

# A Case Study: Negative Influence of Social Media on Youth

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**Abstract -** Information technology makes the world a global village and connects the people from all over the world. Usage of information technology in social media, increase its popularity in the youth especially in students of colleges and universities. Social networking sites may also be used to network efficiently. On the negative side, the internet is laden with a number of risks associated with online communities. Cyber bullying, which means a type of harassment that is perpetrated using electronic technology, is one of the risks. In this paper we cover every aspect of social media with its positive and negative effects. Focus is on the particular field like health, business, education, society and youth. During this paper we explain how these media will influence the society in a broad way.

**Keywords:** Social media, Communication, learning, job, Mobile devices.

## I. INTRODUCTION

The word "Social Media" means collection of applications (Facebook, Twitter, WhatsApp, LinkedIn, or YouTube etc.) and websites that link people to share information and aware people about any event through social networking. Online networking is certainly proficient for us all, particularly the Younger burdens, as its brands up for a practiced Venus' scourge of fun, excitement and relaxation time, splendidly mixed with significant insight communicate you can use about the undertaking characteristic aftereffect around you. In any case, with regards to defending the intrigue gathering of your young ones over the web, it is required to pursue certain viable advances so they may not defeat prey to deceitful or illegal common activity occurring over the internet based life.

1. The social websites become their first priority, than the things that should come first such as school, family and sports.
2. People portray themselves as someone they're not, like the celebrity they like.
3. Young people can begin to do cyber crimes; this can lead to many things such as depression and suicidal thoughts.
4. Youth are easily influenced so they may feel the need to change their physical appearance by comparing themselves to the next person they see in the Social media.
5. Social media is very powerful, so it can also become addiction and begin to start side-tracking the youth.
6. Besides many of its advantages, social media has impacted the youth of modern times adversely as well:

7. Teenagers who spend much time on social media have less time to spend with friends and family.
8. Most of the young users are not even 10 years old, this could cause severe concerns to their privacy over the web as well the security of device data.
9. Parents have their own busy schedule, which leaves them with little time to control browsing habits of their young ones on the social media.
10. Incidents of cyber bullying and electronic aggression among grownup teens have been on rise.
11. Kids may develop a feeling of isolation in their real life while they are hyper active online.

## A. Detriment to Work and/or School

1. Enables cheating on school assignments.
2. While grades did improve for light users, the grades of students who are heavy users of social media tend to suffer. One study shows that student users have an average GPA of 3.06 while non-users have an average GPA of 3.82.
3. For every 93 minutes over the average 106 minutes spent on Facebook daily, college students' grades dropped .12 points.
4. Another study showed that students who went online while studying scored 20% lower on tests.
5. Possible negative effects on college admission: 35% of admissions officers scan prospective students' social media and report discovering information that affects their admissions decision.

6. Social networking sites harm employees' productivity. 51% of users aged 25-34 checked social media at work.
7. Using social media can harm employment and prospects. Job recruiters check a prospective employee's social media accounts, and things like profanity, poor spelling or grammar, racism, sexism, poor health, references to alcohol or drugs, and sexual and religious content can all count against you.

## B. Lack of Privacy

1. People, especially the young, are often too open and public with personal information when online. Most don't read privacy policies and may be unaware that their information may be used by third parties, like advertisers, insurance companies, and the IRS. 21% of teens believe it is safe and harmless to post personal information, including photos.
2. Exposure to corporate and governmental intrusions. The US Justice Department intercepts thousands of pieces of information from email and social networking activity per year.
3. The IRS trains agents to scan social media for information that can help them resolve taxpayer cases.
4. Insurance companies use information gleaned from social media, as well. If you have "liked" a medical-related page or a post about a health condition, that information is sometimes used by insurance companies to determine eligibility and raise rates.
5. Online advertising policies are an invasion of privacy. If you "like" a brand, you're giving that company access to your personal information.

## C. Users Vulnerable to Crime

1. Social networking sites allow hate groups to recruit and distribute propaganda online.
2. Unauthorized sharing and copyright infringement threatens intellectual property and causes loss of income.
3. Security attacks such as hacking, identity theft, and phishing scams, and viruses are common online. 68% of users share their real birth date, 63% share the name of their high school, 18% share their phone number, and 12% share a pet's name: This information might be used in identity theft.

4. Criminals use social media to commit crimes. Robbers know when you're away from your home on vacation and stalkers get information about your whereabouts via social media.
5. Sexual predators find, stalk, and assault victims through social media.
6. Sexting (texting sexual content) can be a big problem. When teens post sexy photos or comments online, it can lead to criminal charges and child pornography. 88% of "private" sexual images posted to social media are stolen and publicly posted on porn sites without the subject's knowledge.
7. Security attacks such as hacking, identity theft, and viruses and exposure to phishing scams are common via social media.

## D. Social Detriments

1. Cyber-bullying (the use of electronic communication to bully someone, usually by sending intimidating or threatening messages) is commonplace online, because it's emotional trauma, and sometimes even leads to suicide. 49.5% of students reported victimization by bullying online and 33.7% admitted to online bullying. A 2012 study found that at least 800,000 minors had been harassed on Facebook. Middle school children who experienced cyber bullying were almost twice as likely to try to kill themselves.
2. According to one report, 15% of adult users said that something that happened online caused a friendship to end. 12% of adult users said something that happened online caused a face-to-face argument, and for 3% of adults it turned into a physical confrontation.
3. Extensive online engagement is correlated with personality and brain disorders like poor social skills, ADHD, narcissistic tendencies, a need for instant gratification, and addictive behaviours and other emotional distress like depression, anxiety, and loneliness.
4. Less time for face-to-face interaction with loved ones. 47% of 18-34-year-old users reported using social media or texting during meals. 10% of people younger than 25 reported checking their phones and social media during sex.
5. Children at higher risk for depression, low self-esteem, and eating disorders and more prone to feeling isolated and disconnected (especially youth with disabilities).

## E. Misinformation

1. Enables the spread of false rumours and unreliable information: 49.1% of users have read false news on social media.
2. Encourages amateur medical advice and self-diagnosis of health problems, which can be dangerous and life-threatening.

## F. Advertising

1. Studies have shown that sites such as Facebook influence you, via advertisements, to spend more money.
2. Advertisers gain all kinds of personal information about you via your social media, information they use to persuade you to buy their product.

## G. Waste of Time

When alerted to a new post or tweet, it takes about 20 to 25 minutes for the average user to return to their original task. 30% of the time it takes two hours for the user to return to their original task.

There are also a lot of benefits that come from social media and the internet for teenagers. For a lot of people in 17-27 age group social media is an outlet for thoughts that they are able to share with their friends and loved ones. Websites where they can interact with others their age means a lot to teenagers because it is a form of self-expression; also social media is an easy way to connect with people all throughout the area that they live in. In youth, a lot of very close friendships have been formed through social media and have helped to benefit each other in multiple ways. The reason social media makes it so easy to create bonds is that they are allowed to express their likes and dislikes, which people can easily relate to. As many ways as people believe that social media is bad, it can also provide a lot of good, they just have to use it for the right things.

## II. LITERATURE REVIEW

**Nielsen Media [1]** almost 25 percent of student's time on the Internet is now spent on social networking websites. Facebook is the most used social network by college students, followed by YouTube and Twitter. Moreover, Facebook alone reports that it now has 500 active million users, 50% of whom log on every day. In addition, according to a study by Online PhD, students spend roughly 100 minutes per day on Facebook. In 2007, the number of students who used Facebook was already enormous: 92 percent of college students had an account. By 2008, 99 percent of students had an account on Facebook. That is quite a large amount considering the service was only opened in 2006 to everyone.

**Bicen and Cavus [2]** evaluated the usage of Social Networking Sites among the youth in field of computer education to find out which SNS are most commonly and frequently preferred by the students. As the study revealed that sharing knowledge on internet is an integral part of youth and students life and Facebook is the most commonly used and operated Social networking site by students to share their social life and their academic projects and knowledge.

**Dickson and Holley [3]** made a study on the use of Social Networking Sites in academics in USA to examine the usage by both teachers and students. The study revealed that Social Networking Sites can be effective method of student outreach in academic performance and enhancing their knowledge.

**Cheung, Pui-Yee Chiu and Lee [4]** explored the factors that drive people to use online social networks (e.g., Facebook). Also they conceptualize the use of online social networks as intentional social action and examined the relative impact of social influence and social presence on We-Intention to use online social networks. Facebook (<http://www.facebook.com>), an online social networking site, was used in this study to examine intentional social actions in online social networks. An invitation message with the URL to the online questionnaire was posted on a number of online social groups of Facebook. Partial Least Square (PLS) was used to test the hypotheses. An empirical study of Facebook users (n=182) find that We-Intention to use online social networks is strongly determined by social presence. These social networking sites give everyone a place to share their personal stories, in words, pictures, and videos with their friends. They also connect people with friends and others who work, study, and live around them. Online social networks not only provide a place for people who have similar interests to join together and 56 communicate, but also provide a lot of business opportunities to the online advertising and promotion industry.

**Haas, Schaefer and Kornienko [5]** investigated the link between individuals' health and the characteristics of their social network positions. The researchers first developed theoretical predictions for how health may influence the structure of adolescent networks. Then they tested these predictions using longitudinal analysis of the National Longitudinal Study of Adolescent Health (Add Health). The data collected were statistically analyzed by descriptive statistics and regression analysis. They found important relationships between the health status of adolescents and the characteristics of the social network positions within which they are embedded. Overall researchers found that adolescents in poor health form smaller local networks and occupy less central global positions than their healthy peers. These results also have implications for social network research, expanding the



scope of factors responsible for the network positions individuals occupy.

**Mahfouz and Ihmeideh [6]** investigated Jordanian university students' attitudes towards using video and text chat discourse with anonymous native speakers of English to improve their English proficiency. To achieve this aim, a questionnaire was designed. The study sample consisted of 320 university students enrolled in two Jordanian universities. The data were statistically analyzed using mean, t-test and oneway analysis of variance (ANOVA). Results revealed that students' attitudes towards using video and text chat with English native speakers for improving their English language skills were higher concerning speaking skills, followed by listening skills, reading skills and finally writing skills. Furthermore, results indicated that there were statistically significant differences amongst students, which are attributed to their gender, the faculty they are enrolled in, the chat messenger mode they use most frequently and their seniority of study at university.

**Lack, Beck and Hoover [7]** investigated the usage of Social Networking Sites by undergraduate psychology major. They found that majority of students using Facebook and their account information have publicly accessibility and some user profiles have content of a questionable nature on their publicly viewable accounts. They suggest that formal education must be presided to students regarding the usage of these sites.

**Petter Bae Brandtzaeg and Jan Heim [8]** in their study state that there are many motivational reasons for using Social Networking Sites among people and college students particularly. Brandtzaeg and Heim draw their findings, after the investigation on peoples' subjective motivational reasons for using Social Networking Sites, by performing a quantitative content analysis for 1,200 qualitative responses from Social Networking Sites users. Further, the study (2009) made several attempts to understand the choice, use, diffusion, adoption and acceptance of Social Networking Sites among college students.

### III. DATA COLLECTION

Data will be collected using a Structured Questionnaire. This method is quite popular in case of big enquires. A questionnaire will consists of a number of question involves both specific and general question related to project management functions.

#### A. Statistical Tools and Techniques

Statistical methods involved in carrying out a study include planning, designing, collecting data, analysing, drawing meaningful interpretation and reporting of the research findings. The statistical analysis gives meaning to the meaningless numbers, thereby breathing life into a

lifeless data. The results and inferences are precise only if proper statistical tests are used. This article will try to acquaint the reader with the basic research tools that are utilised while conducting various studies. The article covers a brief outline of the variables, an understanding of quantitative and qualitative variables and the measures of central tendency. An idea of the sample size estimation, power analysis and the statistical errors is given. Finally, there is a summary of parametric and non-parametric tests used for data analysis.

Statistics is a branch of science that deals with the collection, organisation, analysis of data and drawing of inferences from the samples to the whole population. This requires a proper design of the study, an appropriate selection of the study sample and choice of a suitable statistical test. An adequate knowledge of statistics is necessary for proper designing of an epidemiological study or a clinical trial. Improper statistical methods may result in erroneous conclusions which may lead to unethical practice

Variable is a characteristic that varies from one individual member of population to another individual. Variables such as height and weight are measured by some type of scale, convey quantitative information and are called as quantitative variables. Sex and eye colour give qualitative information and are called as qualitative variables

The data collected were analyzed by employing the following statistical techniques:

#### B. Frequency Analysis

Frequency analysis will be conducted for all the demographical variables to know the percentage of the respondents belonging to the respective segments. Frequency Analysis is a part of descriptive statistics. In statistics, frequency is the number of times an event occurs. Frequency Analysis is an important area of statistics that deals with the number of occurrences (frequency) and analyzes measures of central tendency, dispersion, percentiles, etc. Percentage is calculated by taking the frequency in the category divided by the total number of participants and multiplying by 100%.

To calculate the percentage of males in Table 3, take the frequency for males (80) divided by the total number in the sample (200). Then take this number times 100%, resulting in 40%.

Frequency analysis of substitution ciphers. Frequency analysis is used for breaking substitution ciphers. The general idea is to find the popular letters in the cipher text and try to replace them by the common letters in the used language

Often the Fourier transform is converted to the power spectrum, which is the magnitude of each frequency component squared. The most common

purpose for analysis of signals in the frequency domain is analysis of signal properties. It is remarkably useful to analyze the frequency spectrum of a signal. Remember, you count frequencies. To find the relative frequency, divide the frequency by the total number of data values. To find the cumulative relative frequency, add all of the previous relative frequencies to the relative frequency for the current row.

### C. Factor Analysis

As the number of statements under each section will be more, it is necessary to reduce those variables into factors for easy analysis, for that purpose factor analysis will be used in the study. Factor analysis is a technique that is used to reduce a large number of variables into fewer numbers of factors. This technique extracts maximum common variance from all variables and puts them into a common score. As an index of all variables, we can use this score for further analysis. Factor analysis is part of general linear model (GLM) and this method also assumes several assumptions: there is linear relationship, there is no multicollinearity, it includes relevant variables into analysis, and there is true correlation between variables and factors. Several methods are available, but principle component analysis is used most commonly.

## IV. TYPES OF FACTORING

There are different types of methods used to extract the factor from the data set:

**1. Principal component analysis:** This is the most common method used by researchers. PCA starts extracting the maximum variance and puts them into the first factor. After that, it removes that variance explained by the first factors and then starts extracting maximum variance for the second factor. This process goes to the last factor.

**2. Common factor analysis:** The second most preferred method by researchers, it extracts the common variance and puts them into factors. This method does not include the unique variance of all variables. This method is used in SEM.

**3. Maximum likelihood method:** This method also works on correlation metric but it uses maximum likelihood method to factor.

## V. METHODS OF FACTOR ANALYSIS

Alfa factoring outweighs least squares. Weight square is another regression based method which is used for factoring.

**1. Factor loading:** Factor loading is basically the correlation coefficient for the variable and factor. Factor loading shows the variance explained by the variable on that particular factor. In the SEM approach, as a rule of

thumb, 0.7 or higher factor loading represents that the factor extracts sufficient variance from that variable.

**2. Eigen values:** Eigen values are also called characteristic roots. Eigen values shows variance explained by that particular factor out of the total variance. From the commonality column, we can know how much variance is explained by the first factor out of the total variance. For example, if our first factor explains 68% variance out of the total, this means that 32% variance will be explained by the other factor.

**3. Factor score:** The factor score is also called the component score. This score is of all row and columns, which can be used as an index of all variables and can be used for further analysis. We can standardize this score by multiplying a common term. With this factor score, whatever analysis we will do, we will assume that all variables will behave as factor scores and will move.

Criteria for determining the number of factors: According to the Kaiser Criterion, Eigen values is a good criteria for determining a factor. If Eigen values is greater than one, we should consider that a factor and if Eigen values is less than one, then we should not consider that a factor. According to the variance extraction rule, it should be more than 0.7. If variance is less than 0.7, then we should not consider that a factor.

**4. Rotation method:** Rotation method makes it more reliable to understand the output. Eigen values do not affect the rotation method, but the rotation method affects the Eigen values or percentage of variance extracted.

There are a number of rotation methods available:

- (1) No rotation method
- (2) Varimax rotation method
- (3) Quartimax rotation method
- (4) Direct oblimin rotation method
- (5) Promax rotation method.

### Assumptions:

1. **No outlier:** Assume that there are no outliers in data.
2. **Adequate sample size:** The case must be greater than the factor.
3. **No perfect multicollinearity:** Factor analysis is an interdependency technique. There should not be perfect multicollinearity between the variables.
4. **Homoscedasticity:** Since factor analysis is a linear function of measured variables, it does not require homoscedasticity between the variables.
5. **Linearity:** Factor analysis is also based on linearity assumption. Non-linear variables can also be used. After transfer, however, it changes into linear variable.

6. **Interval Data:** Interval data are assumed.

### A. Independent T-test

In order to study the perception of male and female towards the Project management factors, independent t-test will be used. The independent sample t-test is a member of the t-test family, which consists of tests that compare mean value(s) of continuous-level(interval or ratio data), normally distributed data. The independent sample t-test compares two means. It assumes a model where the variables in the analysis are split into independent and dependent variables. The model assumes that a difference in the mean score of the dependent variable is found because of the influence of the independent variable. Thus, the independent sample t-test is an analysis of dependence. It is one of the most widely used statistical tests, and is sometimes erroneously called the independent variable t-test.

The t-test family is based on the t-distribution, because the difference of mean score for two multivariate normal variables approximates the t-distribution. The t-distribution and also the t-test is sometimes also called Student's t. Student is the pseudonym used by W. S. Gosset in 1908 to publish the t-distribution based on his empirical findings on the height and the length of the left middle finger of criminals in a local prison.

Within the t-test family, the independent samples t-test compares the mean scores of two groups in a given variable, that is, two mean scores of the same variable, whereby one mean represents the average of that characteristic for one group and the other mean represents the average of that specific characteristic in the other group. Generally speaking, the independent samples t-test compares one measured characteristic between two groups of observations or measurements. It tells us whether the difference we see between the two independent samples is a true difference or whether it is just a random effect (statistical artifact) caused by skewed sampling.

The independent samples t-test is also called unpaired t-test. It is the t-test to use when two separate independent and identically distributed variables are measured. Independent samples are easiest obtained when selecting the participants by random sampling.

The independent samples t-test is similar to the dependent sample t-test, which compares the mean score of paired observations these are typically obtained when either re-testing or conducting repeated measurements, or when grouping similar participants in a treatment-control study to account for differences in baseline. However the pairing information needs to be present in the sample and therefore a paired sample can always be analyzed with an independent samples t-test but not the other way around.

Examples of typical questions that the independent samples t-test answers are as follows:

- **Medicine** – Has the quality of life improved for patients who took drug A as opposed to patients who took drug B?
- **Sociology** – Are men more satisfied with their jobs than women? Do they earn more?
- **Biology** – Are foxes in one specific habitat larger than in another?
- **Economics** – Is the economic growth of developing nations larger than the economic growth of the first world?
- **Marketing**: Does customer segment A spend more on groceries than customer segment B?

The independent samples t-test, or Student's t-test, is the most popular test to test for the difference in means. It requires that both samples are independently collected, and tests the null hypothesis that both samples are from the same population and therefore do not differ in their mean scores.

Our research question for the independent sample t-test is as follows:

Does the standardized test score for math, reading, and writing differ between students who failed and students who passed the final exam?

Let's start by verifying the assumptions of the t-test to check whether we made the right choices in our decision tree. First, we are going to create some descriptive statistics to get an impression of the distribution. In order to do this, we open the Frequencies menu in Analyze/Descriptive Statistics/Frequencies

### B. One-Way Anova

For those demographical variables whose values are found to have more than three values, one way anova is will be used to find if there is any difference in the opinion of respondents belonging to a certain group, with respect to a factor. Statistics Solutions provides a data analysis plan template for the one way ANOVA. You can use this template to develop the data analysis section of your dissertation or research proposal.

The template includes research questions stated in statistical language, analysis justification and assumptions of the analysis. Simply edit the blue text to reflect your research information and you will have the data analysis plan for your dissertation or research proposal.

## VI. DATA ANALYSIS

To examine the research question, an Analysis of Variance (one way ANOVA) will be conducted to determine if there a significant difference on the dependent variable by independent variable. One way ANOVA is an



appropriate statistical analysis when the purpose of research is to assess if mean differences exist on one continuous dependent variable by an independent variable with two or more discrete groups. The dependent variable in this analysis is dependent variable, and the discrete groups of independent variable (insert categories of groups). The assumptions of normality and homogeneity of variance will be assessed. Normality assumes that the scores are normally distributed (bell-shaped) and will be assessed using the One-Sample Kolmogorov-Smirnov test. Homogeneity of variance assumes that both groups have equal error variances and will be assessed using Levene's Test for the Equality of Error Variances. The t-test will be two-tailed with the probability of rejecting the null hypothesis when it is true set at  $p < 0.05$ . This ensures a 95% certainty that the differences did not occur by chance.

### A. Cluster Analysis

In order to group the factors into few segments, Cluster analysis will be conducted in the study.

Cluster analysis is a class of techniques that are used to classify objects or cases into relative groups called clusters. Cluster analysis is also called classification analysis or numerical taxonomy. In cluster analysis, there is no prior information about the group or cluster membership for any of the objects. Cluster Analysis has been used in marketing for various purposes. Segmentation of consumers in cluster analysis is used on the basis of benefits sought from the purchase of the product. It can be used to identify homogeneous groups of buyers.

Cluster analysis involves formulating a problem, selecting a distance measure, selecting a clustering procedure, deciding the number of clusters, interpreting the profile clusters and finally, assessing the validity of clustering. The variables on which the cluster analysis is to be done should be selected by keeping past research in mind. It should also be selected by theory, the hypotheses being tested, and the judgment of the researcher. An appropriate measure of distance or similarity should be selected; the most commonly used measure is the Euclidean distance or its square. Clustering procedures in cluster analysis may be hierarchical, non-hierarchical, or a two-step procedure. A hierarchical procedure in cluster analysis is characterized by the development of a tree like structure. A hierarchical procedure can be agglomerative or divisive. Agglomerative methods in cluster analysis consist of linkage methods, variance methods, and centroid methods. Linkage methods in cluster analysis are comprised of single linkage, complete linkage, and average linkage. The non-hierarchical methods in cluster analysis are frequently referred to as K means clustering. The two-step procedure can automatically determine the optimal number of clusters by comparing the values of

model choice criteria across different clustering solutions. The choice of clustering procedure and the choice of distance measure are interrelated. The relative sizes of clusters in cluster analysis should be meaningful. The clusters should be interpreted in terms of cluster centroids.

### B. Correlation Analysis

Methods of correlation and regression can be used in order to analyze the extent and the nature of relationships between different variables. Correlation analysis is used to understand the nature of relationships between two individual variables. For example, if we aim to study the impact of foreign direct investment (FDI) on the level of economic growth in Vietnam, then two variables can be specified as the amounts of FDI and GDP for the same period.

Correlation coefficient 'r' is calculated through the following formula:

Where,  $x$  and  $y$  are values of variables, and  $n$  is size of the sample.

The value of correlation coefficient can be interpreted in the following manner:

If 'r' is equal to 1, then there is perfect positive correlation between two values;

If 'r' is equal to -1, then there is perfect negative correlation between two values;

If 'r' is equal to zero, then there is no correlation between the two values.

In practical terms, the closer the value of 'r' to 1, the higher positive impact of FDI on GDP growth in Vietnam. Similarly, if the value of 'r' is less than 0, the closer it is to -1, the greater the negative impact of FDI on GDP growth in Vietnam. If 'r' is equal to zero, then FDI is perceived to have no impact on GDP change in Vietnam within the given sample.

The Pearson product-moment correlation is calculated by taking the ratio of the sample of the two variables to the product of the two standard deviations and illustrates the strength of linear relationships. In Pearson product-moment correlation the correlation coefficient is not robust due to the fact that strong linear relationships between the variables are not recognized. The correlation coefficient is sensitive to outlying points therefore the correlation coefficient is not resistant.

**Spearman Rank correlation** requires the data to be sorted and the value to be assigned a specific rank with 1 to be assigned as the lowest value. Moreover, in case of data value appearing more than once, equal values will be specified their average rank.

**Autocorrelation** (serial correlation) implies the correlation among the values of the same variables but at

various times. Autocorrelation coefficient is calculated by changing lagged data with the formula for the Pearson product-moment correlation coefficient. Also, because a series of unshifted data will express perfect correlation, the function begins with the coefficient of 1.

Correlation coefficient 'r' illustrated above is just a mathematical formula and you don't have to calculate correlation coefficient manually. For a bachelor's degree dissertation most supervisors accept correlation tests that have been run on a simple Excel spreadsheet. For master's or PhD level studies, on the other hand, you will have to use more advanced statistical software such as SPSS or NCSS for your correlation analysis.

Correlation analysis as a research method offers a range of advantages. This method allows data analysis from many subjects simultaneously. Moreover, correlation analysis can study a wide range of variables and their interrelations.

On the negative side, findings of correlation does not indicate causations i.e. cause and effect relationships.

### C. Chi-Square

In order to find if there is any association between the segments (clusters) and the demographic variable gender (as it has only two variables), Chi-Square analysis will be conducted. The Chi Square statistic is commonly used for testing relationships between categorical variables. The null hypothesis of the Chi-Square test is that no relationship exists on the categorical variables in the population; they are independent. An example research question that could be answered using a Chi-Square analysis would be:

The Chi Square statistic is commonly used for testing relationships between categorical variables. The null hypothesis of the Chi-Square test is that no relationship exists on the categorical variables in the population; they are independent. An example research question that could be answered using a Chi-Square analysis would be:

Is there a significant relationship between voter intent and political party membership?

How does the Chi-Square statistic work?

The Chi-Square statistic is most commonly used to evaluate Tests of Independence when using a cross tabulation (also known as a bivariate table). Cross tabulation presents the distributions of two categorical variables simultaneously, with the intersections of the categories of the variables appearing in the cells of the table. The Test of Independence assesses whether an association exists between the two variables by comparing the observed pattern of responses in the cells to the pattern that would be expected if the variables were truly independent of each other. Calculating the Chi-Square statistic and comparing it against a critical value from the Chi-Square distribution allows the researcher to assess

whether the observed cell counts are significantly different from the expected cell counts. The calculation of the Chi-Square statistic is quite straight-forward and intuitive: where  $f_o$  = the observed frequency (the observed counts in the cells) and  $f_e$  = the expected frequency if NO relationship existed between the variables. As depicted in the formula, the Chi-Square statistic is based on the difference between what is actually observed in the data and what would be expected if there was truly no relationship between the variables.

How is the Chi-Square statistic run in SPSS and how is the output interpreted?

The Chi-Square statistic appears as an option when requesting a crosstabulation in SPSS. The output is labeled Chi-Square Tests; the Chi-Square statistic used in the Test of Independence is labeled Pearson Chi-Square. This statistic can be evaluated by comparing the actual value against a critical value found in a Chi-Square distribution (where degrees of freedom is calculated as # of rows - 1 x # of columns - 1), but it is easier to simply examine the p-value provided by SPSS. To make a conclusion about the hypothesis with 95% confidence, the value labeled Asymp. Sig. (which is the p-value of the Chi-Square statistic) should be less than .05 (which is the alpha level associated with a 95% confidence level).

Is the p-value (labeled Asymp. Sig.) less than .05? If so, we can conclude that the variables are not independent of each other and that there is a statistical relationship between the categorical variables.

In this example, there is an association between fundamentalism and views on teaching sex education in public schools. While 17.2% of fundamentalists oppose teaching sex education, only 6.5% of liberals are opposed. The p-value indicates that these variables are not independent of each other and that there is a statistically significant relationship between the categorical variables.

What are special concerns with regard to the Chi-Square statistic?

There are a number of important considerations when using the Chi-Square statistic to evaluate a cross tabulation. Because of how the Chi-Square value is calculated, it is extremely sensitive to sample size - when the sample size is too large (~500), almost any small difference will appear statistically significant. It is also sensitive to the distribution within the cells, and SPSS gives a warning message if cells have fewer than 5 cases. This can be addressed by always using categorical variables with a limited number of categories (e.g., by combining categories if necessary to produce a smaller table).



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#### Data Analysis Plan

Edit your research questions and null/alternative hypotheses

Write your data analysis plan; specify specific statistics to address the research questions, the assumptions of the statistics, and justify why they are the appropriate statistics; provide references

Justify your sample size/power analysis, provide references

Explain your data analysis plan to you so you are comfortable and confident

Two hours of additional support with your statistician

Quantitative Results Section (Descriptive Statistics, Bivariate and Multivariate Analyses, Structural Equation Modeling, Path analysis, HLM, Cluster Analysis)

#### D. Weighted Average Mean Method

In order to find out which factor contributes more for the success of the project weighted average mean analysis will be done to the study. The above mentioned statistical analysis will be carried out using a software called “Statistical Packages for Social Science (SPSS)”, version 16.

Simple arithmetic mean gives equal importance to all items in a series. In some cases, all the items in a series may not have equal importance. In such cases, instead of simple arithmetic mean, weighted average is the appropriate method. The Weighted Average or the Weighted Mean is used when the relative importance of the items in a series is not same for all items. In this case, each item is judged based on its relative importance. Weighted Average plays an important role in Economics. It has wide applications in finance.

#### E. Weighted Average

Weighted average is referred to as weighted arithmetic mean or weighted arithmetic average and is defined for a set of values and non-negative associated weights as the sum of all values times their associated weights divided by the sum of the weights. A weighted average tends towards a given sample mean in proportion to the sample's size relative to the size of other samples being compared.

Weighted Average Method:

Weighted average is a method to average data, sometimes a collection of values will vary significantly in their distribution. In such case, instead of simple average, weighted average method more adequately represents the dispersion of values where the frequency of the values is different.

Weighted average method is a method of computing a kind of arithmetic mean of a set of numbers in which some elements of the set carry weight than others. An average in which each quantity to be averaged is assigned a weight.

#### VII. CONCLUSION

This study investigates the effects of social media on youth. Results shows that social media plays important role in learning and job opportunities. Teenagers mostly use social media for communication with friends and families. Social media should be used for positive purposes. The use of social media in informative way enhances the skills, and abilities to minimize its negative effects Government has to take some strict actions. Government should ban immoral websites. A Strong recommendation for the government is to make policy or community that check which immoral websites are used by which users. Government has to make policies to check out unfair reporting of media which ruin the society. A strong recommendation for the users of social media is that they have to remember the purpose of using social media and always use the informative sites. Adolescence should use their time wisely instead of wasting their precious time on other social networks like WhatsApp, Twitter, Facebook, and YouTube. To secure the future of children, teachers and parents should check out what they actually are doing on social media.

#### REFERENCES

- [1] Valdez, A. C., Schaar, A. K., Ziefle, M. (2012). State of the (net)work address developing criteria for applying social networking to the work environment. *Work*, 41, 3459–3467. doi:10.3233/WOR-2012-0625-3459
- [2] Valkenburg, P. M. Peter, J. and Schouten, A. P. 2006. “Friend Networking Sites and Their Relationship to Adolescent’s Well-Being and Social Self-Esteem”. *Cyber Psychology & Behaviour*, 9(5):584-590.
- [3] Vitak. 2008. “Facebook Friends: How Online identities Impact Offline Relations.
- [4] Vosloo, S. 2007. “Interview with Dana Boyd”. *Social Networking Expert (Internet)*. Mail and Guardian Online.
- [5] Waldstrom, C. and Madsen, H. 2007. “Social Relations among Managers: Old Boys and Young Women’s Networks”. *Women in Management Review*, 22(2), 136-147.

- [6] Weatherall, A. and Ramsay, A. 2006. "New Communication Technologies and Family Life". Families Commission Blue Skies Report 5.06.
- [7] William, Fielding Ogburn and Meyer, Francis Nimkoff. 1976. "Technology and the Changing Family". Greenwood Press.
- [8] Wilson, David W. 2008. "Monitoring Technology Trends With Podcasts, RSS and Twitter". Library Hi Tech News, 26, 10; 8-12
- [9] Won, Kim. Sang-WonLee. 2009. "On Social Websites". Information Systems.
- [10] Xia, Z. David. 2009. "Marketing Library Services through Facebook Groups". Library Management, 30, 6/7; 469-478.
- [11] Ya, Ping Chang and Dong, Hong Zhu. 2011. "Understanding Social Networking Sites Adoption in China: A Comparison of Pre-Adoption and Post-Adoption". Computers in Human behaviour.
- [12] Jacobsen, W. C., &Forste, R. (2011). The Wired Generation: Academic and Social Outcomes of Electronic Media Use Among University Students. *Cyberpsychology, Behavior, and Social Networking*, 14(5), 275-280.
- [13] Kalpidou, M., Costin, D., & Morris, J. (2011). The relationship between Facebook and the well-being of undergraduate college students. *Cyberpsychology, behavior, and social networking*, 14(4), 183-189.
- [14] Livingstone, S. and Bober, M. (2003). UK children go online: Listening to young people's experiences [online].  
London: LSE Research Online. Available at: <http://eprints.lse.ac.uk/388/>
- [15] Lusk, B. (2010). Digital natives and social media behaviors: An overview. *The Prevention Researcher*, 17(5), 3-6.
- [16] Tapscott, D. (1998). *Growing up digital: The rise of the net generation*. New York: McGraw- Hill Companies.  
Available at: [https://www.ncsu.edu/meridian/jan98/feat\\_6/digital.html](https://www.ncsu.edu/meridian/jan98/feat_6/digital.html)
- [17] Waddington, J. (2011). Social networking: The unharnessed educational tool. *Undergraduate Research Journal at UCCS*, 4(1), 12-18.

