phrasing and pronunciation, but

the assessment of the quality of their listening comprehension can scarcely be checked. The group of students I tested after viewing intralingual subtitled videos confirmed that their concentration on listening comprehension was second to reading comprehension, though they recognised it was complementary training that made them enhance the understanding of the plot and the mastery of pronunciation. They all confirmed that prior linguistic preparation through handouts improved their encoding process. In fact, the best way to encode incoming information into long-term memory is to associate the incoming information with something already stored in the memory in order to make it meaningful. Memories can be retrieved because people have an actual means of recall by associating, linking, or connecting the incoming information with something already in their memory.

The brain records an event by strengthening the connections between groups of neurons that participate in encoding the experience. This pattern of connections constitutes the brain's record of the event known as the *engram*. Engrams are brought to conscious awareness by cues that evoke or retrieve them from the memory. The specific way a person thinks about or encodes an event determines what gets into the engram. The different content of engrams is the result of different learners' reactions in the same learning situation and this is due to their psychological disposition during the language exercise, together with their commitment and their motivation.

Some students are stressed during the screening of the video because they cannot combine viewing, listening, and reading at the same time. In order to follow the storyline they have to give priority to the skill they feel more familiar with, and leave the others to one side. We learn from psycholinguistic research that the emotional and physical responses to stress are set in motion by a series of chemical releases and reactions that have a cumulative effect on the human brain, especially on its ability to remember and learn, because they damage and kill brain cells. If one of the stimulating or tranquillising chemical forces dominates the other, without relief, then people experience an on-going state of internal imbalance. This condition is known as stress and can have serious consequences for brain cells. Therefore, a pre-condition for effective second language learning is a state of metabolic equilibrium between the stimulating and the tranquillising chemical forces in our body. The American physiologist Walter Cannon (1932) called this state of internal balance *homeostasis*, from two Greek words meaning *to remain the same*. Learning occurs when learners are in good psychophysical form. In such conditions neuro-chemical communication between neurons is facilitated and less input is required to activate established connections over time.

7. Intralingual videos with additional pre-viewing preparation and student feedback

The huge explosion in the learning of English, and its establishment as the global *lingua franca,* calls for new teaching tools and teaching strategies to meet the needs of an ever-expanding market. The goal of English language teaching, whatever the circumstance, is to teach natural English and gradually drive students to move unconsciously towards simple dialogues and simple discussions. English courses for beginners and intermediate students should frame within their educational programme a good number of intralingual subtitled videos supported by prior linguistic preparation. This type of teaching material should be presented to tutored language learners as a series of phased teaching units with particular emphasis on entertainment. For example, a class of first beginners should be given a pre-viewing vocabulary lesson before watching some sequences of the video; the first time without and the second time with subtitles. In this way the students get accustomed to the cultural and situational context of the video as well as to the language spoken by the characters by practising listening first, and then listening and reading simultaneously. The dialogues students are exposed to reproduce natural speech adapted to the plot of the film. In the course of the teaching unit, students alternate the study of language and vocabulary with screening time, during which they practise both listening and reading skills. Once they are familiar with the cultural and linguistic context of the video the teacher gradually expands viewing time, until the students are able to appreciate the whole multimedia product. When language learning and entertainment are combined, students are highly motivated and likely to enjoy the video without paying attention to the effort involved in understanding a foreign language.

Packages of intralingual subtitled videos supported by linguistic exercises, review questions, extensive supplementary examples, additional explanations, and a range of sample extracts taken from the screenplays should also be available for untutored second language learners. Intralingual subtitles are effective tools also for standalone learning activities and publishing companies should include these packages with their standard teaching materials on language and grammatical usage. They are at present a niche product that could easily be part of the well oiled machine of English–as–a–second/foreign language (or any other language) publishing markets. They are an innovative series of comprehensive resources, providing students with the support they need to be introduced to the various aspects of modern society.

Notes

1. In specialized literature *English as a second language* (ESL) is used when people learn English in an English-speaking country. *English as a foreign language* (EFL) is used when people learn English in a non-English-speaking country. In this paper the two definitions may be considered interchangeable.
2. Jakobson (1959) distinguishes three types of translation: intralingual translation, the rewording of a text within the same language; interlingual translation or translation proper, between two distinct languages; and intersemiotic translation, which involves

the conversion of a particular system of signs into a different configuration such as the conversion of a literary text into a film, e.g. *Away with the wind, The Leopard etc.*, where verbal signs of the written system are interpreted by means of signs from nonverbal sign systems i.e. visual images and dialogue.

3. The language through which deaf people communicate is Sign Language. In this context 'linguistic' refers to the language spoken in the home country of deaf viewers, which might be considered a second language for most of them.

4. http://www.hear-it.org

5. http://accesibilidad.artmedialabs.com/ingles/01_Intro.ExSummary._WEB.pdf

6. http://www.televideo.rai.it/televideo/pub/sottotitoli.jsp

7. www.todaytranslations.com/index.asp-Q-Page-E-Media--51064265

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