UNIDAD EDUCATIVA PARTICULAR JAVIER

BACHILLERATO EN CIENCIAS

MONOGRAPH

"THE LABOR COST AND RESOURCE ABUSE IN THE TECHNOLOGY DEVELOPMENT OF THE BIG CORPORATIONS"

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THIRD OF BACCALAURATE – COURSE C

2019 – 2020

Gratitude

By the beginning of this monograph I can remember people worried about my school development at classes, supporting me, praying for me, for my patience, for my dedication, and so on. My family members were my first supporters, always interested on my grade scores. School was my daily supporter and manager, my adviser was always willing to help, giving me different perspectives, new points of view, can highlight that it was easy to pick my topic because I like technology ever since I can remember, always helping who ever needed my support and I thought that not everything can be positive, and my tutor helped me in the evaluation of the topic so I could share it.

Summary

Technology, a topic that we all know but do we comprehend all that happens in the background. First we have to analyze the materials we have in our hands or house, it is not a lie to say that big industries reach out for better materials that are scant and only located at certain parts of our world and we made a research and it reflects how big corporations abuse from the locals at the time of hiring employees to collect the minerals and cannot get these employees a good salary and it is a notable impact on their live because these minerals are highly toxic and it is not affordable for them and their families because it can cause the death of a family member, because not only the father works, the little kids can be hired for these types of works where they risks their lives for a couple of cents for their family despite the risks and all for the industries to make almost de x40 from earnings so people like us can enjoy a gadget that can helps for communicating but it is not worth to sacrifice alive.

The effect on people it can be seen on two perspectives, the good or bad way because it is very useful but it can also be degrading for our upcoming generations. We have been investigating and we have analyzed how technology consumers can have more advantages from technology gadgets because they are made so it can get a quick solution despite all the money that it inverted in a phone or a gadget to make our lives easier it is not a benefit everyone can get. With the pass of the years and the technology development, the contamination has been notable and so in the environment because of all the work that has been going on our earth. With all this said is necessary to said that the majority of the toxicity is produced by the nanoparticles and this produces affects us as human beings because the nanoparticles gets in our organism and makes us sick.

The assessment is not that hard because we have to implement the nuclear energy because it

is the cleanest in earth.

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Introduction

The labor and resource abuse in the technology development of the big corporations, we have selected theme topic because we have always been interested in technology so we thought that we should share what happens in the background because it is kind of heavy how people sacrifice their lives for a couple of cents, it is important to say that these minerals that people are hire to extract are highly toxic.

We have to say that it is important for us to people know what actually costs to make the technology in our hands or in our house, even though the prices are expensive it does not mean that the employees do not suffer.

We have been investigating to have a backup for the information we expose because it can be controversial to expose inaccurate information, we have been reading and taking information from books from the early 2011s when the technology development was recently coming out so we could make a contras in the before/after and what has been happening in the pass of the years, we have been reading from investigating essays to have more information about the mortality rates in the places where people extract the highly toxic minerals.

We have been counting the actual year technology development and been contrasted with the past years development because is important to know what has been going on in the technology industries like controversial stuff like people almost sacrificing themselves just to extract minerals for big industries and earning a couple of cents, almost nothing.

My monograph consists of technology investigations and very certain highlight from big industries and some of good perspectives and bad perspectives and good and bad impact in human being and our mother earth.

Chapter I

Scant material

From the beginning of time, we as humans, have been taking resources from our mother nature, but with the past of the time the ways to employ the resources we have been collecting has changed, in order to make more benefits out of them, we first started by taking advantage of what surrounded us like plants, by transforming them into food, wood, by transforming it into coal and rock by improving the ways of use for their advantage, making them into tools or for self - defense, other minerals like silver, gold, copper, etc. were found and used this discovery as an advantage for them so they could improve a lot of their tools.

1.1 How obtaining these necessary materials is becoming an abusive industry

The problem is not taking resources, the actual problem is that we, as humans, now these days, we are used to having people to do our tasks for us, and how these people are getting affected by the tasks they are hired to do, big industries, for example, same industries who want resources, so they go to small countries where there is a lot of necessary minerals for their purposes so they proceed to abuse of their workers in order to increase the production level but without having an excess in the extraction and the "recollection" part. Not even hard work is paid off, this is reflected at the extraction of minerals due to the toxicity of them, including derivatives like radioactive properties.

Marconi (2016) said: "At first, they did not understand the relationship between peace and the mobiles that each one carried. Then, with surprise they understood the dark relationship between cell phones and the death of quasi-slave children, condemned to die" (p. 47). In consequence of this the worker suffer different types of illnesses and them taking these hard workers to a sooner death, these facts are reflected on mortality rates at different locations, I

refer to these places as locations because the minerals and the different types of resources are most likely concentrated on determined "locations", for example, coltan, this is a mineral high toxicity, but it is necessary due to the process of fabricating different type of technological gadgets.

1.1.1 Process.

The sacrifice is not even worth the payment, per hour approximately the workers are receiving actual cents of dollar, Marconi (2016):

> A good worker leaves every 24 hours part of his life producing, at most, a kilo of coltan and the average productivity makes them charge 10 pesos a month and exceptionally, 50 pesos a week, in the equivalent of our currency. (p.48)

and that's is like how much is the worker's life cost, and it is necessary to say that there is no actual law that supports this kind of worker, in that actual situation, I mean, that they are exposed to mortal minerals.

The selection of workers should not be legal, workers do not realize that the risks of the work are a lot, more recognized, labor risks, psychological risks, ergonomic risks, etc. But there is always going to exist the sacrifice of the people. "(...) the little ones who die daily have no idea that their life is diluted from their daily effort to collect a strategic resource that is essential to develop new technologies, (...)" (Marconi., 2016, p. 48). I think workers are still in this job because is better doing something to get a couple of cents than doing nothing.

Large electronics and electric vehicle companies still do not do enough to prevent human rights abuses in their cobalt supply chains, almost two years after an Amnesty International investigation revealed that the batteries they use in their products could be linked to child labor in the Democratic Republic of the Congo. (Benson, 2017).

These processes are not only including 18 year old people, they are in clouding Childs too, but with no payment and here we can see reflected how these countries are corrupted and no law can stand against the money.

1.1.1.1 How does it affect.

Regarding our actual environment, the extraction of toxic minerals not just affect humans on work, it actually affects the ecosystem of the animals living there. In consequence of this animal have started becoming extinct, or at least the quantity of a raze of different types of animals have become lower.

As Marconi, R. mentioned (2016): "The coltan also produces environmental dramas, invasion of national parks and decline, by 80 percent of elephants and 90 percent of gorillas" (p. 47).

From our point of view it is actually bad due to all the sacrifice people go through, but, have we actually stop a minute to analyze how big industries see all the people dying, all the small countries getting destroyed, all the families that are missing members because of their death due to the bad work conditions. As OIT mentioned (2017): "For example, a total of 700 million people live in extreme or moderate poverty despite having a job" (p. 11). We can affirm that all the employed people are not earning enough money despite all the effort the put into their work.

1.1.2 Childs.

These days is known that big corporations are multinational, and have plenty locations where they put people to work, but there are a lot of them, so it is usual these work stations did not even reach the cost limit, and exempt all responsibility.

There were more than 168 million children working with working days that can last up to 16 hours a day, for six days a week - in the best case - in exchange for a salary that ranges between 9 and 13 cents. time in subhuman conditions. (Periago, 2016, pag. 35)

As we can read in the text kids are working, bout not a small group at determinated place, no, they are working around the world due to the big industries.

Chapter II

Technology consumers

We can agree that the software is slowly eating the world; it is not necessary look very far to see this in action. The different variety of apps able to download on our cell phones has actually changed the game, leading us to an easier accessibility format, we have all we need in our hand, I mean, through internet, the online shopping revolution for example, makes all even simpler, no need to drive to the Mall or shopping groceries. The effect in young people has became more heavy impact due to all the technology that has been releasing in the last 10 years and these kids had been able to coexist in the same environment, and this has caused a generation used to having all at their hand palm, and there it comes the adults and elders critics about the last mentioned topic. The moral in these kids and teens that do not have earned their belongings because everything has been handed to them, and they do not know the effort and the satisfaction of earning something and the value that you give to them.

2.1 Effect on people

Nothing is perfect in this world and technology is not the exception, we can highlight the effect in teenagers, the impact in their lives is harmful. The social area is a problem due to the co lateral impact in people, as Kidslox mentioned (2019)

> When we replace real-life interaction with online communication, we lose the ability to read social cues like tone of voice, facial expression, body language, and direct wording. On top of it, violent games and videos kill empathy and bring destruction into individual's life. (p.79)

As we can read in the past text, we can agree that technology can eventually destroy us.

The technology is a very powerful gadget at the time of talking about education, but, ever since it has been introduced the cheating has increased meanwhile the analysis and critical thinking has declined. As Kidslox said (2019): "The reason for it is the distraction caused by games, messages, and videos. Young people have a hard time focusing attention at the lessons and resisting impulsive behavior" (p.79). As text mentions, all the technology derivates are been used the wrong way, there is no priorities for today's teenagers and kids.

One of the most dramatic impacts of technology is the decline of the quality and quantity of sleep.

> The sleep chemical melatonin is influenced by the constant glow from screens. So keeping technology is likely to interfere with your sleep and affects your general state. What is even more serious is that people become addicted to technology. This has a detrimental effect on person's health and social life, and destroys social and family bonds. (Kidslox, 2019, p.80)

This type of stress is usually caused by cell phones and computers.

2.2 Money

Mobile devices, computers and technology in overall can definitely make our life easier, but they can also add a lot of expenses too. In daily bases we can say that when we need something, we are able to afford it, but what happened when it comes to technology gadgets, which usually goes over the 50 dollar limit, the accessories for mobile devices, laptops, computers, where earphones and chargers cannot be left out. But what happens if we go beyond, start counting on the high end devices from recognized brands like Iphone from Apple or S+ from Samsung, etcetera. The go above the 500 dollar mark.

> Cupertino, California — July 30, 2019 — Apple today announced financial results for its fiscal 2019 third quarter ended June 29, 2019. The Company posted quarterly revenue of $53.8 billion, an increase of 1 percent from the year-ago quarter, and quarterly earnings per

diluted share of $2.18, down 7 percent. International sales accounted for 59 percent of the quarter's revenue. (Kidslox, 2019, p.81)

With these facts we can actually tell how much the Apple Corporation actually earns from all their technology devices and products, big numbers can actually be seen and it is strange, due to all their useless products, beside the important ones.

2.3 Contamination

It is usual that we as innovators want to have the latest thing, gadget, etcetera from the market in our hand palm, but what exactly happens with our past phone. It usually ends up in bug containers that eventually lead up in a river or lake, contaminating it with its residues due to the soil in the metals.

> Soil and groundwater contamination conditions differ depending on the compositions of heavy metals, volatile organic compounds, dioxins, oils and fats, and other contaminants. Efficient restoration requires total engineering technologies encompassing soil surveys and analyses; planning, implementation, and monitoring of countermeasures; and follow-up care, such as the formulation of proposals for empty lot utilization. (Kidslox, 2019, p.81)

In the text behind we can actually interpret how bad metal is for our body and our digestive system, because in one way or another we are going to eventually drink from a glass of water that is contaminated with one of these last mentioned contaminants.

2.3.1 Technology reduces.

The technology has a lot of time being on the market and it is normal to find out that it reduces are leading un in oceans, streets, etcetera, but it is not good for our planter safety and for our way of living in earth. Now we can appreciate people actually realizing that we are doing bad and we can change it with projects.

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Chapter III

Environmental toxicity

3.1 Nanoparticle toxicity

Many nanoparticles used by industry contain heavy metals, this toxicity and bioaccumulation of these heavy metals that are contained in nanoparticles may become important environmental issues, knowing that the size of the particles makes them able to cross cell membranes, reach blood and various organs. Nanoparticles of any material have much greater surface to volume ratio than large particles of the same material. This is one of the reasons why nanoparticles are more toxic than larger particles.

Schenihr (2013) mentions: "The toxicity of nanoparticles depends on their chemical composition, but also on the composition of any chemicals adsorbed onto their surfaces. However, the surfaces of nanoparticles can be modified to make them less harmful to health" (p.87).

Any type of technology can be degraded with the pass of time and is no lie to say that any type of technology uses different type of metals and minerals or we do not even know what is inside of the technology gadgets we purchase. Inside of our pockets or in our living room can be the reason why we are slowly getting intoxicated, this intoxicating process depends in the shape of the nanoparticles. Scheinhr (2017) mentions: "A recent study showed a high toxicity of carbon nanotubes which seemed to produce harmful effects by an entirely new mechanism, different from the normal model of toxic dusts" (p.91).

In our daily coexistence with different type of atmosphere we are not usually warned from these nanoparticles due to the absence of information online or in our society.

3.1.1 Ecotoxicity.

The technology innovation has accelerated progress in information and communication technology, the mobile phone area in special. Currently in our country, locally, nationally and internationally the governments had noticed the impact of the technology so they are enforcing stricter regulations to protect natural resources and human health. But has the technological innovations and development has had a positive impact on ecosystem and public health?

We identified 36 waste mobile phones (WMPs) manufactured between 2002 and 2013, assessed their metals concentration, leachability, and potential impact on environment and human health using digestion, Toxicity Characteristic Leaching Procedure (TCLP), and USEtox model, respectively. The results highlight that regulations did not have significant impact on total metal content, except some heavy metals, while technology innovation recorded stronger impact. WMPs should be classified as hazardous due to excessive lead content (Chen, 2018).

3.1.2 Impact.

Chen (2018) comments:

> Data obtained from chemical analysis of the cellular phones from 2002–2013 were used with the base data and modeled using USEtox. The results are shown in Fig. 1. Copper posed the most significant ecotoxicity risk followed by aluminum and nickel which also posed considerable risks. (p.42)

In forward investigations the copper posed the most significant ecotoxicity risk where the proportion of coppers potential of ecotoxicity impact. In addition, zinc ranked second for ecotoxicity risk and the rest were insignificant aluminum and nickel. The potential human health risks, both cancer and non-cancer related, are significantly different compared to the

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results where lead followed by nickel posed the most significant cancer risk and Zink followed by lead for non-cancer risk. Hilbert and Ogunsetitan (2018) share:

> Nickel followed by chromium registered the most significant cancer risks; and beryllium followed by lead for non-cancer risks21. This can be attributed to the fact that the characterization factors of hexavalent chromium in USEtox Version 2.02 is much higher than that of USEtox Version 1.01, which highlights the potential risk of chromium. (p.29)

We interpret that the potential risk has incremented from the first version to the second version due to the exponential contamination has occurred.

3.2 Toxicity assessment

The risk assessment involves identifying potential hazards and developing dose-response information for effects of interest. In general environmental assessments, the critical effect is used to develop reference values that represent doses below which significant adverse effects are not expected under the anticipated exposure conditions.

While these toxics pose danger, they can be contained and their disposal and recycling can be safely managed. Nuclear power, one of the often-cited solutions to the climate problem, results in even higher levels of toxicity and threats that are so long lasting they will likely outlive contemporary social and political systems (Cohen, 2014).

As we mentioned in the past chapter, the nuclear power is a very good method to create a healthier environment free of most of the toxicity chemicals and metal nanoparticles. It will come down to the belief in the ingenuity of the human power, perhaps of our survival instinct. Technology will keep developing and the economy with it, we need a sustainable base for this century.

Conclusion

At the end of this monographic work it is concluded that:

- Big industries are going to keep this protocol of taking advantage from locals in the places where they extract the minerals because it is rentable for them to have a low labor cost, they are having more earnings, and that is basically all that matters.
- Technology is going to keep developing because it is in our genes to survive and with this we have to evolve so we are going to look forward in future to make new things and innovate in a society where people are scare of changes.
- People is always going to look forward for their comfort and that is exactly what big industries do, make people think they need their product, now a day despite all the catastrophe behind a phone publicity they will keep promoting their product because it is a development in our era so buying and spending money on their products is going to be justified.
- In order to technology goes forward the abuse goes with it and it will be a no progress production of technology because we will be doing very bad to our world.
- Communications and information technologies have the most potential for improving reserve component capabilities compared to the capabilities of the active components.

Recommendation

At the end of this monographic work, it is recommended that:

- Harness the variety of technology that we have at our disposal to estimate a longer live for us as humans and a safe planet.

- Make ourselves more conscious of our actions and how technological development can get into our lives and how can it damage or benefit us.

- Explain how people can be intoxicated by the extraction of minerals that later will be used to the ensemble in technology gadgets than to be purchased by consumers.

- Minerals can be replaced by technology-developed components and so we would not have to destroy our world and it will be a win-win.

- Progress off the gadgets we can purchase so we can do good from them to make out a true benefit out of it as we evolve to avoid any type of malicious activity.

- Use the overall information to propose different type of solutions for our planet state out of the exploit from the mineral extract.

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