**How is Google search affecting our intelligence**

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**Abstract**

Google is one of the famous search engine on the world wide web(www). It let us search for things that we do not know or we have no idea of. Google’s mission is to organize the world’s information and make it universally accessible and useful. The Google story begins in 1995 at Stanford University founded by Larry Page and Sergey Brin and was incorporated on September 4, 1998 (Larry Page and Sergey Brin, 1998). It’s an undisputed fact and the one which has been established repeatedly that internet affecting our intelligence by improving the quality of it in the form of providing comfort and ease, however, the increasing dependency is silently taking a toll and it’s alarming. Overall, it’s believed that technology is making us smarter and wiser by providing us with newer things on daily basis, the increase in its need is harming us in a way that’s largely going unnoticed (A Different Version, 2019).

**Introduction**

There are many of the things which directly or indirectly affect the human ability- Health issues, distraction from the goal, lack of esteem and low IQ as well. Some of the people can easily remember the tasks that they want to do. Some of them can smoothly elaborate the simplest topic whereas some find it very hard. The only thing for such people is to find their answers online. Google or any search engines is created just to help people to find the way to their solutions. Ongoing success of the search engines leads to increase of the dependencies of the people (From huge tasks like searching jobs, educations, and business, etc. to

small tasks like searching, meanings or spellings). Human memory is so adapting search engine which became an external memory which act as our virtual brain.

**Background**

Google was established by ‘Larry Page’ and ‘Sergey Brin’ while they were students at Stanford University. The company was officially open on September 1998. It is one of the most successful Initial Public Offerings Google collects $1.67 billion in August of 2004. Today, Google has over 12,000 employees in offices throughout the whole world. Google receives over 63,000 searches per second on any given day. That’s the average figure, at least 2 trillion searches per year; 3.8 million searches per minute; 228million searches per hours; and 5.6 billion of searches per seconds per day. Everyday Google has to gain more and more searches and covering the highest market share. Google had shown its US market share in 2019 is 62.87% which own 93% of the search engine market. This data shows that one out of four visitors in Google is from U.S. Notably Google is truly one of the most used search consoles has the highest number of active users.

**A. Live Survey**

We have done a live survey among the college students who owned their mobile phones and depend on the mobile phone for the each and every basic task. We have gathered 30 students and divided them into two groups (group A and group B). We have provided some hard words to group A which is difficult to remember. We told them to find the meanings of those words using any source. The only source they find to their solution is Google search. They give their answers within seconds and have a kind of satisfactory on the face by giving answers to us.

**B. Online Survey**

We have used the Google form to collect respondent’s data on "How Google Search affects our intelligence" using Online Google Form Surveys. Online Google form is one of the most utilized survey methods; a survey is the systematic collection of data from the target spectators characterized by the invitation of the respondents and the completion of the questionnaire over the World Wide Web. Different questionnaires were asked in front of the respondents.

**Google—The Virtual Brain**

Mere anyone is left who doesn’t say, let’s Google it. This is a complete phrase to determine how increasing reliance on the internet transform what we think and recall, that actually altering our brains (**LeMind, 2016)**. Some researchers had taken it positively. Those facts and figures which we have to forcefully remind are easily available on the internet (Academic Earth, 2020).

Nicolas Carr pointed out that relying on search console for the information could lead to low working memory which is essential for the creation of knowledge and wisdom. On the other side Storm said, Google can expand the capabilities of the human mind. Thus what we need to find is where this technology can improve our capability and where this can hinder our intelligence.

### ****How Google Affecting Our Social Fundamental Structures****

According to **online assignment help** experts**,** the top most searches belong to Google brand itself. Youtube, hotmail, G- mail etc gained the considerable amount of popularity along with increased number of users. This suggests that certain aspects of the social media networking affecting the lives, encourages individual to holding online social connection which may invoke some non identical cognitive process in brain.

People having mental issues may be found the most vulnerable impact of social networking, but this media also provides a platform to improve health, if we used them correctly. Researches are still going on to determine the long term effect of social networking sites on mental illness.

## **Individual effects**

The Google effect impacts the ways we learn, problem-solve, and recall information. While the Internet has opened up a new realm of possibilities for what information we can obtain, our engagement with the world can become shallow when that information isn’t being ingrained as lasting knowledge.

Although some people believe the Google effect is a sign of being technologically savvy, there is no evidence that we are getting any better at researching information.2 However, there is growing evidence that we do not evaluate facts we encounter online,2 which can be dangerous because the Internet is plagued with misinformation.

Alternatively, the Google effect demonstrates our impressive proficiency when it comes to prioritizing information. We have learned to use the Internet as our own personal repository for knowledge, splitting the burden of encoding and storing. In other words, although we effortfully process new information, we depend on Google to retain that information. This tradeoff is known as transactive memory.3

We may no longer waste effort remembering something that can easily be looked up online. However, if the quality of that information is poor, the Internet is actually doing little to improve our intelligence and productivity.

## **Systemic effects**

The Google effect suggests that the digital world is changing the way that we think. We are less likely to digest or deeply encode information, knowing that we can always “Google it.”

There has been a great deal of research that suggests increasing dependence on the digital world has negative consequences. This includes decreased attention spans, increased anxiety, lower performance on cognitive tasks, and diminishing social skills.4

The Google effect may be new in its digital form, but our tendency to not remember information that we know we can access elsewhere is not a novel phenomenon. The Google effect is a form of transactive memory, where team or work environments encourage us to develop a group memory.3 Since information gets divided up into different people’s individual memories, team members are only required to remember their piece of the puzzle.

The Google effect can therefore be thought of as an effective way to not overload our brains with information. However, reliance on a computer can have different effects than dependency on our work team, especially when spontaneous retrieval is necessary. If your boss asks for the latest numbers on an ongoing project, it is much more socially acceptable for your colleague to chime in, rather than you pulling out your phone to look it up.

## **The Google effect and AI**

You’ve heard of the Google effect, but what about the ChatGPT effect? As it turns out, our digital dependency extends from search engines to machine learning, where we rely on automated responses to store information rather than our own minds. In fact, language models may exaggerate this effect – it’s no longer other writing we forget, but our own.

While we easily encode our own work, we just as easily forget work by others. This becomes an issue when we take credit for words written by robots. This is not to say we shouldn’t use machine learning to bypass short tasks—just make sure you actually read and remember ChatGPT’s response before sending it out into the world.

## **Why it happens**

Our brains encounter lots of new information on a daily basis. It is difficult for us to commit all this information to memory, and therefore, we might have to prioritize what information we choose to remember.

Even though the Google effect is about forgetting information, anthropologist Dr. Genevieve Bell suggests that it actually could be a sign of efficiency.5 After all, knowing how and where to access the information is often more important than knowing the small pieces of information themselves.

## **Why it is important**

Although the Google effect is an efficient way to prioritize what information we commit to memory, it unfortunately leads us to become overly reliant on the digital world.

The Google effect causes us to treat the Internet as a permanent memory bank, believing that we will always have access to it. This might be helpful for general information or facts, but not so useful when it comes to learning and storing personal information.

Imagine that a young woman named Christina is out at a bar one night and loses her phone. She starts walking home but realizes she doesn’t know how to get there—after all, she always uses Google Maps. She wishes she could call a taxi or her parents to come pick her up because it’s dangerous to walk home alone at night. Christina sees a payphone, but she doesn’t know any taxi companies’ numbers, let alone her parents’, since she always looks them up. Christina has found herself in an uncomfortable situation that she can’t get out of because she has become too reliant on digital devices.

These types of situations where we can’t access online information are the ones we never expect to be in. With this in mind, it is essential to learn how to make information that matters readily accessible—not on our phones, but in our minds.

## **How to avoid it**

In our digital age, we cannot completely avoid the Google effect; no matter what, our work or school responsibilities will require us to search for information online. However, by being aware of this bias, we can remind ourselves that there are better ways to expand our knowledge beyond search engines.

The first thing we can do is look to other sources to gather information. Try checking a book out from the library or printing out a document instead of reading it on a screen. Taking hand-written notes instead of just skimming also helps us actively store facts in our long-term memory.

Second, if we know we looked something up online and can’t remember what it was, we should resist turning straight to the Internet for help. Instead, we can pause and take a moment to activate our memory for the answer. Try recalling contextual clues, like where you were when you first searched it, or even why. If this still doesn’t jog your memory, give Google another chance—this time intentionally encoding the information to avoid any future digital dependency.

## **Example 1 – Altering experiences**

A study conducted by Linda Henkel, a psychologist specializing in memory, examined whether the Google effect extended to photographs.6 Remember that photographs are a form of external memory we often store on our smartphones.

In Henkel’s study, participants went on a guided tour of an art museum and were given instructions to observe some objects and take photographs of other objects. Participants learned they would later be asked to recall the names of the objects and what the objects looked like. The next day, participants were asked to write down all the names of the objects that they had looked at, and a subsequent task asked them to recall details about them.

Henkel found that participants were significantly worse at remembering the names and details of objects that they had photographed compared to those that they had observed.

This study suggests that we take in less of what we experience through photographs than what we experience through observation. With the rise in popularity of social media, people often take photographs daily. Henkel’s study suggests that we are less likely to remember events that we photograph, so living life through a lens might decrease the quality of our experiences because we aren’t truly absorbing them.5

## **Example 2 – Cybersecurity**

The Kaspersky Lab, a company dedicated to formulating innovative cybersecurity solutions, has taken great interest into how the Google effect poses risks to our safety and productivity online. They have conducted a number of surveys to learn how people treat the information they acquire and store digitally.

One downside to the Google effect in the work environment is that people overestimate their ability to listen and type simultaneously. 44% of business professionals that the Kaspersky Lab surveyed claimed that typing notes caused them to miss valuable information such as contextual or emotional clues. Moreover, since we aren’t listening as well when typing, our typed records become the only place that information is retained. 13% of those surveyed admitted that they have lost a digital record and as a result are unable to remember anything about a particular conversation.7

The Google effect can also lead to safety risks when companies’ information is stored on digital technology. Another survey by the Kaspersky Lab showed that 58% of people surveyed do not use antivirus software, and only 29% of people back up their digital devices.8 This means that companies’ confidential information can easily be hacked, and someone’s hard work can go to waste if their computer crashes.

### Potential factors related to inconsistent findings

#### **Region**

The presence of diverse cultures and work habits across various regions can potentially influence the manner in which individuals with varying cognitive frameworks utilize search engines for information retrieval. Consequently, this can have implications for the assessment of search engines’ influence on individuals’ perceptions ([25](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref25)). Therefore, we explore whether region (e.g., North America, Europe, or Asia) moderates the relationship between frequent Internet search behavior and cognitive effects.

#### **Gender**

The literature reviewed in this paper does not currently include any research that has specifically investigated the Google effects in relation to gender differences. Nevertheless, considering that the majority of the articles under examination provide data on the gender distribution of individuals, we have properly considered this as a plausible variable that could have impacted the outcomes. Due to significant variations in the gender distribution among the studies ([26](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref26), [27](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref27)), we incorporated a column indicating the percentage of males in the subsequent meta-analysis figures, in order to mitigate potential discrepancies across publications.

#### **Type of sample**

Different sample features may be related to conflicting findings on gender differences in google effects on memory. For instance, with an adolescent sample, Yu et al. ([28](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref28)) found a large gender difference in search behavior leading to cognitive change. With a community sample of adults, however, Hamilton et al. ([25](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref25)) and Kahn and Martinez ([4](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref4)) did not detect a significant gender difference. Moreover, Kamin et al. ([27](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref27)) and Yu et al. ([28](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref28)) showed that gender differences in search behavior leading to cognitive change were smaller in online databases samples than in college samples. Sample characteristics (e.g., college vs. public databases sample) speak to the strictness of a participant’s immediate situation—such as the behavioral restriction within the living community—which may affect the measurement of results. Therefore, it is imperative to investigate whether the nature of the sample or cohort might influence the association between gender and google effects on memory.

#### **Experiment measurement type**

The researchers conducting this meta-analysis have thoroughly examined and categorized the various types of experiments discussed in the articles pertaining to the Google effects on memory. These experiments have been classified into five distinct categories, denoted as cognitive load (cognitive load theory, CLT, is an instructional framework grounded in our understanding of human cognition. It relies on a cognitive architecture comprising a restricted working memory, which is partially isolated from processing units responsible for visual and auditory information. This working memory engages in interactions with an unlimited long-term memory) ([1](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref1), [29](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref29), [30](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref30)), cognitive measurement (the development of new automated data collection methods, the application of cognitive psychology concepts and methods to reduce survey measurement error) ([17](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref17), [25](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref25), [31](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref31)), behavioral phenotype (they are recognizable patterns of behavior-syndromes) ([1](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref1), [32](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref32), [33](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref33)), cognitive self-esteem (individuals with greater confidence in their own intelligence, memory and ability would hold the belief that information is easily accessible, such as through the use of a search engine) ([4](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref4), [8](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref8)) and psychophysiology (measurements with physiological instruments, e.g., EEG, fMRI, etc.) ([13](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref13), [17](https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1332030/full#ref17)). The subsequent sections of the meta-analysis further categorizes these five groups to derive more accurate and specific conclusions.

#### **Age**

Previous studies have demonstrated that the extent and orientation of differences in search behavior leading to cognitive change may vary throughout the stages of adolescence, young adulthood, and middle age. For instance, Yu et al.conducted a study examining problematic Internet use among a sample of adolescents (*M* = 15.33, *SD* = 0.47). Similarly, Sanchiz et al.conducted a study investigating the impact of frequent search engine usage on human memory cognition. They employed a cognitive aging-related experimental design, which included both an experimental group (*M* = 66.00 years old, *SD* = 3.45) and a control group (*M* = 21.28 years old, *SD* = 1.78). There exists a substantial disparity in the effect sizes observed in the outcomes of the two previously mentioned experiments. Therefore, age may also influence the media effects brought by Internet search behavior.

## **Methods**

### Selection of studies

A literature search was conducted for studies that had examined google effects on memory published up to June 2023. A computer-based search was conducted using ACM Digital library, PsycINFO, Web of Science, IEEE Xplore, and Scopus. To mitigate the possibility of unintentionally excluding literature, the entire search procedure was replicated three times at one-month intervals in these databases. Records containing the search string in their titles or abstracts were located and the search string can be found. For the search string, it was divided by the author into three distinct sections: the object or phenomenon, the method or tool employed, and the journal type. The most frequently searched keywords were entered into each section, employing logical linkers such as “AND” and “OR” and wildcards like “\*” to facilitate the search for multiple forms of the term throughout the screening procedure. For instance, the input “memor\*” may return results for terms such as “memory,” “memorize,” and so on, but not words like “distributed memory.” To link each input, an “OR” link was necessary due to their relatively similar meanings. The initial search identified 908 records and 35 studies in 22 different articles were finally considered. The meta-analysis incorporated studies that satisfied the following set of criteria: The decision to use English as the language of publication for this study was based on previous research findings that indicated a lack of substantial evidence suggesting any systematic bias resulting from the restriction to English language in meta-analyses; was published in peer-reviewed journals or conferences; provided comparisons between various experiments in terms of google effects on memory, and also reported or made it possible to calculate the effect size (Cohen’s *d*) for these comparisons; Experiments must be well designed methodologically. We refer to the criteria related to assessing experiments quality in Chen et al., for example, “was the study population clearly specified and defined” and “well developed with reporting validity and/or reliability.” And experiments with qualitative or quantitative analysis of evidence to support conclusions, and if part of the experiment involves a moral and ethical test, only ethically certified experiments will be considered.

We did not include unpublished findings for the following reasons: Only original research and quantitative literature review could be selected, and it should not be a novel, communication letters or editorial report, etc.; Studies that do not focus directly on the methods used for memory or cognition change on Internet use, but merely refer to the various effects of the Internet; Studies not discussing the effect of using search engines but only focusing on the different methods to use them; Reports on the same subject that have been published more than once . So in this research, the most comprehensive iteration of the study was included when multiple reports of the study were found in various journals; other spontaneous surveys in the literature (e.g., no defined research objectives; no defined search process; no defined data collection process).

### Coding of studies

The discrepancies among the raters were resolved through engaging in discussions with the first and second authors. The following information was extracted from each of the included studies: paper ID and study ID; authors; publication year; regions (north America, Europe, Asia); age; male, female and percentage of males; treatment and control group sample size; experimental measurement indicators; research type (cognitive load, cognitive measurement, behavioral phenotype, cognitive self-esteem, psychophysiology); and Cohen’s *d* or the information for computing Cohen’s *d*. The two coders were trained to code a set of articles that had been expertcoded for another study prior to beginning formal coding. Once the coders had acquired experience in coding articles for meta-analyses, they commenced the formal coding process. The reliability of the final intercoder varied between 0.91 and 1.00 (Krippendorff’s alpha). Discrepancies were resolved through discussions. For included studies that did not directly report Cohen’s *d*, means and standard deviations of experiment and control groups for were extracted and used to calculate d. Where necessary, we changed the sign of the published Cohen’s *d* to ensure that all effect sizes were consistent.

### Data analyses

The data analyses were performed using R and the metafor package . We conducted mean effect size analyses, heterogeneity tests and other required analysis. Initially, to calculate a comprehensive mean effect size, we employed a random-effects model as we anticipated substantial variability in effect sizes across studies. And the determination of the effect size of Cohen’s *d* was derived from guidelines, which established 0.20 as the threshold for a small effect, 0.50 for a medium effect, and 0.80 for a large effect.

Furthermore, the evaluation of unexplained heterogeneity is an essential component in the process of conducting a meta-analysis. Both random sampling error, which refers to the variability observed within a study, and systematic study features, such as the characteristics of the samples, the selection of measurement instruments, and the type of publication, have the potential to contribute to the heterogeneity observed among studies. The outcomes of the heterogeneity test have a direct impact on the choice of statistical models, specifically fixed-effects versus random-effects, when conducting an analysis of effect sizes. The Cochrane Q statistic and the I2 index are frequently employed in the evaluation of the statistical significance of unexplained heterogeneity . Based on the I2 statistic, mild heterogeneity is indicated by a range of 0–40%, moderate heterogeneity is within the range of 40–60%, greater heterogeneity is represented by a range of 50–90%, and great heterogeneity is denoted by a range of 75–100%.

Thirdly, we conducted moderator analyses to investigate the potential factors that may have contributed to the variability observed in previous research findings. Several potential moderators were examined (e.g., publication year, region, age etc.). We suspected that if there is a statistically significant moderating effect was found for a categorical moderator comprising more than two levels, a post-hoc comparisons to examine the gaps between the levels within the moderator would be processed. To reduce the risk of Type one errors, we employed Bonferroni corrections during the post-hoc pairwise comparisons.

With the increase in technology in almost all sectors, employees are expected to be adaptable and innovative. However, the over-reliance on Google search for problem solving has made it less likely for employees to think outside the box or develop their unique solutions. This can lead to a lack of competitiveness in the job market and a decrease in overall productivity (Pošćić & Martinović, 2020). Therefore, while Google search is a powerful tool for finding information, it should not be relied on exclusively for problem-solving or research. It is crucial to develop critical thinking skills, engage in traditional research methods, and explore new avenues of thought to ensure that we are not limiting our potential for creativity and innovation. By doing so, we can ensure that technology enhances rather than detracts from our intelligence and well-being. Another way in which the internet is impacting our intelligence is the increased urge to excessively socialize in the virtual world. One of the ways that Google Search contributes to addiction to social networking is through its algorithms. These algorithms are designed to keep us engaged by presenting us with personalized content that we are more likely to interact with. This content can include posts from our friends, news articles, and even advertisements (Hasford et al., 2022). As a result, we are more likely to spend extended periods on social networking sites, scrolling through endless content. Today, many people have become addicted to different social networking sites such as Instagram, Twitter, and Facebook. These sites are designed in such a way that they keep us engaged for as long as possible. Many people have slowly become obsessed with comments, likes, and views on their sites. This in turn has created a false sphere as people seek validation from online users. In this fake race of social media, people are constantly being monitored and judged by strangers online and peers. Through the false façade in these sites, every person is under constant pressure to be accepted by others (Hasford et al., 2022). This entire negative atmosphere has significantly affected our ability to be ourselves. Notably, it has put a negative impact on our wit and intelligence. The increased addiction to social networking has also halted the ability of people to have healthy discussions.

.We’re still capable of basic cognitive process things that matter and aren't simply found on-line, Sparrow said. Rather, it suggests that the human memory is reorganizing wherever it goes for knowledge, adapting to new computing technologies instead of relying strictly on committal to memory memory. We are outsourcing search from our brains to our computers. “We’re not thoughtless frivolous folks that don’t have recollections any longer,” Sparrow said [Betsy Sparrow, Jenny Liu, Daniel M. Wegner et.al.,2011].Rather, it suggests that the human memory is reorganizing wherever it goes for data, adapting to new computing technologies rather than relying purely on rote memory. We have been outsourcing “search” from our brains to our computers. In a series of 4 experiments at Columbia and Harvard, Sparrow and her team found that students are more likely to recall a trivial fact if they think it will be erased from the pc and forget it if they’re assured it'll be there. Similarly, the team proved that folks are higher at memory wherever to search out facts, rather than the facts themselves. The students found that they recalled the names of files where the information was stored, rather than the information itself. This creates a mental dependency on instant access to information, the team noted[Sparrow et al.,2011]. No surprise the loss of our net association looks like losing an addict, they wrote. Once we tend to become dependent on a large reservoir of data, it feels uneasy to be aloof from it, she said. “We should stay blocked in to understand what Google is aware of,” the paper concludes. Proving that the web is just Associate in Nursing swollen network of individuals, University academician Clay Shirky, author of the book “Cognitive Surplus,” has done the math: The articles, edits, and arguments on Wikipedia represent regarding one hundred million hours of human labor, he calculated. That’s more than 11,400 years. If we tend to quit memory, “the net would grind to a halt,” Sparrow said. “Nobody would be feeding anything into it” [[Betsy Sparrow, Jenny Liu, Daniel M. Wegner et al., 2011].There are losses in contrast to their great-grandparents, few of today’s youngsters will recite poems .Perhaps this is often a skill that doesn’t turns rusty. In an experiment, the researches has students write down in a text document on a computer 40 pieces of trivia and tested them in different ways. For the first group, students were either told their answers would be saved or that they would be erased. When asked later to write down as many statements as they could remember, those who thought their answers would be saved could not recall as many statements as those who thought their answers wouldn’t be saved. In the last experiment, a group performed the same task as in the second experiment, but everyone was told their work would be saved in folders with labels, such as “info”, “fact”, etc. When asked to recall the statements they had written, students could only recall 1/4th of the statements. But if the researcher asked in which folder a specific statement had been saved, they were able to identify 1/2 of the folders. This suggests that when presented with information, if we know where we can find this information again, we will remember where to find it, rather than the information itself. This provides real evidence for the Google Effect on memory, though it would be a rather large stretch to call it brain damage. Drawing attention to the internet's effect on our brain is essentially the same complaint that movies make kids less inclined to read. And they aren’t wrong. People did stop carrying around a lifetime of accumulated facts in their heads, but they were also able to pass down what they had learned and discovered to later generations. This act of cultural inheritance is what made the world we live in today and why I even know who Socrates even is, a man who has been dead for a few thousand years. Which also means that the Internet's effect on our brain is real. Our brains will always rewire our synapses to make sense of the information it is receiving and so the new way of receiving information through the internet will effect our brain's structure. But this isn't brain damage, it's brain plasticity.

**Result**

Most of the people find that the Google search is better than find and searching for the doubts in books. This is a pie chart which the shows that people really prefer Google search as a better option than searching those in books or asking to any expert personalities. Many of the people feel very shy to share their doubts to any of their colleagues or peers. Instead of sharing their problems with anyone and looking for the suggestions and solution some of them often find Google as better option to search their personal problems because they have the basic mentality that Google will never back question them about their personal problems. Among 9/10 young people turns to internet for help in solving their personal problems rather than asking their colleagues and parents. A survey is also found that only 20 to 30 percent of youngsters would turn to their mother to discuss their personal problems. Many people turn to towards the internet which affects them mentally. Discussions Even if some consider that as a form of brain damage, and some don’t, it isn't exclusive to the internet. People get addicted to all sorts of things for all sorts of reasons. What's more is that, the increased dependency on Internet effect on our brain it doesn’t acquire information from other sources. It also at times provides us inadequate information. In order evrything.to keep Google updated we humans need to gain information and it won’t be able if we keep searching Google itself for everything. As it will become our habit and it can be dangerous. Google itself is repository of information by people. So, if we stop our critical thinking and research in other mediums at certain point even Google information ill become stagnant. The Internet's effect on our brain makes it more likely that we'll fail to recognize our vulnerability. And there isn’t even space here to begin discussing the issues of what has happened to our privacy in the Internet era and the effect that is having on our psychological well-being. The Google search is affecting society by rewiring the people’s way of finding information and thinking. It’s also restructuring our brain and its functioning. Even students, the future generation also refers to it for questions asked to know their views which are bit shocking.

**Conclusion**

All the gathered data helps us to conclude that the dependency of the people increasing day by day and it actually affects our intelligence. It rusts the capacity of the brain and has an adverse effect on the brain power. We not even try to remember the things which are easily available to us. We stop ourselves on recalling the things because we do not find any need of storing and memorizing as it can be recollected within a second using Google search. It is not bad to be self-dependent but social interaction is also important and we need not to find our all queries on Google. If we search our all queries/problems on Google, then what is the importance of our intelligence? It is also fact that Google give us fast and almost reliable solutions quickly. But overuse of Google makes us lazy.

**Our opinion**

In this digital world all people prefer to stay alone, because of that social interaction between peoples getting less and less.

Apart from Google search, people should also prefer other sources of information like library (books can enhance the basic knowledge and polish the capacity), group discussion (improves the intellectual behaviour amongst people), discussing problems with different type of knowledgeable people, teachers and can be friends who can solve your queries as well as make you familiar with your knowledge which you want to gain and this will put you live in better social-community than stressful internet’s Google searches.

**References**

1. https://www.learning-mind.com/google-effect-howsearch-engines-affect-our-memory

2. https://www.weforum.org/agenda/2016/10/how-googleis-changing-our-brains

3. https://academicearth.org/electives/internet-changingyour-brain

4. https://www.livescience.com/15044-internet-googleinfluence-learning-memory.html

5. https://www.learning-mind.com/google-effect-howsearch-engines-affect-our-memory