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Impact of mental pollution on learning and memory

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Abstract

With the advent of new technologies and their versatile products, people are directly or indirectly subject to mental pollution – contamination of mind by various forms affective visual stimuli mostly with sexual, violent, and scary content ranging from short internet clips to popular commercial advertisements widely prevalent in the digital and virtual world. Similar to the way water, air, and environment pollution threatens human life, a high amount of uncontrolled exposure to mental pollution may result in poor memory and thus hinder learning. Therefore, it is necessary to raise the awareness of public on the side effects of various media tools which may impact a society's level of literacy and education. The purpose of this qualitative study based on semi-structured interviews with different members of the society including students, academics, and parents is to find out how people view mental pollution and whether or not they are aware of its negative consequences. Besides the content analysis of transcribed interviews, this study also elaborates on the pedagogical implications of mental pollution by providing helpful information to maintain a strong memory.

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1. Introduction

According to the 2005 edition of Ethnologue more than 2000 languages out of a total of 6700 world languages are spoken in the African continent which has by far the lowest literacy level (Gordon, 2005). We learn from the same source that Nigeria with its over 140 million people accounts for over 400 languages, Cameroon over 280 languages, and Congo over 200 languages or group of languages that are more or less related to each other. Furthermore, the Centre for Advanced Study of African Languages (CASAS) report that approximately between 75 and 85 per cent of Africans are multilingual and speak between 12 to 15 languages as either their first or second language (Prah, 2002). When we consider the fact that Africa is the poorest and most underdeveloped continent in the world, how do Africans manage to learn and speak so many languages without extra resources (multimedia tools, videos, books, dictionary, and etc.)? On the other hand, the obvious truth is that in more developed and modern societies learning only one foreign language (FL) becomes a serious challenge for many even though people have numerous opportunities and facilities such as CD-ROMs, DVDs, computer software, internet websites, language courses, and so on. If so, then the following question arises naturally: As far as learning a foreign language is concerned, what makes an African who lacks the scientific and technological resources of the current century superior to Western people? According to Cetin (2011), absence of overabundance of mental pollutants in the environment enables an average African to learn and speak an average of 13 languages.
Besides social, cultural, linguistic, and psychological factors, Cetin and Flamand (2010) believe that mental pollution – “any ‘contamination of the mind’ by various forms of affective visual distractors, ranging in scope from violent or sexually suggestive images to comedic commercial advertisements and coming from a variety of media sources (p.275)” also plays a significant role in learning foreign languages. Depending on their size, type and quality, constant exposure to mental pollutants can arouse various emotions such as frustration, fear, anger, and sexual thrill in different people. In other words, one’s intentional or unintentional encounter with mental pollutants prevalent in various media tools - including movies, popular TV programs and commercials, pictures, posters, billboards, internet websites and video clips – can trigger the brain hormones which influence the biochemical system. As an example, an instant increase in heart rate and blood pressure upon watching an erotic video clip can remarkably decrease one’s ability to concentrate fully on demanding cognitive tasks such as learning a second language. Therefore, it is not easy particularly for adults who are allowed to view visual depictions of any kind to maintain a strong memory and stable emotions which are necessary for concentration, reasoning and judgment in their jobs and daily life. As an example, a study by Bushman (2005) indicated that watching movies with violent and sexual content as opposed to documentaries have harmful effects on adults’ memory and ability to remember things. Based on the survey results by Entertainment Software Association (2004), the impact of mental pollution to the society cannot to be underestimated when the average age of video game players is identified to be 33 who spend around 7.5 hours per week in front of the screen.

Unlike Africa, exposure of industrialized societies to large volumes of mental pollution in their everyday lives is almost inescapable mainly because of the presence of excessive visual stimuli and clutter. It seems that large doses of mental pollutants prevent people, especially adults, from learning new skills where memory functions play a significant role like taking up a new foreign language, playing a musical instrument, and pursuing further academic qualifications (Cetin and Flamand, 2010). Interestingly, though they did not have the means and advantages of modern methodology and technology, many past scholars known as polyglots – such as Cardinal Giuseppi Mezzofanti, Sir William Jones, Jean-Francois Champollion, Sir Richard Francis Burton and so on (Perry, 2004) – managed to communicate with an average of more than 20 languages. Cetin and Flamand (2010) point out that the past scholars owe their success with so many languages particularly to lack of mental pollutants besides their devotion, aptitude and capacity. Because of the absence of pervasive overabundance of mental pollutants, Cetin (2011) believes that these polyglots were once able to maintain a stable and strong memory which facilitates the learning new information.

The purpose of this qualitative study based on semi-structured interviews is to inquire what people from different age groups, gender, and profession know or think of mental pollution – exposure to large volumes of affective visual stimuli with violent, scary and sexual content coming from a variety of media sources ranging from short internet video clips to popular TV programs and commercial advertisements. Even though the negative effects of modern technology and media products on the human physiology and psychology are well-known, their impact on learning and academic achievement, in particular foreign language learning, is not so much known or voiced. Thus, the present study also attempts to reveal whether or not the members of the society are aware of the inhibitory effects of by-products of modern technology and media tools to academic achievement. Finally, it is also among the aims of this study to raise public awareness about the harmful effects of various media sources (TV, internet websites, video games and clips, movies, billboard ads and so on) to cognitive and memory functions.

2. Method

2.1. Participants

The number of participants for this study was 110 Turkish people from different age groups, gender, and profession. In relation to their academic qualification (having a primary school, high school, or university diploma), 48 males and 62 females aged between 18 and 45 were randomly chosen from the Turkish population for the semi-structured interviews. The rationale behind grouping them according to their literacy level was to see whether or not the view of mental pollution changes in relation to educational background.
2.2. Procedure

A semi-structured interview was prepared for the research purpose including the following three questions: (1) What is Mental Pollution? (2) In your opinion, what kinds of people are mostly exposed to Mental Pollution? Why? (3) Do you yourself suffer from mental pollution? If yes, can you explain this with examples? The interview questions were asked to the respondents whose answers were tape-recorded and transcribed for data analysis. After the first question, a definition of mental pollution was given to the respondents not only to avoid confusion of interpretation but also the following two questions were based on perception of mental pollution. The data analysis process was based on Miles and Huberman’s (1994) pattern coding scheme.

3. Findings and Discussion

The in-depth qualitative interviews started with introductory questions, mostly biographical, and subsequently moved to the actual research questions. Correspondingly, the first question ‘What is Mental Pollution?’ was asked to the participants so as to find out people’s awareness and view of what is meant by mental pollution. The analysis of interview transcripts revealed that there is some level of awareness of mental pollution in the Turkish population even though the perception of the concept shows variation according to age and literacy level. Particularly young respondents (55%) as well as adult respondents (70%) with high school degree think of mental pollution as the acquisition of useless information. However, from their examples it is evident that they have different opinions concerning useless information. According to a small group of respondents (30%) including housewives, mental pollution consists of useless information they may experience on daily basis like eavesdropping. There is also a group of respondents (20%) who believe that mental pollution is the memory of unpleasant events and related moods they were exposed to in their life time. One particular group of respondents (43%) point out that mental pollution is a mental state whenever they experience concentration problems during the day. Respondents from higher academic backgrounds (BA, MA, and PhD) (70%) seem to be more aware of the presence of mental pollution, for they are able to provide more detailed and concrete examples of mental pollution like detrimental visuals exposed on various media tools to public view. Still, a relatively few number of respondents (15%) told that they had no idea of what mental pollution is all about.

It is possible to conclude from the interview responses of the participants that there is actually some kind of perception of mental pollution in the Turkish population only that this interpretation differs from person to person. In general, the answers revolve around the state of human mind, though they are not sure of what constitutes mental pollutants. One remarkable point is that although either a definition or description of mental pollution was provided by the respondents, almost none of them expressed any concern at this stage about possible side effects of mental pollution.

As for the second question, ‘In your opinion, what kinds of people are mostly exposed to Mental Pollution?’ the answers provided by the respondent indicate variation in terms of their age, profession and literacy. It is important to remind the reader that a definition of mental pollution was presented to the respondents in order to avoid any confusion before they were asked to answer the second and third question. The analysis of the respondents’ answers revealed interesting information about people who are intentionally or unintentionally exposed to mental pollutants. According to almost all respondents (90%), no matter what their age, profession, or literacy is, they agree that children and young people are overwhelmingly exposed to mental pollution. This is because they think that children and young people spend most of their time on the internet and therefore they are subject to mental pollutants. However, an important group of respondents (60%) point out that raising awareness about the negative effects of mental pollution can help not only children and young people but the public also to reduce the time spent in front of televisions and computers. What is rather interesting is that respondents who are high school students (30%) believe that mothers are more exposed to mental pollution since they spent most of their time watching TV in particular soap operas. Likewise, many mothers think that mostly children and young people are exposed to mental pollution because of their strong inclination towards social networks and computer games. Particularly, some respondents including students and concerned parents (40%) express that because of lack of education certain mothers leave their child in front of the TV so that they can do their jobs. Accordingly, in their opinion these children are highly exposed to mental pollution whose intensity may change in relation to the TV programs they are unconsciously and
unintentionally watching. Moreover, a small number of high schools students (20%) openly confessed that they are usually subject to mental pollution whenever they have to do homework for school on internet. We learn from their answers that they may digress from the research topic and end up visiting irrelevant websites because of eye-catching and attractive pop-ups, banners, links, and so on.

In general, the common sense among the respondents is that people from all age groups who spend time in front of the screen (TV, computer, movie, mobile phone, etc) regardless of the purpose or reason (entertainment, commercial, research, communication, education) more or less may experience mental pollution. According to them, the more time people spend with different media tools, the more their minds get polluted.

As far as the last question ‘Do you yourself suffer from mental pollution? If yes, can you explain this with examples?’ is concerned, the respondents came up with a variety of thought-provoking responses. It can be pointed out that the majority of the respondents (81%) complain about poor memory (forgetting names of people, places and phone numbers) and attention difficulties (like typing, taking notes, task-based activities) which they think are caused by mental pollutants from various TV programs, internet websites, movies, and so on. Especially, housewives (45%) report that they experience indecision both cognitively and emotionally when they want to buy a product. Similarly, as a result of exposure to high volumes of mental pollution many students (57%) express that they suffer from concentration problems, imaginations and dreams that pop-up into consciousness during exams and homework. University and high school respondents (63%) also add that they spend much more time than planned either in front of the TV tube or on the internet because of their seductive characteristic. Moreover, an important number of respondents (40%) believe that due to overexposure to TV violence subconsciously people get desensitized to real life crime. They also believe that a state of cognitive dissonance and weariness sometimes accompanied by headache are caused by mental pollutants including violent and erotic visual stimuli. Interestingly, a certain number of respondents (23%) contend that they can identify victims of mental pollution from their speech, behavior and interaction.

From the answers it is possible to conclude that approximately all respondents experienced some level of mental pollution in their lifetime whose psychological, biological, and cognitive impact may vary depending on the content, size and volume. Only a few respondents did not to worry about the negative effects of mental pollution because it was found that their exposure to visual stimuli was rather limited.

4. Conclusion

This present study is valuable in that it provides a new perspective to learning difficulty in relation to pedagogy, psychology, and technology in particular foreign language education. This study contributes to second language research from a cognitive and psychological aspect besides sociological, biological, and cultural factors which all play an important role in the second language learning process. The present study indicates that mental pollutants – exposure to a high amount of violent, scary, sexual and bizarre visual stimuli from various media sources including TV, computer, movies, internet, video games- can hinder not only second language competence but also learning other subjects like mathematics, history, literature, and so on. Thus, this study calls for further research which may investigate possible harmful effects of various media tools widely used in social life as well as in education. It is also important in relation to this study to raise public awareness on the side effects of modern technological tools to human mind which are planned and designed to facilitate rather than inhibit human life.

References