

RELATIONSHIP BETWEEN TECHNOPHILIA AND SOCIAL INTERACTION AMONG HIGHER SECONDARY SCHOOL STUDENTS

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DECLARATION

I, Dilshad C K., do hereby declare that this dissertation **RELATIONSHIP BETWEEN TECHNOPHILIA AND SOCIAL INTERACTION AMONG HIGHER SECONDARY SCHOOL STUDENTS** has not been submitted by me for the award of a Degree, Diploma, Title or Recognition before.

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CERTIFICATE

I, Dr. T.K. Umer Farooque., Do hereby declare that this dissertation **RELATIONSHIP BETWEEN TECHNOPHILIA AND SOCIAL INTERACTION AMONG HIGHER SECONDARY SCHOOL STUDENTS** is a record of bonafied study and research carried out by **Dilshad C.K.**, under my guidance and supervision. The report has not been submitted by her for the award of a Degree, Diploma, Title or Recognition before.

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Chapter 1

INTRODUCTION

- *Need and Significance*
- *Statement of the Problem*
- *Definition of Key Terms*
- *Variables of the Study*
- *Objectives of the Study*
- *Hypotheses of the Study*
- *Methodology*
- *Scope and Limitation*

The term education is a very common and a popular word that is uttered by many of us but understood by very few in its right perspective. Education is defined as “the aggregate of all the process by which a person develops abilities, attitudes and other forms of behavior of practical value in the society in which she/ he lives; the social process by which people are subjected to the influence of selected and controlled environment (especially that of the school), so they may obtain social competence and optimum individual development” (Good, C.V, 1973).

Education is a natural process, which takes place in the interaction between the individuals and the environment, and also is a social process and one of the prime function of the school is to help in the socialization of the child. Thus education should provide a learning platform for children to develop a variety of skills and other dimensions such as social interaction, emotional growth, physical awareness, and awareness of life around us.

All education begins with family. The modern concept of education also gives importance to social settings in which interaction between the teacher and the taught takes place. But it is not enough, if there is just an interaction between the teacher and children there ought to be an active interaction among children as they learn quite a lot from each other’s experience.

According to John Dewey (1897), all educations proceed by the participation of the individuals in the social consciousness of the race. It means that any system of education that is devoid of social environment is not education at all. The child’s

personality to large extent depends upon his social environment. The self of an individual develops only due to socialization. The improvement of socialization offers one of the greatest possibilities for the future alternation of human nature and human society.

Through socialization, the individual learns to control himself in the interest of society and realize his responsibility towards others. Socialization develops community feelings in the individual and he learns to cooperate with others (Sharma & Sharma, 1985).

Socialization is the process whereby an individual learns to behave in accordance with social traditions and mores. According to Aristotle, man is by nature a social animal; an individual who is unsocial naturally and not accidentally is either beneath our notice or more than human. A man is a social being and socialization brings balance to his personality because the social aspect of personality also is very important.

Introduction of technology into the field of education brought changes in all spheres of human life. Technology place a major role in our day today life, and within a few years from now, our social life will become totally dependent on it. Technology makes human life easier at the same time it decreases social interaction among individuals. Technology does not determine society: it embodies it. But neither does society determine technological innovation: it uses it (Castells, 1996).

The advancement of technology throughout human history has relatively stayed the same until the inventions and innovations of the past 200 years: the

internal combustion engine, alternate current power, the light bulb, telephones, automobiles, the camera, radios, atomic and nuclear engineering, airplanes, space shuttles, lasers, fiber optics, computers, silicon based transistors, video cameras, CDs, DVDs, cell phones and the internet have brought about evolutionary changes in society. Much more recently, there has been an exponential explosion in technology and information in the past few decades (Barton, 2013; Greenstein, 2012; Kurzweil, 2010).

The co founder of Intel, Gordon Moore (1965), illustrated that the capability of computer circuits had doubled every year since their invention. His prediction that this trend would continue and have broader applications has become known as Moore's Law (Greenstein, 2012).

Fuller (1981) continued Moore's logic in his "Knowledge Doubling Curve" and explained how until 1900 human knowledge doubled approximately every century. By the end of World War II, knowledge was doubling every 25 years. Furthermore, in today's technologically advanced society, diverse types of knowledge are growing at varying proportions.

Since technology invaded human life, there has been a strong relationship between humans and machines. Bruce Mazlish (1967) claimed "we cannot think any longer man without a machine" and Sherry Turkle (2011) discussed the issue of people growing up with computers and loving them and identify themselves as machines. In this relationship, similar to other relationships in which humans are involved, there are emotions. When technology brings irresistible innovations and creates a multi mediated environment, it becomes more difficult to reject the

materiality of technology. The acceptance of machine into life has created a new society which cannot exist without machines, and the individual's life in this new society has become dependent on machines. For some individuals, this interdependence may become an enthusiasm and even addiction, intentionally or unintentionally. Technophilia and Technophile are useful burgeoning terms to describe the devotion of humans to new technologies and other technological inventions. Someone who likes and advocates the use of new technology is called Technophilia. Technophilia refers generally to a strong enthusiasm for technology, especially new technologies such as personal computers, the internet, mobile phones, and home cinema.

Today our eyes, ears and minds are being saturated with a variety of media via the internet, smart televisions, DVR s, instant messaging, Google, Facebook, Twitter, Youtube, Skype, Smart phones, Smart phone apps, Texting, Email, Video game and the list goes on and will continue to grow with the advent of wireless technology (Wi-Fi) and because most smart phones use their carrier's signal to access the internet, students have access to media 24 hours per day. Remarkably enough, the widely accessible smart phone is a more effective communication device than any computer prodigy had access to just a quarter of a century prior, and this device delivers entrance to more data.

Many teens now do the bulk of their socializing via digital media. They rarely use their phones except for access to the internet, almost never call each other. Even when they are in close proximity, many teens prefer to "speak" in writing. Poli & Agrimi (2012) in their study illustrates that this digital world attracts a particular

fascination for students who use it to investigate new ways for communication or socializing through various messaging systems such as blogs, forums, social media sites, emails and through games, films and music.

The technophile regards most or all technology positively, adopts new forms of technology enthusiastically and sees it as a means to improve life, whilst some may even view it as a means to combat social problems. Young people, as a whole, have always been technophiles however with the digital transformation their ability to use and share information using new technology has amplified. People, especially the younger generation spend considerable amount of time on the internet, and thus spending less time with real people. Technophilia has greatly increased the level of communication available and it has also had detrimental effects on the amount and type of social interaction that takes place.

Now a days, there is little social interaction taking place in many of today's classrooms. A social interaction is an exchange between two or more individuals and is a building block of society. By interacting with one another, people design rules, institutions and systems within which they seek to live. Without interaction there will be no organization or group life. Mere proximity of individuals does not unite them into a group or social unit. Thus interaction is the basic ingredient of social relationships. Society is rooted in inter-action.

Adolescents are inclined to be unaware of just how much time they really spent on social networking sites, and in effect this might have on their academic performance and social interaction (Meena, Mittal, & Solanki, 2012).

Today, teenagers spent most of their time on the internet, chatting, interacting and establishing cordial and strong relationship with people sometimes thousands of kilometres away. While most of them maintain regular contact with their far away internet family through the internet, their interaction and personal communication level with their immediate family and friends are very weak. A more alarming possibility is that youths avoid spending time with their parents and instead prefer to surf the internet. Youths within the same location or the same apartment a time prefer to communicate with one another through e-mail instead of meeting one another face- to-face. It is true that the internet has become a powerful medium of communication (Matusitz, 2005).

Technology and information is expanding at an exponential rate never seen before in human history. Along with this explosion in technology and information comes a massive move of positive and negative consequences. In essence, technology is a double edged sword. Professional school counselors must not only be aware of the positive impact of technology, but they must also realize that an improper use of technology can lead to unintended consequences.

Talking with friends face to face has been an important existing human connection tool for years. Today technology is transforming modern society and daily life. In the coming years, internet and mobile technology will destroy the quality of human social interactions.

Need and Significance

Social interaction is the basic condition of our social existence. It is the most inclusive group process. It is a context in which the personality grows. Man cannot

be called man outside the range of human interaction. Society exists only when large numbers of persons are interacting. Social interaction is the basic process through which human nature and social structure develop and are changed.

The opportunity for social interactions with others is very important for the development of all children. Through social interactions, children begin to establish a sense of self and to learn what others expect of them. Most opportunities for social interactions among young children take place during play. When playing with peers, children learn appropriate social behaviors, such as sharing, cooperating and in addition, while interacting with their peers young children learn communication, cognitive and motor skills.

The advantage of new technologies created large number of technophiles among children. The new technologies are immersed into the life of individuals. This study is an attempt to find out relationship between technophilia and social interaction among higher secondary school students.

New technologies having a major impact on society as a whole. The integration of such technologies into social settings within society such as family, school, etc. is having a major influence on social interaction between individuals. It is evident from the literature that new technologies impact on social interaction within the society in many different ways. The young generation, spend hours of their time online, chatting and on forums. Although this can be beneficial, it is certainly not the same as real interaction with human beings and does not involve the same skills. It is important that children have and maintain real friendship in order to develop their own inter personal skills.

There has also been a drastic change in familial relationships. In recent years, the influence that technologies is having on family as a unit and the communication between family members is revolving around certain technologies such as, multiple televisions, laptops, MP3 players, mobile phones, game consoles and forth. The technology inside the family home is resulting in a growing privatization and isolation among family members and there are people increasingly using technology individually rather than collectively. The internet has undoubtedly been beneficial, but there are good reasons to be concerned about social interaction in our societies.

Technophilia and the impact on social interaction among the students is a topic that is evident and of great importance to the present world. The investigation will have great significance in the contribution that it will make to the world of sociology. It is through the study of sociology that allows for a better understanding and insight into today's society. The research will yield a greater insight into and the appreciation of the social interactions of the individuals within the school. The research will ultimately provide a greater understanding that will enable individuals to control the conditions of social life and therefore, help to improve these conditions.

Statement of the Problem

The problem for the present study is entitled as “RELATIONSHIP BETWEEN TECHNOPHILIA AND SOCIAL INTERACTION AMONG HIGHER SECONDARY SCHOOL STUDENTS”.

Definition of Key Terms

Some of the key terms that require definition are presented below:

Technophilia

Technophilia refers generally to a strong enthusiasm for technology, especially new technologies such as PC, internet, mobile, tabs and home cinema (The American Heritage Dictionary of the English language-4th edn.2003).

For the present study, technophilia is operationally defined as the intense desire of children to actively engage with new technologies and other technological gadgets which include any kinds of computers, tablets, net books, mobile phones, television, console/PC games.

Social interaction

Social interaction involves people communicating face-to-face, acting and reacting in relation to each other using verbal as well as non verbal cues. Every social interaction is characterized and dependent on people's distinct positions in terms of their status, standards of conduct-or 'norms'-and their sets of expected behavior or roles (furze et al.2008).

For the present study social interaction is defined as the interaction including cooperation, adjustment and sharing of feelings of higher secondary school students with their peer groups, family members and social groups.

Higher secondary school students

Higher Secondary School Students are the students studying in plus one and plus two. In the present study students studying at plus one level are considered as higher secondary school students.

Variables of the Study

I. Independent Variable

“Technophilia” was considered as the independent variable.

II. Dependent variable

“Social interaction” was considered as the dependent variable.

Objectives of the Study

The following are the major objectives of the study:

- To find out the extent of Technophilia among Higher Secondary School students in the total sample and the relevant sub samples based on
 - Gender.
 - Locale of student.
 - Type of management of school.
- To find out the extent of Social Interaction among Higher Secondary School students for the total sample and the relevant sub sample based on
 - Gender.

- Locale of student.
- Type of management of school.

- To find out whether there exist any significant difference between the male and female Higher Secondary School students in Technophilia.

- Find out whether there exists any significance difference between the rural and urban Higher Secondary School students in Technophilia.

- To find out whether there exists any significant difference in Technophilia among Higher Secondary School students in the sub sample based on type of management of schools.

- To find out whether there exist any significant difference between male and female Higher Secondary Students in their Social Interaction.

- To find out whether there exist any significant difference in Social Interaction between urban and rural Higher Secondary School students.

- To find out whether there exists any significant difference in Social Interaction among Higher Secondary School students for the sub sample based on type of management schools.

- To find out whether there exists any significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub samples based on
 - Gender.

- Locale of student.
- Type of management of school.

Hypotheses of the Study

- There exists significant difference in the mean scores of Technophilia between male and female Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between urban and rural Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and aided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between aided and unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between male and female Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between urban and rural Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Government and aided Higher Secondary School students.

- There exists significant difference in the mean scores of Social Interaction between Government and unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between aided and unaided Higher Secondary School students.
- There exists significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub sample based on
 - Gender.
 - Locale of student.
 - Type of management.

.Methodology

Method

For the present study survey method is employed as the method of research.

Sample

The investigator conducted the study on a sample of 770 Higher Secondary School Students of plus one class, from Calicut and Malappuram districts drawn by stratified sampling technique giving the due representation to gender, locale of student and type of management of school.

Tools

- Technophilia Assessment Scale developed and standardized by the investigator with the help of supervising teacher.

- Social Interaction Scale prepared by Mumthas and Shameena (2008) and was modified and standardized by the investigator with the help of supervising teacher.

Data collection procedure

The investigator got permission from the heads of the institution of selected schools. After getting permission, Technophilia Assessment Scale and Social Interaction Scale were administered on students with clear instruction. After completing the responses the investigator collected the response sheets and scored it based on the scoring key. The data will then be tabulated for analysis.

Statistical techniques used

- Preliminary statistical techniques like Mean, Median, Mode, Skewness and Kurtosis.
- Test of significance of difference between means (t-test).
- Pearson's product moment coefficient of correlation.

Scope and Limitations of the Study

The aim of the study was to find out the relationship between Technophilia and Social Interaction among Higher Secondary School students. The study was conducted on a representative sample of 770 students of standard XI. It was confined to 18 Higher Secondary Schools belonging to Malappuram and Calicut districts of Kerala. Practical consideration of administering the test to an adequately representative sample within a short time forced the investigator to confine the sample

to such a limited number. However the investigator selected the sample by stratified sampling technique.

The independent variable Technophilia was measured by using Technophilia Assessment Scale. It was constructed and standardized by investigator with the help of supervising teacher. Dependent variable Social Interaction was assessed by using Social Interaction Scale. It was prepared by Mumthas and Shameena (2008), modified and standardized by the investigator with the help of supervising teacher.

The present study Relationship between Technophilia and Social Interaction among Higher Secondary School students has wide scope. In the present technological era the students are becoming a timeless human being. And also lacking the interaction between family members. The consequences of technology on students have adverse effect. Strong feeling of desire to use technology and detachment from social interaction is leading the young generation to threat. The study was an investigation to find out how far the technology affects the Social Interaction due to Technophilia. It also aimed to find out whether there exists any significant difference in the mean scores of Technophilia and Social Interaction among Higher Secondary School students.

Though maximum effort has been taken to make the study precise, some unfavorable limitations also have crept into it. They are:

1. The sample for the study is not a state wide sample, but confined to only two districts of Kerala namely Malappuram and Calicut. Limitation of time and

other unavoidable practical difficulties were the main obstacles in selecting a state wide sample.

2. The study was conducted among pupils of standard XI assuming that it is the representation of the two standards of higher secondary school education viz., standards XI and XII.
3. Only three subgroups, gender, locale of the student and type of management of school were treated as subsamples.
4. Subgroups like subject of specialization, socio economic status were not included in the study.

In spite of all these limitations, the investigator hopes that the study will necessarily supply dependable findings. The findings may be of great help to classroom teachers and educators for developing new trends in the field of education.

Organization of the Report

The report of the study is presented in five chapters. The details are incorporated in each chapter as follows.

Chapter 1. Presents a brief introduction of the study, statement of the problem, definition of key terms, variables of the study, objectives of the study, hypotheses, methodology, scope of the study and organization of the report.

Chapter 2. Presents the review of related literature which include theoretical overview and review of related studies.

Chapter 3. Presents the methodology of study, details of variables, tool used, selection of the sample, data collection procedure, scoring techniques used for analysis and statistical techniques used.

Chapter 4. Brings out the details of statistical analysis of the data and discussion of result.

Chapter 5. Deals with summary of the study, major findings, conclusion, educational implications of the study and suggestions for further research in this area.

REVIEW OF RELATED LITERATURE

- *Theoretical Overview of the variables Technophilia and Social Interaction*
- *Studies Related to Technophilia*
- *Studies Related Social Interaction*
- *Studies Related to both Social Interaction and Technophilia*
- *Conclusion*

REVIEW OF RELATED LITERATURE

Review of related literature in any field of investigation has become an inevitable part of research work. Best (2010) is of strong opinion that “familiarity with the literature in any problem area helps the student to discover what is already known, what others have attempted to found out, what method of approach have been promising or disappointing and what problems remain to be solved.”

The literature in any field forms the foundation upon which all future works will be built. Researchers conduct reviews of the literature to justify proposed studies, to uncover patterns of findings in the field, to enter into scientific debate, and to discover gaps in knowledge that lead to future research questions. Research reviews are often the first step toward making discoveries and social interventions in our society.

In the words of Whitney (1961) “The investigator should find, analyze and evaluate critically every pertinent research report dealing with all problems. Further he should know it detailed, about all related research projects in progress but not yet completed or reported.”

The main goal of this work is to improve our understanding of how the technological revolution may change social life. Manuel Castells, one of the most cited scholars in the information society literature, explains the origins of Information Communication Technology from the perspective of social developments. He argues that the network is the dominant structure of society in the

information age; power, money, information and society itself is reproduced in networks. Networks can incorporate practically anything (Castells, 1998).

Computers and telecommunication networks were originally designed to process and exchange data and databases, but they were used for interpersonal communication from the very beginning. The alternative use of new devices assists ongoing social changes. Electronic mail, which is the equivalent of postal mailing, enabled more flexible and real-time one-to-one communication. Online communities have become widespread and the repertoire of their communication channels includes online discussion groups, public chat rooms, networking websites, peer-to-peer networks, weblogs, photo and video sharing websites and their various combinations.

A fundamental feature of social life is social interaction, or the ways in which people act with other people and react to how other people are acting. New media technologies can assist in increasing interaction in society by bringing generations and members of society together. As a result, it can help in bridging generational and digital divides. On the other hand however, new media technologies within society can lead to a growing privatization within social life, with individuals increasingly using technology independently rather than collectively. For that reason, the researcher set out the research problem; Relationship between Technophilia and Social interaction among higher secondary school students. The investigator want to explore if new media technologies do in fact bring the members of the society together and increase social interaction among one another, or if it leads to social divide instead.

This chapter presents the theoretical overview of the variables Technophilia and Social Interaction.

Theoretical Overview

Technophilia

Technophilia (from the Greek *techne*, "art/ artifact, skill and understanding" and *philos*, "love"), refers generally to the enthusiasm generated by the use of technology, particularly new technologies, such as: personal computers, Internet, mobile phones and even the technologies of "home cinema". The term emerged in the 1960s, is mainly used in sociology, when is examined the interaction between individuals and society.

The person attracted to technology, the "technophile" takes the most or all technologies in a positive manner, enthusiastically adopting new forms of technology and view this as a way to improve his living conditions and combat social problems (Hambrugger, 2009).

Technophilia is defined as attraction, enthusiasm of the human individual determined by the activities which involve the use of advanced technologies. It is expressed by easily adaptation to the social changes brought by technological innovations. The term technophilia is used to highlight how technology can evoke strong futuristic positive feelings. However, reverent attitude towards technology that determines technophilia can sometimes prevent a realistic assessment of environmental and social impact of technology on society.

The technophiles has no fear about the effects of technological development on society, as is the case for technophobes. Technophilia refers to technological determinism, theory emphasize that human society has not the power to resist towards the influences of technology. The technophiles enjoy using technology and focus on its egocentric benefits.

The concept of addiction is often associated negatively with technophilia, while targeting only those technophiles who become excessive and obsessive bound to the forms of technology they possess. So far as, in the eighteenth century, industrialized societies (notably the UK and France) have relied on their development and expansion of the multiplication and improvement techniques in order to obtain effective / efficient to their producers and comfort to consumers it can be said that such societies are by their nature technophiles. As technophilia is associated with the phenomenon of psychological and social "normality", the technophilia can acquire a pathological aspect.

New media consumption plays a key role in reducing barriers to technology adoption by promoting technical skills and online expertise through enjoyment of the experience. Having reviewed research on the extent of enthusiasm or even desire to use technology, this study reframes the relationship between technology adoption, enjoyment, openness, and assimilation (future use) of technology. The new technology adoption's antecedent factors comprise the extent of enjoyment when using online entertainment and communication tools: playing games, downloading applications, communicating with friends, collaborating and being in contact with other users. The consequences are digital literacy or computer and web self-efficacy

on the individual level. The next level comprises users that have acquired a deep understanding of the technology's abilities and limitations. Looking at the individual in an organizational context, for example, technological sophistication and openness are expected to characterize those managers who enjoy using online entertainment and communication tools. Thus, the model draws a line from online entertainment to technological sophistication and from online communication to openness, both assuming improved cognitive and social abilities.

Technophilia, is not only the mirror image of technophobia (Rosen et al., 1987) but leads to the adoption and usage of technology in the long run, emphasizing a certain approach to technology that reflects the qualities of a given technology. In addition, the current study offers new definitions to well-established Information system concepts, emphasizing the enthusiastic attitudes and norms toward technology. The focus on predisposed attitudes that may create positive feelings toward technology usage or the desire to use technology in the first place leads to some suggestions about the types of tasks, technological artifacts, and their creators. This aspect of the technophilia model draws from the socio-technical approach to information systems.

Technophilia is expected to link enthusiasm toward technology with its rewarded and knowledgeable adoption. Technophiles are obsessed with their gadgets. According to dumbing down theory, technophiles are dumbing down because of their obsession with technology. They are spending too much time texting and not enough time talking. Technophiles are also speaking in terms of sound bites instead

of having real conversations. And they prefer short code to actually writing meaningful sentences (Prajapati, 2018).

Technophilia refers generally to a strong enthusiasm for technology, especially new technologies such as personal computers, the Internet, mobile phones and home cinema. The technophile regards most or all technology positively, adopts new forms of technology enthusiastically, and sees it as a means to improve life and combat social problems. The term Technophilia is used as a way of highlighting how technology can evoke in humans strong positive futuristic feelings. However, the reverential attitude towards technology that Technophilia produces, which can sometimes inhibit realistic appraisals of the social and environmental impacts of technology on society. Technophiles do not fear of the effects of technological developments on society.

Theoretical overview of Social Interaction

Social interaction theory studies the ways that people engage with one another. social interaction, which is defined as a situation where the behaviors of one actor are consciously reorganized by and influence the behaviors of, another actor and vice versa. The term behavior in the broadest sense, to include the overt movements of individuals in space, the covert or mental deliberations of individuals, and the physiological processes of individuals. At its most intense level, then, social interaction is the process whereby the overt movements, covert deliberations, and basic physiology of one individual influence those of another, and vice versa. Less intense social interaction would have lower values for one or all of these basic dimensions of behavior.

In the late 1800s and early 1900s, German sociologist Max Weber rose to prominence as a social scientist. His theories on social interaction formed the basis of the field. Weber believed that sociology was a study of social action. To Weber social action was an action carried out by an individual to which an individual attached a meaning. Therefore, an action that a person does not think about cannot be a social action. For example, an accidental collision of bicycles is not a social action as they are not a result of any conscious thought process. On the other hand, a wood cutter cutting wood has a motive, an intention behind that action. It is therefore a social action. The concept of social interaction or social relationship is introduced via the concept of social action.

Weber equates action with the concept of simple movement in the environment. Action is sociologically relevant when it is social or meaningfully oriented to that of others (Adams & Sydie).

Weberian sociology, a typology is offered to denote the ways the action can be oriented: (1) rational, which is subdivided into instrumental-rational, or calculated use of the most efficient means to an end, and value-rational, or use of those means relevant for realizing some moral standard; (2) affectual, or orientations determined by feelings and emotions; and (3) traditional, or orientations dictated by custom and habit.

The process of orientation that is, the actual interpersonal practices that actors use to develop orientations toward each other, Weberian sociology gives these descriptive categories. The same is true of social relationships, or systems of mutual orientations among pluralities of actors. The two relationships highlighted here are

communal and associative; appear more frequently than other distinctions throughout Weber's sociology. Moreover, they represent more structured manifestations of the types of social action. But whether it is two, four, or six types of relationships, the logic is the same, the basic processes by which social relations are created, sustained, or changed are not discussed; instead, Weber offers a typology of relations. For Weber, communal relations are based upon either affect or tradition, associative relations rest on the rationally motivated adjustment of interests (whether value-rational or instrumental-rational) and agreement by mutual consent. Thus, this typology of relations incorporates the types of social action. Weber's typological approach can provide little in the way of understanding the topic social interaction. Weber did not discuss processes at the micro level. In the macro level the process of interaction among people is ignored (Turner, 1988).

In social action theory, Weber believes that bureaucratic organizations are the dominant institutions in society. Weber believes that bureaucracies (institutions) consist of individuals carrying out rational social actions designed to achieve the goals of bureaucracies. Weber views the whole development of modern societies in terms of a move towards rational social action. Thus modern societies are undergoing the process of rationalization.

Weber argues that all human action is directed by meanings. He identified various types of action that are distinguished by the meanings on which they are based. Affective or emotional action is based on an individual's emotional state at a particular time. Traditional action is based on established custom, people act in a certain way because of built in habits. Rational action involves a clear awareness of

goal. The social action theory gives a better understanding of actions behind human behavior, be they traditional, affective or rational.

Talcott Parsons's movement away from the micro "unit act" to macro structural analysis was much like Weber's. For Parsons adopted Weber's ideal type or typological methodology, but unlike Weber, he advocated a form of positivism or a commitment to discovering the invariant properties of the empirical world. Parsons was thus committed to developing a system of categories that analytically accentuates universal and generic properties of the social universe (Turner, 1988).

Another early contributor to social interaction theory was German-American Kurt Lewin, who developed the concept of group dynamics. Lewin was concerned with the interaction not just between individuals but between individual and the group they belong to. The main contributor of group dynamics to later theories is that human behavior result from the interaction between a person and his or her environment. Lewin wrote this theory as a mathematical equation, making behavior equal to the function of individuals and the environment.

Symbolic interactionism is a set of theories that explore social interaction from a linguistic perspective. In the first half of the 1900s, American philosopher, Sociologist and Psychologist George Herbert Mead and later his student, Herbert Blumer, developed this theory. Their main contribution is the idea that humans interpret meanings through symbols.

The relationship between people involves the use of language and symbols. It means communication through a common language is symbolic process. This is

the most common method of human societies. Human beings convey their ideas through language and it is completed by reciprocal response. All cultures develop, expand and change only through language symbolic interaction. Without language no culture can live. Through language a man memorize his previous experiences and transmits them to the following generation with a change. For this purpose man uses, telephone, wireless, telegraph, postal system, rail, road, sea and air services, all are various means of communication and transportation. Deaf and dumb convey their ideas through voice, and gestures of hands and eyes.

People are influenced by the norms and beliefs of their cultures and society. This influence can take a more personal and intimate level or a more general and widespread level that affects large numbers of people. Sociologists who study the effect of social life on society use two approaches, macrosociology (focusing on broad features of society) and microsociology (concentrating on small-scale, face-to-face social interactions). Functionalists and conflict theorists tend to use the macrosociological approach, while symbolic interactionists are more likely to use the microsociological approach. Although most sociologists specialize in one approach or the other, both approaches are necessary for a complete understanding of social life.

While functionalist and conflict theorists tend to explore broad features of social structure from a macrosociological perspective, symbolic interactionists are more inclined to examine small-scale, face-to-face social interactions from a microsociological perspective. Symbolic interactionists are especially interested in the symbols that people use to define their worlds and how these definitions, in turn,

influence human behavior. For symbolic interactionists, this may include studying stereotyping, personal space, eye contact, smiling, and body language.

According to symbolic interactionists, people surround themselves with a personal bubble that they carefully protect by controlling space, touching, and eye contact. Anthropologist Edward Hall studied how human groups have different perceptions of personal space and how much physical distance they use to keep physically apart from people in specific situations. Frequency of touching also differs across cultures. Furthermore, the meaning of touching differs not only across cultures, but also within cultures. People also protect their personal bubble by controlling eye contact. This includes the length of contact and whether it is direct or indirect.

Interaction is a two-way process whereby each individual or group stimulates the other and in varying degrees modifies the behaviour of the participants. The behaviour and personality characteristics of individual members of a group affect the behaviour of others and make a significant impact over the functioning of a group as a whole. The behaviour of each individual is affected by the behaviour of other individual. This is known as interaction process and it is the essence of social life. According to Eldredge and Merrill, “social interaction is the general process whereby two or more persons are in meaningful contact as a result of which their behaviour is modified, however slightly.” Social interaction refers to the entire range of social relationship, wherein there is reciprocal stimulation and response between individuals. Social interaction is of a dual nature, of persons with persons and of groups with groups. Social interaction is found in various forms among the society.

Between individual and individual:

It is the interaction between at least two persons. The doctor and the patient, the mother and the child, the customer and the shopkeeper are the various examples in this case.

Between individual and group:

It operates between one person and more. Teachers teaching his class, a speaker addressing the audience are its common examples.

Between group and group:

This is found between two groups of people like two teams playing match, two forces fighting against each other..

Between individuals and culture:

This form is found when the people listen to radio, see television, read newspaper enjoy pictures and observe exhibitions. Radio, T.V. cinema, newspapers, books, exhibitions, theatre, drama, circus, fairs and other socio-cultural activities are included in the Culture of a society. People have social interaction and social relationship with these media of mass communication and get social change in their life.

Every individual interacts with other individuals in order to survive. In the beginning the interaction is with parent or caretaker, later on with other individuals in the society. As interaction takes place there are cooperation, competition and conflicts emerging in these relationships. Each and every person is a social and cultural being.

It is very difficult for people to live in isolation. Human beings always live in various groups and associations. They act and behave in a certain manner. In each and every moment, the behaviour of each individual is affected by the behaviour of others. This interaction is the essence of social life.

Social structure and social interaction influence human behavior, so both macrosociology and microsociology are essential to understanding social life.

Studies related to Technophilia

An online study, conducted by Internet Ad Network firm Mindset media in partnership with Nielson online (2003), has found that early adopters of new technology often display personality traits such as strong leadership skills, dynamism and assertiveness....but some traits, such as modesty, appear to be lacking. “A lot of previous research points to wealthy young males as early adopters of technology”, said sarah weleh, lead researcher at Mindset Media. “But this study tells us that there are characteristics beyond age and gender and income that are also extremely highly correlated with tech consumption”.

Lin (2008) defines digital-natives as young people born into a world of laptops and cell phones, text and twittering and discovered that these digital-natives are spending an average of 8.5 hours each day enmeshed in digital technology. From the research it is very clear that many students are spending an exorbitant amount of time on their electronic devices, which may indicate obsession and addiction.

Eglash.R (2009) in his essay ‘Oppositional Technophilia’ said that technophilia has been routinely pathologized in the science and technology studies

literature. It is variously framed as a type of dangerous psychological deviance, a form of spiritual deficit, and a source of social destruction.

Guan & Subrahmanyam (2009) conducted a study which reports that, Internet access was available in 74 percentage of the homes of 8 to 18 years old, and in 2008, internet usage among youth 12 to 14 years old was 88 percentage in the United states, 100 percentage in the United kingdom, 98 percentage in Israel, 50 percentage in Canada, and over 70 percentage in Singapore. They noted several positive effects of students using the Internet such as youth empowerment, overall well-being, higher test scores, and an improved motivation to learn. Additionally, they indicated that the Internet is an effective tool for delivering interventions and health prevention and promotion, especially for students living below the poverty line or who do not have local access to mental health care options.

Diaz, Evans & Gallanger, (2011), in their study, found that the total amount of media use by six youth ages 8 to 18 averages 6-plus hour a day more than any other activity. Because of the relatively recent invention of smart phones and facebook and the accompanying compulsion of students to be on their phones, texting using apps and social media, there are not any longitudinal studies researching the positive and negative short and long-term impact of compulsive and addictive internet/facebook/social media use .

Nielsen (2011) study reported that in 2008, 13 to 17 year olds with a cell phone averaged 1742 text messages per month, then a few months following, it increased to 2,272 texts per month; and by mid-2009, teens passed the 2500 exchanged messages mark a couple years later, in the third quarter of 2011, the quantity of sent texts

skyrocketed to 3,417 per month, which is the equivalent of seven messages per hour. Teens are not focused on making calls via their mobile phones voice usage has declined the most among this group, from an average of 685 minutes to 572 minutes. When surveyed, the top three reasons teens said that they prefer messaging to calling was because it is faster (22 percentage), easier (21 percentage) and more fun (18 percentage).

Chun, Lee and Kim (2012) conducted a study on The integrated model of smartphone adoption: Hedonic and utilitarian value perceptions of smart phones among Korean college students. The study said that smart phones have seen an unpredictably fast adoption rate overtaking all other handled digital devices in history. The i phone, Apple's historic smart phone, sold more than 1 million units within 74 days of its release, setting a record for the fastest growth rate.

Park and Lee (2012) discovered that the correlation analysis of the intentions for Smartphone use were positively related to bonding relations but negatively related to bridging relations. In other words, smart phones can bring two friends closer together, but smart phones are not effective at building relationships between strangers that could potentially be connected through their shared experience and presence on the same social networking site.

Baer, Saran, Green and Hong (2012) conducted a study; it demonstrates that Canadian youth are spending an average of three hours a day in front of a screen. Sadly, many students observed that they could not truthfully distinguish between the length of the time they spent on the internet for school work or work-related purposes from those of non-school/non-work-related purposes.

Poli & Agrimi (2012) conducted a study and the result of the study shows that the dissemination of the internet has been rising at a mystifying pace and so have its pages; it has been estimated that more than one billion online pages exist and that there is an increase of 20 million pages per month. Accordingly, access to the internet is on the rise, the World Wide Web is exponentially growing and it is primarily the young demographic that are using the internet.

Kim (2013) conducted a study named Association between internet overuse and aggression in Korean adolescence. He cited that international research and the accompanying statistics denote that over the past decade, the total populace with fixed (wired)-broadband subscriptions in the world increased from 63.9 million to 582.6 million people, which specifies a staggering 9.1-fold increase.

McGonigal (2013) discovered a striking figure related to the amount of time the average 21 year old has spent online: 10,000 hours. This staggering number lies parallel to the time a student spends in school from fifth grade through their high school graduation, which is 10,080 hours. When taking these numbers into consideration, the average young person not the student addicted to the Internet has spent as much time online as they have in school.

Ahamadi & Saghafi (2013) reported that the internet penetration rate (IPR), which is computed as the number of internet users across the population, is a comparison tool to study each country's access level to the world wide level. Sweden (85 percentage), Denmark (83 percentage), Iceland (82 percentage), South Korea (82 percentage), The Netherlands (79 percentage), China (79 percentage),

Finland (79 percentage), Taiwan (79 percentage), Canada (78 percentage) and the United states (78 percentage) are the top ten countries with the highest IPR.

Kim, Lee, Nam and Chung (2014) reported that adolescent primarily use their smart phones for camera, MP3 and other apps that centre around entertainment, such as watching Netflix; also their study found that young adults mainly use their smart phones for SNS(Social networking sites), and the adults usually manage their schedules, contact list, email and other business related functions.

Pew Research Centre(2015) in their study reports that smart phone serves not only the portable functions of a phone, camera, game and multimedia player, but also serve thousands of mobile applications with available internet. Now the majority of Americans are using their smart phones to look up information about specific health conditions or do online banking. Because of increased usage and functionality of smart phones 46 percentage of Americans say that they couldn't live without their smart phone Also young smart phone users are especially prone to use a smart phone to avoid boredom and simply ignore other people.

Li, O'Brien, Snyder and Howard(2015) found that the amount of time students are spending on the internet daily ranged from five hours to 24/7 access due to the widespread use of mobile devices like smart phone and tablets with Wi-Fi and data coverage.

Studies related to Social Interaction

Laursen(1995) in his study Conflict and Social Interaction in Adolescent Relationships, identified differences between adolescent relationships in

self-reported patterns of daily conflict and social interaction. High school sophomores and juniors completed questionnaires detailing perceptions of exchanges in various relationships from the previous school day. Averages of 7.74 daily conflicts were reported. Conflict, defined in terms of interpersonal disagreement, was most frequent with mothers, followed by friends, romantic partners, siblings, fathers, and other adults and peers. Levels of social interaction did not account for relationship differences in conflict, as more social interaction was reported with peers than family members. Relationship differences also arose in topics of disagreement. Conflict with parents centered on responsibilities, school, and autonomy, whereas that with peers concerned friendship and heterosexuality. The results support claims that conflict is an integral component of adolescent close relationships, underscoring areas of mutual interdependence between participants that require integration of goals and behaviors.

Capalan (2003) analyzed the preference for online social interaction and the result showed that lonely and depressed individual may develop a preference for online social interaction and individual prefer for online rather than face to face social interaction.

Gelfer, J lau, c, and Higgins, k (2005) investigated the effect of teacher facilitation on the social interaction of young children during computer activities and observed that the children with and without disabilities in the teacher facilitated computer group and more positive social interaction and demonstrated more effective social behavior than the children in the computer only group.

Lukman (2008) studied social interaction and communicative construction of personal identity knowledge and reality. Result indicated that the constructional meaning in experience and action is described with lengthy foot note and most importantly communicative interaction.

Katz and Aspeden (1995) conducted the first national survey of the public's use of the internet. They reported that internet users had more total contact with family members than non users, and that they made more new friends, including those they talked with or met on the internet. The authors concluded that using the internet augments traditional communication and adds to people's social ties.

The positive impact of technology can be seen in the academic life of students. A research project on the role of technology in education reform sponsored by the Office of Educational Research and Improvement and the U.S. Department of Education (SRI, 1995) illustrated the positive impact of technology in student outcomes such as increased motivation and self-esteem, technical skills, the accomplishment of more complex tasks, more collaboration with peers, increased use of outside resources, improved design skills, and improved attention to one's audience.

McKenna and Bargh (2000), opined that media reporting of the effects of Internet use over the years has consistently emphasized this negative view to the point that, as a result, minority of (mainly older) adults refuses to use Internet at all. However, others believe that the Internet affords a new and different avenue of social interaction that enables groups and relationship to form otherwise would not be able to, thereby increasing and enhancing social connectivity. The advent of the

Internet was welcome by some as a panacea while others fear that it is a curse, all would agree that it is quite capable of transforming society.

Wellman et al.(2001) note that internet usage may sometimes interfere with communication in the home, creating a post familial family where family members spend time interacting with computers rather than with each other. The authors argued that this was because weaker ties generated online were replacing stronger offline ties with family and friends.

Morrison and Krugman (2001) argue that new media technologies can be regarded as being internal or external. Internal social functions facilitate social interaction among members of the household whilst an external social function promotes interaction with persons not physically present in the home. And new media technologies are changing the way people learn and entertain, and facilitate privatization of social activities previously conducted outside the home. For instance, the computer like many other new media technologies, such as game consoles and mobile phones can increase social interaction amongst individuals within the home.

Nie & Hillygus (2002) reported that the more time people spend using the internet during leisure time, the more time has to be detracted from social activities like communicating with friends, neighbors and family members.

Kraut et al. (2002) found that, when examined over a longer period of time, internet use was no longer associated with decreased communication and involvement with family (and the associated measures of loneliness and depression).

Anderson (2008) conducted a study on the social impact of broadband household internet access. His argument relies on the fact that the internet allows

users to conduct many daily transactions such as shopping or banking online from home. The supporters of this argument suggest that to shop and carry out a number of tasks without leaving home may reduce face to face interaction.

Bargh and Mckenna (2004) conducted a study, in this study they found that no one today disputes the fact that the internet is likely to have significant impacts on social life, but there remains substantial disagreement as to the nature and values of this impact. Several scholars have contended that internet communication is an impoverished and sterile form of social exchange compared to traditional face to face interactions. And will therefore produce negative outcomes such as loneliness and depression for its users as well as weaken the neighborhood and community ties.

Brignall and Valey (2005) analyzed the effects of technology among current cyber-youth those who have grown up with the Internet as an important part of their everyday life and interaction rituals. The two authors discovered that due to the pervasive use of the Internet in education, communication and entertainment, there has been a significant decrease in face-to-face interaction among youth. They suggest that the decrease in the amount of time youth spend interacting face-to-face may eventually have significant consequences for their development of social skills and presentation of self.

Matussitz (2005) conducted a study named Deception in the virtual world: A semiotic analysis of identity. In this study, the internet also called the 'virtual world' or 'cyber space' is both an environment and a complex system that is created and architected for the act of signification to takes place sees the internet as a combination of textual interactions and virtual worlds that enable global

communication among humans. Among the many ways of communication that cyberspace offers, Multi-Users Domains (MUDS), e mail chat lines and virtual reality simulation are examples. And be noted that one of the main concerns for the past ten years has been that the internet has fundamentally influenced social interactions among humans, to such a point that, for some of them the ‘techno culture’ (that is, the set of computer mediated relationships among individuals.) is the only culture that they know and clarify with humans, by nature, grow through social interaction that takes place in a social setting.

Mesch (2006) outlines “families with access to information and communication technology differ from those without them, not only in access to technology but in family dynamics as well”. He delineates “the introduction of new technologies such as the Internet into the household can potentially change the quality of family relationships”. Access to technology such as personal computers and laptops has made the boundary between work time and family time more permeable than ever. As a result, individuals have the opportunity to do their paid work at home. In turn, this increases the time spent together, communication and social interaction between one another. From the reviewed literature it is evident that there is positive impact as well as negative impact of technology on social interaction.

Antoci, Sabatini and Sodini (2010) conducted a study entitled see you on facebook, The Effect of Social Networking on human interaction. This study shows an environment characterized by online networking and increasing pressure on time. The model shows how time pressure encourages the choice to develop social

interactions also through online networking instead of relying exclusively on face to face encounters. The findings of the study suggest that the joint influence exerted by the reduction in leisure time and the new opportunities of participation offered by web mediated communication may progressively lead a growing share of the population to adopt networking sites as an indispensable environment for the development of interpersonal relationships.

Janke (2010) observed the effects of online forum use and student learning, engagement, and outcomes. This research study evidenced that students using an online discussion forum gave rise to a greater social construction of knowledge, thus, further validating the choice of online environments to improve learning outcomes.

Bullard (2010) indicated how student use of technology can allow for meeting technology standards set by the International Society for Technology in Education (ISTE) for students in preschool through second grade. These standards are adequately using input devices (e.g., mouse, keyboard), output devices (monitor, printer), using media and technology for directed and independent learning, communicating about technology using accurate terminology, using developmentally appropriate multimedia resources to support learning, working cooperatively and collaboratively with peers, family members, and others, demonstrating positive social and ethical behaviors when using technology, practicing responsible use of technology, and gathering information and communicating with other using technology . Furthermore, he points out that there are positive social skills, cognitive skills, and essential life skills in today's

fast-paced technological world that are learned, internalized, and practiced by students when using technology appropriately.

Plowman et al. (2010) establishes three main negative impacts that the technologisation of childhood has resulted in through television, computers and games consoles. These refer to risks that children are prone to as a result of using digital technologies on a daily basis. For instance, children's social development is at risk due to increased social isolation as children playing by themselves; their linguistic intellectual and imagination development are at risk. Furthermore, their well-being is under threat as children are spending increased time indoors, and are at risk of obesity. The main argument in this study is that opportunities for interactions with family members that promote emotional development are reduced. In other words, new media technologies are having a negative impact on the social interaction between individuals and family members within a household.

Turkle (2011), in her book *Alone Together* eloquently illuminates: Human relationships are rich and they're messy and they're demanding. And we clean them up with technology. Texting, email, posting, all of these things let us present the self as we want to be. We get to edit, and that means we get to delete, and that means we get to retouch, the face, the voice, the flesh, the body-- not too little, not too much, just right. And she admits that technology is a substitute for connecting with others face-to-face. She believes that our networked lives actually lead to us hiding from one another. Rather than talking face-to-face or even on the phone, texting is the preferred option. This can lead to misinterpreting the sender's or receiver's intent.

Furthermore, she insinuates that because we are bound to our electronic devices at all times, boredom flees but so does personal reflection and mindfulness.

Aguilar et al. (2012) noted that “social media is redefining how individuals create ties with other individuals as well as how individuals establish relationships with the organizations that serve them.” They also stress that social networking sites play a key role in peoples’ lives because they provide a space for people to communicate with friends and peer or share information, and through websites and services that encourage and facilitate participation, social media allows a person to collaborate and build communities.

Regoniel (2012) elucidated a few of the negative consequences of the Internet such as addiction, destructive and pervasive pornography, the loss of human touch, criminal activity such as phishing, scamming, credit card theft, and identity theft, and the abandonment of family.

McGrath (2012), in his study examines the relationship between new media technologies within the household and social interaction between individuals. It explores how new media technologies such as, “video games, computer games, the internet and e-mail” as well as televisions, mobile phones, Mp3 players and other types of modern technology are playing a major role in everyday life in modern society. This study set out to explore if new media technologies within the home are serving to bring different generations of the family or a household together or if it is leading to an increasing privatization within the household. Empirical data was received from four case studies which involved participant observation and semi structured interviews. The qualitative data obtained shows that new media

technologies are negatively impacting on social interaction between individuals within the household. Firstly, it emerged that new media technologies are immersed into the household and into the daily routines of individuals. Secondly, it became known that there is a close correlation between the location of new media technologies within the home and social interaction. In addition, the main findings to emerge from the research process found that new media technologies within the home are leading to increased social isolation and a privatization of people's lives within the household.

Liu and Yu (2013) performed a study whose results showed that using Facebook helped college students to obtain online social support, and that online social support is an extension of general social support, which can effectually lead to greater well-being. If there were not social and personal benefits to using Facebook, there would not be over a billion users worldwide.

Adler (2013) reported that, contrary to many researchers' beliefs that technology impacts face-to-face communication negatively, Baym, principal researcher at Microsoft Research, does not share these concerns. Rather, Baym believes that research suggests digital communications enhance relationships and that the evidence consistently shows that the more you communicate with people using devices, the more likely you are to communicate with those people face to face.

Al Sayigh (2013) noted that the new communication revolution has effected a major change in the culture and lifestyle of people, particularly of the youth. Many of the prevailing problems afflicting the youth such as introversion, social isolation,

Internet addiction, poor performance at schools, and the acquisition of bad habits and values, such as violence and criminal behavior are a direct consequence of the big change that has struck our social culture. The report added that sophisticated devices, such as iPad, pose a new challenge to Emirati families as they remain in the hands of children and are a matter of concern for many parents. Some complain that iPad has stolen their kids from them as these devices divert them from their daily studies, completing their homework, and even from communicating with the rest of the family.”

Baek, Bae & Jang (2013) reported a debate within the psychological and technological communities about whether or not the overall affect of Social Networking Sites (SNSs) is positive or negative, specifically when discussing its affect on social relationships. Some in the psychological community contend that SNSs strengthen human networks that have already been established, and thereby, those relationships can venture far beyond constrained offline relationships, which in turn diminishes loneliness and fosters interpersonal trust; however, others in the community, place emphasis on the quality of relationships formed through SNSs, and maintain that SNS relationships limit authentic face-to-face interaction, which intensifies social isolation and corrodes interpersonal trust.

Misra et al. (2014) in their study, examined the relationship between the presence of mobile devices and the quality of real life, in-person social interactions. In a naturalistic field experiment, the researchers found that conversations in the absence of mobile communication technologies were rated as significantly superior compared with those in the presence of a mobile device. People who had

conversations in the absence of mobile devices reported higher levels of empathetic concern, while those conversing in the presence of a mobile device reported lower levels of empathy

Apeanti and Danso (2014) conducted a study, they found that students think that it is more fun for their teachers to use social media. The authors also note that children think their academic performance would be better if they could contact their colleagues and teachers through social media. The authors noted also that teachers should offer class hours on social media. Researchers have tackled different methods and ways where social networking could be utilized in education.

Tartari (2015) showed that social media had a positive effect on children and teenagers. A positive impact was noticed with regard to communication abilities, information research, technical skills development, and effective use of new technology. Technology within the home has many benefits for a household and a family and it has changed the meanings of family time.

Drago (2015) conducted a study on the effect of technology on face to face communication on the students of Elon University in North Carolina. In this research, previous studies were analyzed, field observations were conducted, and an online survey was administered to determine the level of engagement individuals have with their cell phones, other technologies and with each other in face-to-face situations. Findings suggest that technology has a negative effect on both the quality and quantity of face-to-face communication. Despite individuals' awareness of the decrease of face-to-face communication as a result of technology, more than 62% of

individuals observed on Elon's campus continue to use mobile devices in the presence of others.

Gapsiso & Wilson (2015) examined the Impact of Internet on face-to-face communication in Comprehensive Secondary School, College of Education Hong. The objectives include: to examine the relationship between Internet Use and Teenager's face-to -face communication, to find out whether internet usage is weakening their desire for face-to-face communication. The study found out that the use of internet have some impact on face-to -face communication between teenager's and their friends and also appears to weaken the ties that bind them with family and friends. The study concludes that Internet use by the teenagers has reduced the time they spend engaging in face-to-face communication with their friends and family members because of the time spent on the internet.

Messina & Iwasaki (as cited in Stontz, 2015) reported that even though the Internet can deliver web-based social support and interaction, it also places them in a position of unsupervised access to potentially harmful content.

Badri et al. (2016) examined the usage of social media devices and applications among students in Abu Dhabi. A survey of more than 31,000 children from private and public schools showed a high home access to the Internet of 91.7%. Results showed that children used social media mainly for keeping contact with friends and family and for learning purposes.

Erdogan and Mustafa (2017) conducted a study; it aimed to determine social media usage habits of high school students. The data was collected from 853

students in total (419 female and 434 male). In research, “Frequency of Social Media Instruments Usage Scale” for determining usage frequency of 10 different social media instrument, and to determine the reasons of these instruments’ usage “Reasons of Social Media Usage Scale” consisting of 20-item are used for collecting data. Scales are also rated on 5-point scale. The results show that the most commonly used social media among the students participating in questionnaire is “Youtube”, and “Facebook” follows it in the second place. “MySpace” and “LinkedIn” are the least used social media sites. Top reasons of students’ social media usage are sharing document, information and opinion, and entertainment. It was determined that students do not use social media instrument for presenting themselves by using others profiles too much. Gender differences have an important impact on social media usage. Students access and use social media mostly with using their smart phones. Students spend between 1-3 hours daily on social media. Study results indicate that high school students use social media frequently for educational and entertainment purposes and use it less frequently for the purpose of social interaction.

Badri, Nuaimi, Guang & Rashedi (2017) conducted a study that uses structural equations modeling to test a hypothetical social network model with applications to a sample of 34,896 school children in Abu Dhabi. The main independent constructs in the model are related to children’s attitude with regard to social networking, reasons for using social networks, things done on social networks, and topics used. The dependent constructs cover perceived school performance and social effects of social networking. The study described the relations among the

various constructs. The effect of other variables, such as parental knowhow, is also investigated. Results support the idea of reciprocal relations among perceived performance, learning from social networking, and the social effect of social networking.

Conclusion

New technologies are having a major impact on society as a whole. The integration of such technologies into social settings within society, such as the household, education is having a major influence on social interaction between individuals. It is evident from existing literature that technologies impact on the social interaction within society in many different ways. New technologies can assist in increasing interaction within society by bringing generations and members of society together. As a result, it can help in bridging generational and digital divides. On the other hand however, new media technologies within a household/school can lead to a growing privatization within family life/school with individuals increasingly using technology independently rather than collectively.

METHODOLOGY

- *Variables of the study.*
- *Objectives of the study.*
- *Hypotheses of the study.*
- *Sample selected for the study.*
- *Tools employed for data collection.*
- *Data collection procedure.*
- *Scoring and consolidation of data.*
- *Statistical techniques used for the analysis of data.*

METHODOLOGY

The procedure or technique employed in a research study is known as methodology of research. Methodology is systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. It offers the theoretical underpinning for understanding which method, set of methods or best practices can be applied to specific result. The adopted methods and tools determine the validity of the study and accuracy of the result.

The present study is an investigation about relationship between technophilia and social interaction among Higher Secondary School students. The success of research largely depends on the suitability of the methods, tools and techniques used for the collection of data. This chapter deals with the brief and precise description of the study and design. The design of the study is described under the following major sections.

- Variables of the study.
- Objectives of the study.
- Hypotheses of the study.
- Sample selected for the study.
- Tools employed for data collection.
- Data collection procedure.
- Scoring and consideration of data.
- Statistical techniques used for the analysis of data.

Variables of the study

Variables are the conditions or characteristics that the experimenter manipulates. A variable is any measured characteristics or attributes that differs for different subject. The major objective of the study is to find out the relationship between Technophilia and Social Interaction among Higher Secondary School students.

The present study involves two variables viz., Technophilia and Social Interaction. Technophilia is the Independent variable and Social Interaction is the Dependent variable. The study involves gender, locality of the student and type of management of the school as the categorical variables.

Objectives of the study

- To find out the extent of Technophilia among Higher Secondary School students in the total sample and the relevant sub samples based on
 - Gender.
 - Locale of student.
 - Type of management of school.
- To find out the extent of Social Interaction among Higher Secondary School students for the total sample and the relevant sub sample based on
 - Gender.
 - Locale of student.
 - Type of management of school.

- To find out whether there exists any significant difference between the Male and Female Higher Secondary School students in Technophilia.
- Find out whether there exists any significance difference between the Rural and Urban Higher Secondary School students in Technophilia.
- To find out whether there exists any significant difference in Technophilia among Higher Secondary School students in the sub sample based on type of management of schools.
- To find out whether there exists any significant difference between Male and Female Higher Secondary Students in their Social Interaction.
- To find out whether there exists any significant difference in Social Interaction between Urban and Rural Higher Secondary School students.
- To find out whether there exists any significant difference in Social Interaction among Higher Secondary School students for the sub sample based on type of management schools.
- To find out whether there exists any significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub samples based on
 - Gender.
 - Locale of student.
 - Type of management of schools.

Hypotheses of the study

- There exists significant difference in the mean scores of Technophilia between Male and Female Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Urban and Rural Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Urban and Rural Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School students.

- There exists significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub sample based on
 - Gender.
 - Locale of student.
 - Type of management.

Sample selected for the study

Selection of the sample is an important aspect of any research work. A sample is a small portion of a population selected for observation and analysis, by observing the characteristics of the sample one can make certain influences about the population from which it is drawn (Best and Kahn, 2014).

Due to the limitation of conducting the study on the population, the investigator confined to a sample representing the population. The sample of the present study covers the Higher Secondary School students of Malappuram and Calicut districts and the study is carried out on a representative sample of Higher Secondary School students of Calicut and Malappuram districts. The following points were considered for the selection of sample for the study. Gender viz., male and female, locality of the student viz., rural and urban and the type of management of school viz., government, aided and unaided.

Stratified sample was used on the basis of gender, locale and the type of management of school. The study was conducted on 770 students from schools of Malappuram and Calicut districts. The sample selected is given in the table below.

Table 1

Stratification of sample

Serial no	Name of the school	Type of management
1	GHSS Vazhakkad	Government
2	GHSS Cheruvadi	Government
3	KKMHS Cheekode	Aided
4	EMEA Kondotty	Aided
5	PMSAPTHSS Kakkove	Aided
6	Markazul Uloom	Unaided
7	GHSS Thadathil Paramba	Government
8	Gallent Institute Cheekode	Unaided
9	GHSS Kuttikattur	Government
10	RHSS Ramanatukara	Aided
11	GHSS Nayarkuzhi	Government
12	GHSS Medical College Campus	Government
13	Apex-Odumbra, Calicut	Unaided
14	Apex-Eranhimavu, Calicut	Unaided
15	MES Raja Residential School, Calicut	Unaided
16	Pace Residential school for GIRLS Vettykode, Manjeri	Unaided
17	CMRHS Chennamangallur	Aided
18	ACE Public School, Manjeri	Unaided

Break –up of the sample

Table 2

Break-up of the sample

Sample	Categories	Number of students	Total
Gender	Male	367	770
	Female	403	
Locale of student	Rural	534	770
	Urban	236	
Type of management	Government	303	770
	Aided	351	
	Unaided	116	

Tools employed for the study

Data collection is one of the major parts of research process. For an effective data collection, an effective tool has to be selected and the necessary step in the preparation of the tool was to be adopted. The tool may vary as per the complexity, design, administration and interpretation of the research. The following tools were developed and standardized by the investigator with the help of supervising teacher

1. Technophilia Assessment Scale.
2. Social Interaction Scale.

Description of the tool

Technophilia Assessment Scale

The Technophilia Assessment Scale was prepared by the investigator with the help of supervising teacher to measure the variable Technophilia among Higher Secondary School students.

Planning and Preparation

The investigator initially considered various definitions available on the term Technophilia. From the various definitions and descriptions, the investigator analyzed and pooled a list of components of the Technophilia which would comprehensively represent them as per their definitions given by the investigator.

When a large number of studies were analyzed, investigator felt the need for a scale to assess 'how much the students are obsessed with technology'. Sixty four questions are prepared as a first step. The discussion with the supervising teacher made the Technophilia assessment scale with fifty seven questions.

After planning the components suitable for the variable Technophilia, Technophilia Assessment Draft Scale consists of fiftyseven items. Each item carried five responses viz., strongly agree, agree, undecided, disagree, strongly disagree.

Components of Technophilia

Technophiles take most or all technology positively, adopt new forms of technology enthusiastically and sees it as a means to improve life, whilst some may even view it as a means to combat social problems. Technophiles are always ahead

of the crowd and are the trailblazers of technology. Technophiles keep technology anchored in their daily lives.

The components for the scale on technophilia were categorized in to 14 major components on the basis of Dumbing down theory (Vinay prajapathy, 2018) and eight signs you are a technophile (Mova, 2016)

Knowledge and expertise in new technological gadgets.

It means that the knowledge and information related to the new gadgets and resourcefulness in new technology.

Example:

I use to download latest applications form play store

Adaptability.

The ability of a person to accept and use new devices and technology.

Example:

I try to download and use latest softwares in the market

Multiplicity of similar gadgets.

Make use of more than one computer, mobile phone, tablet and laptop.

Example:

I use to keep more than one phone at a time.

Impressing people to new technology or gadgets.

Make someone ready to impress with new gadgets and spark conversation.

Example:

I use to grab attention of others by using latest applications.

Fear of missing out of new technology.

It is the tendency of the people to spend more time surfing online without sleep because of the fear of missing out on the revision of the software and technological devices.

Example:

I use to surf a long time in internet for latest gaming software.

Early adoption and technological upgradation.

It is the tendency of a person to have new technological devices and to be the first person of updating and using the software and devices.

Example:

I try to download and use latest software in the market

Overreliance on technology

Complete dependence on technology digitalizing and storing the major documents, learning materials etc.

Example:

I used to store important documents in Google account

Utilization of texting mode and use of abbreviations for chatting.

Texting is preferred over talking or voice messaging. Using short codes or abbreviations to text a message.

Example:

I prefer texting over voice chats

Habit of password making

It is the behavior to set the user names and remember all the passwords for online accounts and making passwords to their devices.

Example:

More than one password makes it difficult for me to remember them.

Always being online

Feeling of experiencing separation anxiety when disconnected from the digital world. Effort of the people being online in all the time.

Example:

I never use to turn off mobile data in phone.

Utilizing of more bookmarks, multiple tabs and windows.

Utilizing of bookmarking options while surfing the internet and reading online materials. Opening multiple tabs while searching information and doing different tasks simultaneously by using windows.

Example:

I never use multiplatform facility while searching in internet.

Social Interaction in the digital realm.

Prefer to have all social interactions through digital channels, and keep up to date by reading and responding to the posts of friends and family and compelling real world friends for making online connections.

Example:

I use social networking sites to maintain communication with my friends.

Browsing history is loaded with forums and reviews.

Browsing history is loaded with the comments/discussion of the members and reviews related to new products. It also includes online accounts with lengthy saved items for future reference.

Example:

I find it difficult with long list of products saved in add to cart.

Use of complex technology

Utilization of complex software rather than using simple software as the personal scientific calculator for solving simple arithmetic.

Example:

I have activated net banking with my bank account.

Standardization of Technophilia Assessment Scale

The scale was administered on a sample of 370 higher secondary school students, selected using stratified sampling method by giving due representation to gender, subject of specialization and type of management of schools. After scoring the response sheets as per the scoring procedure they are arranged in ascending order of total score. Then the highest 27 percentage and the lowest 27 percentage were separated. The mean and standard deviation of the scores obtained for each item of the upper and lower group were calculated separately. The critical ratio for each items were calculated using the formula:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

Where:

\overline{X}_1 = Mean of sample 1

\overline{X}_2 = Mean of sample 2

N_1 = Number of subject in sample 1

N_2 = Number of subject in sample 2

σ_1^2 = Standard deviation of sample 1

σ_2^2 = Standard deviation of sample 2

Items with a critical ratio greater than or equal to 1.96 were selected for the final scale. The critical ratio obtained for each item is given in the table 3.

Table 3

Critical Ratio ('t' values) for the items of Technophilia Assessment Scale

Item no.	t - value	Item no.	t - value
1	5.42	30	7.52
2	2.27	31	7.04
3	12.38	32	7.00
4	6.24	33	1.27*
5	7.79	34	2.19
6	7.79	35	5.55
7	6.15	36	11.27
8	4.08	37	9.58
9	4.15	38	11.07
10	9.82	39	8.40
11	1.26*	40	9.51
12	7.50	41	12.25
13	10.38	42	12.75
14	10.14	43	6.92
15	10.58	44	0.00
16	9.27	45	5.52
17	6.48	46	3.79
18	9.13	47	8.63
19	10.21	48	4.40
20	0.60*	49	8.56
21	8.53	50	11.29
22	9.44	51	11.48
23	10.95	52	9.66
24	7.40	53	6.56
25	10.26	54	6.25
26	5.23	55	4.95
27	9.48	56	8.98
28	2.03	57	13.34
29	8.46		

* Indicates items that are rejected in the finalization of the scale

Preparation of the final tool

Among the fifty seven items with critical ratio greater than 1.96(table value of 't' at 0.05 level) is selected for the final scale. The four items with critical ratio less than 1.96 were rejected. The standardized Technophilia Assessment Scale contains fifty three items. There are fifty positive items and three negative items.

The copy of the final scale (Malayalam and English) is given as appendix 1 and 2.

Validity

A test is valid when the performance which it measures corresponds to the same performance as otherwise independently measured or objectively defined (Garrett, 2014, p.354).

The validity refers to degree to which a test measure. When compare with accepted criteria the validity for the scales are ensured using face validity. Content validity is the estimate how much a measure represents every single element of construct. Validity of Technophilia Assessment Scale was ensured by consulting with experts and was constructed by analyzing literature. Hence the scale has face validity.

Reliability

Test retest method was used to establish the consistency of the test over time. For this the scale was administered on a group of 40 students of eleventh standard and the same scale was administered for the same group after two weeks. The

Pearson's coefficient of correlation was calculated for the two sets of scores. The correlation coefficient obtained for Technophilia Assessment Scale is 0.80. Hence the test scores are reliable.

Social Interaction Scale

For the purpose of measuring Social Interaction among Higher Secondary School students, the investigator adopted Social Interaction Scale. The scale was prepared by Mumthas and Shameena (2008) and was modified and standardized by the investigator with the help of supervising teacher by giving due weightage to the components of social interaction viz., cooperation, competition, conflict, social contact, face-to-face/eye to eye contact, communication, interaction with peers and teachers, interaction in the household, neighborhood interaction and task initiation.

Planning and preparation of the tool

The investigator adapted the tool prepared by Mumthas and Shameena to measure Social Interaction among Higher Secondary School students. For modification of the tool, the investigator considered various definitions available for the term Social Interaction. From these definitions and various descriptions, the investigator analyzed and pooled a list of components of the term, which would comprehensively represent it as per their operational definition given by the investigator. From reviewing many studies related with Social Interaction and also from the discussion with the supervising teacher, the investigator developed a final list of relevant components for the preparation of the tool.

Components of Social Interaction

Social Interaction is an event which changes the behavior and attitude of the interacting persons. It is a social relationship among at least two persons. Interaction is a two-way process whereby each individual or group stimulates the other and in varying degrees modifies the behavior of the participants. The behavior and personality characteristics of individual members of a group affect the behavior of others and make a significant impact over the functioning of a group as a whole. The behavior of each individual is affected by the behavior of other individual. This is known as interaction process and it is the essence of social life. According to Eldredge and Merrill, "social interaction is the general process whereby two or more persons are in meaningful contact as a result of which their behavior is modified, however slightly." Social interaction refers to the entire range of social relationship, wherein there is reciprocal stimulation and response between individuals. Social interaction is of a dual nature, of persons with persons and of groups with groups. The main forms of social interaction are cooperation, competition and conflict.

The components for the scale on social interaction were categorized into ten major components on the basis of theories of social interaction.

Social Contact

Social contact is the first and important phase of interaction. Interaction is initiated by social contact refers to the connection between persons and groups. For this, social proximity (mental contact) and not the physical proximity (bodily contact) are essential. Mere physical contact of individuals does not constitute a group. That

is if there is no contact of human minds, then there is association and where there is no contact there is a state of isolation. Social contact may be positive or negative. According to Gillin and Gillin, “by social processes we mean those ways of interacting by which we can establish system of relationships or find out what happens when changes of relationships occur or what happens when changes disturb already existing modes of life.”

Example:

I wish to spend my leisure time with my friends.

Face-to-face/eye-to-eye contact

Face to face interaction is defined as the mutual influence of individual’s direct physical presence with his or her body language. Face to face interaction one of the basic elements of the social system, forming a significant part of individual socialization and experience gaining throughout one’s life time. Similarly it is also central to the development of various groups and organizations composed of those individuals.

Example:

I prefer direct conversation with my friends than through calls.

Communication

Communication is a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior.

Example:

I maintain a good relationship with my friend's parents.

Cooperation

Cooperation is most basic, pervasive and continuous social process. It generally means working together for the pursuit of common goal. Cooperation is a form of social interaction where two or more person work together to gain a common end (Merril and Eldredge, 1952). It implies a regard for the wishes, needs and aspirations of other people.

Example:

I used to participate in social awareness campaigns.

Competition

Competition is based on the fact that all people can never satisfy all their desires. According to Anderson and Parker, "Competition is that form of social action in which we strive against each other for the possession of or use of some limited material and non-material goods." According to Sutherland, Woodward and Maxwell (1961), "Competition is an impersonal, unconscious continuous struggle which, because of their limited supply, all may not have." It is for which compels people to act against one another. Competition is an unconscious, impersonal and continuous struggle between individuals and groups for satisfaction. It is a contest to obtain something which does not exist in a quantity sufficient to meet the demand.

Example:

I keep my study materials to myself and away from my classmates.

Conflict

It is an ever present process in human relations. According to Gillin and Gillin (1980) conflict is the process in which individual or groups seeks their ends by directly challenging the antagonist by violence or threat of violence. It takes place whenever a person or groups seeks to gain reward not by surpassing other competitors but by preventing them from effectively competing. Conflict is a fundamental social trait. It is a conscious action as well as personal activity. It lacks continuity but it is a universal phenomena. Causes of conflict are mainly individual differences, cultural differences, clash of interest, social change etc. Besides this, conflict serves constructive and positive ends. Conflict has both integrative and disintegrative effects.

Example:

My classmate used to consult me when there is an issue within the class.

Interaction with peers and teachers

Effective communication between teachers and students has the potential to improve the learning experience and create a positive environment in the classroom. It is the interaction of higher secondary school students with their peer groups and teachers including cooperation, adjustment and sharing of feelings.

Example:

I don't share my doubts in studies with my classmates.

Interaction in the household

It means the interaction between the family members such as sharing of feelings, money, care giving, eating together and amount of time they spend together.

Example:

I share every matter with my parents.

Neighbourhood interaction

Neighbourhood is generally defined spatially as a specific geographic area and functionally as a set of social networks. Neighbourhoods, then, are the spatial units in which face-to-face social interactions occur-the personal settings and situations where residents seek to realize common values, socialize youth, and maintain effective social control.

Example:

I maintain a good relationship with neighbours.

Task initiation

Task initiation is a skill that is important for children throughout development in school as well as in personal endeavors. Task initiation is described as the ability to begin a task independently.

Example:

I don't find any trouble in starting a conversation with strangers.

Standardization of Social Interaction Scale

The scale was administered on a sample of 370 higher secondary school students, selected using stratified sampling method by giving due representation to gender, locale of the student and type of management of schools. After scoring the response sheets, as per the scoring procedure they are arranged in ascending order of total scores. Then the highest 27 percentage and the lowest 27 percentage were separated. The mean and standard deviation of the scores obtained for each item of the upper and lower group were calculated separately. The critical ratio for each items were calculated using the formula:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

Where:

\bar{X}_1 = Mean of sample 1

\bar{X}_2 = Mean of sample 2

N_1 = Number of subject in sample 1

N_2 = Number of subject in sample 2

σ_1^2 = Standard deviation of sample 1

σ_2^2 = Standard deviation of sample 2

Items with a critical ratio greater than 1.96 were selected for the final scale.

The critical ratio obtained for individual items are given in table 4.

Table 4

Critical Ratio ('t' values) of items in the Social Interaction Scale

Item no.	t - value	Item no.	t - value
1	3.71	21	5.68
2	3.16	22	5.28
3	4.06	23	9.32
4	4.79	24	8.15
5	6.48	25	0.922*
6	5.55	26	5.75
7	1.05*	27	5.21
8	4.97	28	2.84
9	6.47	29	5.94
10	4.04	30	7.59
11	3.49	31	5.79
12	2.99	32	2.06
13	1.48*	33	5.42
14	6.31	34	0.95*
15	6.22	35	4.81
16	3.41	36	0.25*
17	8.35	37	5.54
18	7.76	38	4.57
19	8.16	39	0.80*
20	5.16	40	4.26

* Indicates items that are rejected in the finalization of the scale

Preparation of the final tool

Out of the forty statements in the Social Interaction Scale six were discarded after standardization procedure for the reason of low discrimination index. The final scale contained thirty four items. The number of positive statements is twenty seven where as there are seven negative statements.

Validity

The validity refers to degree to which a test measure. When compare with accepted criteria the validity for the scales are ensured using face validity. Content validity is the estimate how much a measure represents every single element of construct. Validity of Social Interaction Scale was prepared by giving due weightage to the ten components as specified in the social interaction theories by Sociologists. Hence the scale has content validity.

Reliability

Test retest method was used to establish the consistency of the test over time. For this the scale was administered on a group of 40 students of eleventh standard and the same scale was administered for the same group after two weeks. The Pearson's coefficient of correlation was calculated for the two sets of scores. The correlation coefficient obtained for Social Interaction Scale is 0.50. Hence the test scores are reliable.

Data collection procedure, Scoring and Consolidation of data

Administration of the tool

After finalizing the sample size, the investigator sought permission from selected Higher Secondary School principals for collecting data and made necessary arrangements for the administration of the tool. The investigator explained the nature and confidentiality of the study. Through necessary instructions, the investigator administered the Technophilia Assessment Scale and Social Interaction Scale together with personal data sheet and collected the data.

Scoring and consolidation

According to the scoring scheme of the tool prepared, all the responses were needed to score. Tools include positive as well as negative items and scores arranged according to the items. Incomplete and incorrect sheets were discarded and the response sheets were scored according to the scoring procedure. Scores of the negative items were reversely scored by the investigator. Response sheet completed in all aspects were selected for the final sample. Total scores are calculated.

Statistical techniques used for the study

Preliminary analysis

Preliminary analysis was done in order to arrive at conclusions about the nature of distribution. Preliminary analysis involves the following statistical techniques.

- i) Measures of central tendency
- ii) Standard deviation

iii) Skewness

iv) Kurtosis

Pearson’s product moment coefficient of correlation

The most often used and most precise coefficient of correlation is Pearson’s product moment coefficient of correlation. The degree of relationship between the variables, Technophilia and Social Interaction was measured and represented by the coefficient of correlation which can be calculated using the formula

$$r_{xy} = \frac{N\sum XY - (\sum X \sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where;

N = Number of pairs of scores

∑ = Denotes summation of items

∑XY = Sum of the product of paired scores

∑X = Sum of X score

∑Y = Sum of Y score

∑X² = Sum of squared X score

∑Y² = Sum of squared Y score

The value of ‘r’ obtained in the class is described in terms of:

1. Size of ‘r’.
2. Statistical significance of coefficient.
3. Direction of ‘r’.

Interpretation of computed correlation coefficient

The compound correlation coefficient between two variables is then interpreted to find out whether there exists any relationship between the two variables and if any such exists, how far the relation is significant.

The interpretation of correlation coefficient is presented in table 5.

Table 5

The interpretation of correlation coefficient

Range of computed correlation	Interpretations
0	Zero correlation, absolutely no relationship
0.21 to +/- 0.40	Slight ; almost negligible relationship
0.41 to +/- 0.60	Moderate relation, Substantial, but small relationship
0.61 to +/- 0.80	High correlation, Marked relationship
0.71 to +/- 0.99	Very high correlation
+/- 1	Perfect correlation; almost identical or opposite relationship

In this study correlation coefficient ‘r’ is used to find out relationship between Technophilia and Social Interaction among higher Secondary School students.

Test of significance of difference between means of different categories

The statistical technique test of significance of difference between means (t-test); statistical significance indicates whether or not the difference between two

group's averages most likely a 'real' difference in the population from which the group were sampled.

t-test for different categories was used to find out the difference between male/female, urban/rural, government/aided, science/commerce etc.

The tabled value for 0.01 level of significance is 2.58 and the tabled value for 0.05 level of significance is 1.96

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

Where:

\bar{X}_1 = Mean of sample 1

\bar{X}_2 = Mean of sample 2

N_1 = Number of subject in sample 1

N_2 = Number of subject in sample 2

σ_1^2 = Standard deviation of sample 1

σ_2^2 = Standard deviation of sample 2

ANALYSIS AND INTERPRETATION

- *Objectives of the Study*
- *Hypotheses of the Study*
- *Variables of the Study*
- *Preliminary analysis*
- *Major analysis*
- *Findings of the study*

ANALYSIS AND INTERPRETATION OF DATA

In chapter three, researcher had discussed the research design and methodology, origin of the research, design of the research, variable of the research, population and sample of the research, tools for data collection, procedure for data collection, statistical analysis done in research work. Data analysis is considered to be important step and heart of the research in research work. After collection of data with the help of relevant tools and techniques, the next logical step, is to analyze and interpret data with a view to arriving at empirical solution to the problem.

This chapter deals with analysis and interpretation of data described in the methodology chapter. The present study is mainly intended to find out the relationship between Technophilia and Social Interaction among Higher Secondary School students. Here done both Preliminary analysis and Major analysis to arrive solution to the problem.

Objectives of the study

- To find out the extent of Technophilia among Higher Secondary School students in the total sample and the relevant sub samples based on
 - Gender.
 - Locale of student.
 - Type of management of school.

- To find out the extent of Social Interaction among Higher Secondary School students for the total sample and the relevant sub sample based on
 - Gender.
 - Locale of student.
 - Type of management of school.
- To find out whether there exists any significant difference between the Male and Female Higher Secondary School students in Technophilia.
- Find out whether there exists any significance difference between the Rural and Urban Higher Secondary School students in Technophilia.
- To find out whether there exists any significant difference in Technophilia among Higher Secondary School students in the sub sample based on type of management of schools.
- To find out whether there exists any significant difference between Male and Female Higher Secondary Students in their Social Interaction.
- To find out whether there exists any significant difference in Social Interaction between Urban and Rural Higher Secondary School students.
- To find out whether there exists any significant difference in Social Interaction among Higher Secondary School students for the sub sample based on type of management schools.

- To find out whether there exists any significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub samples based on
 - Gender.
 - Locale of student.
 - Type of management of schools.

Hypotheses of the study

- There exists significant difference in the mean scores of Technophilia between Male and Female Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Urban and Rural Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Urban and Rural Higher Secondary School students.

- There exists significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School students.
- There exists significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub sample based on
 - Gender.
 - Locale of student.
 - Type of management.

Preliminary analysis

As the first step of analysis the investigator has done preliminary analysis. The important statistical properties of score on the variables under the study were analysed as the preliminary step. The mean, median, mode, standard deviation, Skewness, kurtosis were computed for the whole sample.

The details of the preliminary analysis for Technophilia and Social Interaction are presented in table 6.

Table 6

The details of preliminary analysis

Variable	N	Mean	Median	Mode	SD	Skewness	Kurtosis
Technophilia	770	150.63	151	159	28.60	-0.014	-0.428
Social Interaction	770	127.25	128	122	14.52	-0.304	0.397

Discussion

The important statistical constants of the selected variables for the total samples and sub samples were analyzed. The measures like mean, Medium, Mode, Standard Deviation, Skewness, and kurtosis were computed for the whole sample.

For the variable Technophilia, the values of Mean (150), Median (151) and Mode (159) are almost similar. This indicates that the distribution of the scores approximate closely what is expected for a normal curve. The values of skewness(-.014) and Kurtosis(-0.428) indicates that the distribution is negatively skewed and Platykurtic. So the variable Technophilia can be considered normally distributed.

For the variable Social Interaction also, the values of Mean (127), Median (128) and Mode (122) are almost similar. The values of Skewness (-0.304) and Kurtosis (0.397) indicates that the distribution is negatively skewed and Platykurtic. So the variable Social Interaction can be considered as normally distributed.

Graphical representation of scores of the variable Technophilia among Higher Secondary School students is represented in Figure 1.

The Histogram with Normal Probability Curve of the total score of the variables Technophilia among Higher Secondary School Students for the total sample is represented in Figure 1.

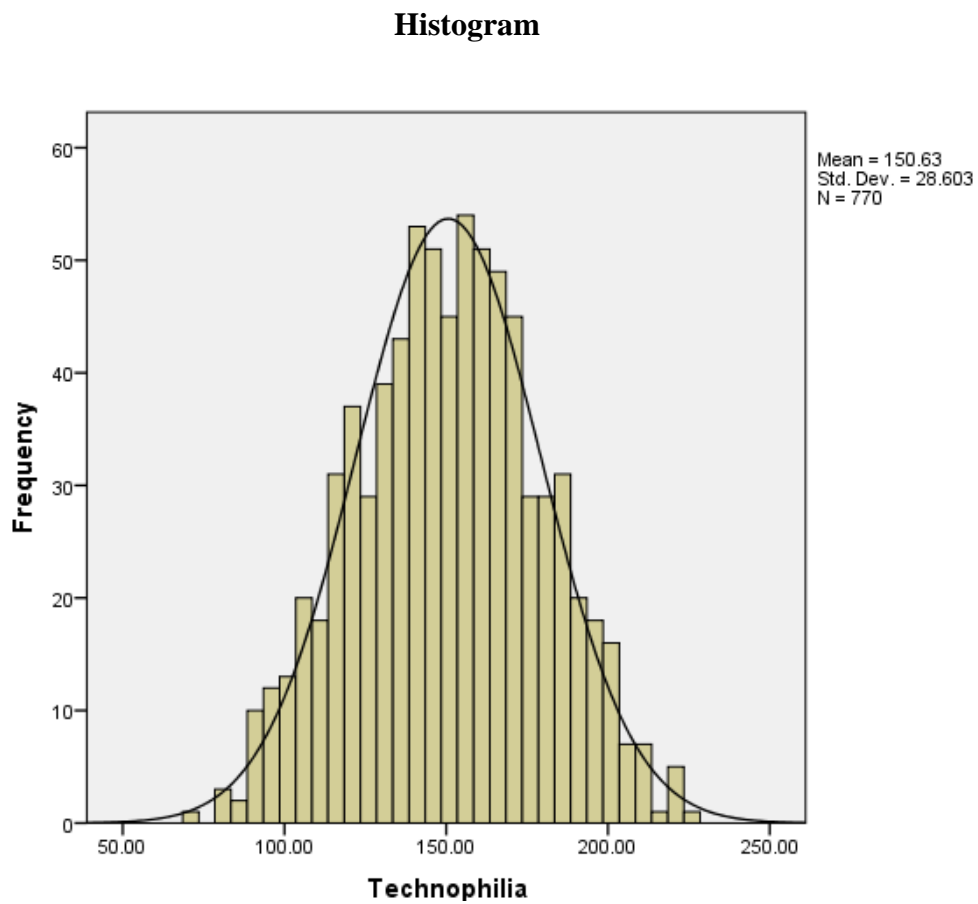


Figure 1: Frequency curve of the scores of Technophilia for the total sample.

The statistical constants and graphical representation of the variable Technophilia among Higher Secondary School students follow approximately a Normal distribution.

Graphical representation of scores of the variable Social Interaction among Higher Secondary School students is represented in Figure 2.

The Histogram with Normal Probability Curve of the total score of the variables Social Interaction among Higher Secondary School Students for the total sample is represented in Figure 2.

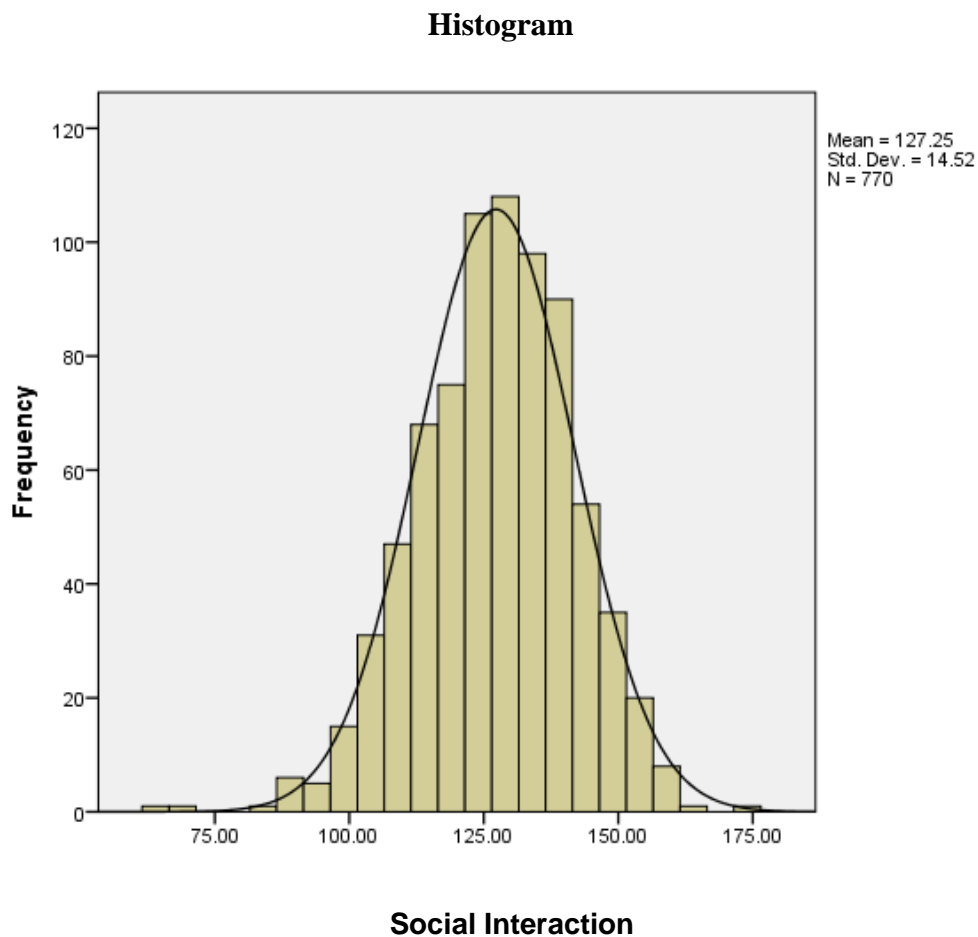


Figure 2: Frequency curve of the scores of Social Interaction for the total sample

The statistical constants and graphical representation of the variable Social Interaction of Higher Secondary School students follow approximately a Normal distribution.

Extent of Technophilia for the total sample and subsamples based on Gender, Locale of the student and The type of management of schools

The extent of Technophilia in the total sample was established by using mean and percentiles. The details are the following.

The total Score of Technophilia assessment scale is 265. The mean score obtained in Technophilia for the total sample is 150.62. It is above the half of the total score and hence the Technophilia among the Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 170, which means 75 percentages of the students scored below 170.

The mean score obtained for Technophilia for the subsample Male is 161.19. It is above the half of the total score (265) and hence the Technophilia among the Male Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 180, which means 75 percentages of the Male students scored below 180.

The mean score obtained for Technophilia for the subsample Female is 141. It is above the half of the total score (265) and hence the Technophilia among the Female Higher Secondary School students in Malappuram and Calicut district is positive. But it is moderate. The 75th percentile is 159, which means 75 percentages of the Female students scored below 159.

The mean score of Technophilia obtained by the Rural students is 147.54. It is above the half of the total score (265) and hence the Technophilia among the Rural Higher Secondary School students in Malappuram and Calicut district is

Positive. The 75th percentile is 166, which means 75 percentages of the Rural students scored below 166.

The mean score of Technophilia obtained by the Urban student is 157.61. It is above the half of the total score (265) and hence the Technophilia among the Urban Higher Secondary School students in Malappuram and Calicut district is Positive.. The 75th percentile is 181.75, which means 75 percentages of the Urban students scored below 181.75.

The mean score of Technophilia obtained by the Government students is 146.65. It is above the half of the total score and hence the Technophilia among the Government Higher Secondary School students in Malappuram and Calicut district is Positive. The 75th percentile is 167, which means 75 percentages of the Government students scored below 167.

The mean score of Technophilia obtained by the Aided students is 151.79. It is above the half of the total score and hence the Technophilia among the Aided Higher Secondary School students in Malappuram and Calicut district is Positive. The 75th percentile is 170, which means 75 percentages of the Aided students scored below 170.

The mean score of Technophilia obtained by the Unaided students is 157.70. It is above the half of the total score and hence the Technophilia among the Unaided Higher Secondary School students in Malappuram and Calicut district is Positive. The 75th percentile is 182, which means 75 percentages of the Unaided students scored below 182.

Extent of Social Interaction for the total sample and the subsamples based on Gender, Locale of the student and Type of management of school.

The total Score of Social Interaction Scale is 180. The mean score obtained in Social Interaction for the total sample is 127.25. It is above the half of the total score and hence the Social Interaction among Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 137, which means 75 percentages of the total sample scored below 137.

The mean score obtained in Social Interaction for the subsample Male students is 128.52. It is above the half of the total score (180) and hence the Social Interaction among Male Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 140, which means 75 percentages of the Male students scored below 140.

The mean score obtained in Social Interaction for the subsample Female students is 126.09. It is above the half of the total score (180) and hence the Social Interaction among Female Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 135, which means 75 percentages of the Female students scored below 135.

The mean score obtained in Social Interaction for the subsample Rural students is 128.44. It is above the half of the total score (180) and hence the Social Interaction among Rural Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 138, which means 75 percentages of the Rural students scored below 138.

The mean score obtained in Social Interaction for the subsample Urban students is 124.54. It is above the half of the total score (180) and hence the Social Interaction among Urban Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 136, which means 75 percentages of the Urban students scored below 136.

The mean score obtained in Social Interaction for the subsample Government school students is 127.39. It is above the half of the total score (180) and hence the Social Interaction among Government Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 139, which means 75 percentages of the Government students scored below 139.

The mean score obtained in Social Interaction for the subsample Aided school students is 128.98. It is above the half of the total score (180) and hence the Social Interaction among Aided Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 139, which means 75 percentages of the Aided students scored below 139.

The mean score obtained in Social Interaction for the subsample Unaided school students is 121.44. It is above the half of the total score (180) and hence the Social Interaction among Unaided Higher Secondary School students in Malappuram and Calicut district is remarkably positive. But it is not high. The 75th percentile is 132, which means 75 percentages of the Unaided students scored below 132.

Major Analysis

Comparison of the Mean scores of Technophilia between Male and Female Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Technophilia between Male and Female Higher Secondary School students. Comparison of the total mean scores of Technophilia between Male and Female Higher Secondary School Students was done and the result obtained is presented in the table 7.

Table 7

Data and results of the test of significance of difference in Technophilia between Male and Female Higher Secondary School Students

Variable	Groups	N	Mean	SD	t-value	Level of significance
Technophilia	Male	367	161.19	26.39	10.44	0.01
	Female	403	141.00	27.12		

From the table 7, it was found that the mean scores of Technophilia obtained for Male and Female Higher Secondary School Students are 161.19 and 141 respectively. It also shows that the standard deviations are 26.39 and 27.12 respectively. Male and female students differ significantly in the mean scores of Technophilia as the t-value obtained 10.44 is above 2.58 the required value for significance at 0.01 level. Hence it can be interpreted as there exists significant difference in the mean scores of Technophilia between Male and Female Higher

Secondary School Students. An estimation of mean score indicated Male students are more Technophilic when compared to that of Females.

Discussion

The analysis of the above data shows that there is significant difference in the mean scores of Technophilia between Male and Female Higher Secondary School Students. Hence it can be concluded that Male students are more Technophilic than Female students.

Comparison of the Mean scores of Technophilia between Rural and Urban Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Technophilia between Rural and Urban Higher Secondary School students. Comparison of total mean scores of Technophilia between Rural and Urban Higher Secondary School Students was done and the result obtained is presented in the table 8.

Table 8

Data and results of the test of significance of difference in Technophilia between Rural and Urban Higher Secondary School Students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Technophilia	Rural	534	147.54	27.80	4.56	0.01
	Urban	236	157.61	29.22		

From the table 8, it was found that the mean scores of Technophilia obtained for Rural and Urban Higher Secondary School Students are 147.54 and 157.61 respectively. It also shows that the standard deviations are 27.80 and 29.22 respectively. Rural and Urban students differ significantly in the mean scores of Technophilia as the t-value obtained 4.56 is above 2.58 the required value for significance at 0.01 level. Hence it can be interpreted as there exists significant difference in the mean scores of Technophilia between Rural and Urban Higher Secondary School Students.

Discussion

The analysis of the above data shows that there is significant difference in the mean scores of Technophilia between Rural and Urban Higher Secondary School Students. An estimation of mean scores indicated Urban students are more technophilic than Rural students.

Comparison of the Mean scores of Technophilia between Government and Aided Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School students. Comparison of total mean scores of Technophilia between Government and Aided Higher Secondary School Students was done and the result obtained is presented in the table 9.

Table 9

Data and results of the test of significance of difference in Technophilia between Government and Aided Higher Secondary School Studentsphilic than Rural students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Technophilia	Government	303	146.65	28.36	2.33	0.05
	Aided	351	151.79	27.79		

From the table 9, it was found that the mean scores of Technophilia obtained for Government and Aided Higher Secondary School Students are 146.65 and 151.79 respectively. It also shows that the standard deviations are 28.36 and 27.79 respectively. Government and Aided students differ significantly in the mean scores of Technophilia as the t-value obtained 2.33 is above 1.96 the required value for significance at 0.05 level. Hence it can be interpreted as there exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School Students.

Discussion

The analysis of the above data shows that there is significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School Students. An estimation of mean score indicated Aided students are more technophilic than Government students.

Comparison of the Mean scores of Technophilia between Government and Unaided Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School students. Comparison of total mean scores of Technophilia between Government and Unaided Higher Secondary School Students was done and the result obtained is presented in the table 10.

Table 10

Data and results of the test of significance of difference in Technophilia between Government and Unaided Higher Secondary School Students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Technophilia	Government	303	146.65	28.36	3.4	0.01
	Unaided	116	157.70	30.32		

From the table 10, it was found that the mean scores of Technophilia obtained for Government and Unaided Higher Secondary School Students are 146.65 and 157.70 respectively. It also shows that the standard deviations are 28.36 and 30.32 respectively. Government and Unaided students differ significantly in the mean scores of Technophilia as the t-value obtained 3.4 is above 2.58 the required value for significance at 0.01 level. Hence it can be interpreted as there exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School Students.

Discussion

The analysis of the above data shows that there is significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School Students. An estimation of mean score indicated Unaided students are more technophilic than Government students.

Comparison of the Mean scores of Technophilia between Aided and Unaided Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School students. Comparison of total mean scores of Technophilia between Aided and Unaided Higher Secondary School Students was done and the result obtained is presented in the table 11.

Table 11

Data and results of the test of significance of difference in Technophilia between Aided and Unaided Higher Secondary School Students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Technophilia	Aided	351	151.79	27.79	1.86	Not significant
	Unaided	116	157.70	30.32		

From the table 11, it was found that the mean scores of Technophilia obtained for Aided and Unaided Higher Secondary School Students are 151.79 and 157.70 respectively. It also shows that the standard deviations are 27.79 and 30.32 respectively. Aided and Unaided students do not differ significantly in the mean

scores of Technophilia as the t-value obtained 1.86 is even below 1.96 the value of t for significance at 0.05 level. Hence it can be interpreted as there is no significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School Students.

Discussion

The analysis of the above data shows that there is no significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School Students. This indicates that Aided and Unaided students are similar in their Technophilia.

Comparison of the Mean scores of Social Interaction between Male and Female Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School students. Comparison of total mean scores of Social Interaction between Male and Female Higher Secondary School Students was done and the result obtained is presented in the table 12.

Table 12

Data and results of the test of significance of difference in Social Interaction between Male and Female Higher Secondary School Students

Variable	Groups	N	Mean	SD	t-value	Level of significance
Social Interaction	Male	367	128.53	14.98	2.33	0.05
	Female	403	126.10	14.01		

From the table 12, it was found that the mean scores of Social Interaction obtained for Male and Female Higher Secondary School Students are 128.53 and 126.10 respectively. It also shows that the standard deviations are 14.98 and 14.01 respectively. Male and Female students differ significantly in the mean scores of Social Interaction as the t-value obtained 2.33 is above 1.96 the required value for significance at 0.05 level. Hence it can be interpreted as there exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School Students.

Discussion

The analysis of the above data shows that there exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School Students. Male students have higher Social Interaction than the female students.

Comparison of the Mean scores of Social Interaction between Rural and Urban Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Social Interaction between Rural and Urban Higher Secondary School students. Comparison of total mean scores of Social Interaction between Rural and Urban Higher Secondary School Students was done and the result obtained is presented in the table13.

Table 13

Data and results of the test of significance of difference in Social Interaction between Rural and Urban Higher Secondary School Students

Variable	Groups	N	Mean	SD	t-value	Level of significance
Social Interaction	Rural	534	128.44	14.20	3.46	0.01
	Urban	236	124.54	14.90		

From the table 13, it was found that the mean scores of Social Interaction obtained for Rural and Urban Higher Secondary School Students are 128.44 and 126.54 respectively. It also shows that the standard deviations are 14.20 and 14.90 respectively. Rural and Urban students differ significantly in the mean scores of Social Interaction as the t-value obtained 3.46 is above 2.58 the required value for significance at 0.01 level. Hence it can be interpreted as there exists significant difference in the mean scores of Social Interaction between Rural and Urban Higher Secondary School Students.

Discussion

The analysis of the above data shows that there exists significant difference in the mean scores of Social Interaction between Rural and Urban Higher Secondary School Students. Rural and urban students differ significantly in the mean scores of social interaction as the t-value obtained 3.46 is above 2.58 the required value for significance at 0.01 level. An estimation of mean score indicated Rural students are more socially interactive than Urban students.

Comparison of the Mean scores of Social Interaction between Government and Aided Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School students. Comparison of total mean scores of Social Interaction between Government and Aided Higher Secondary School Students was done and the result obtained is presented in the table 14.

Table 14

Data and results of the test of significance of difference in Social Interaction between Government and Aided Higher Secondary School Students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Social Interaction	Government	303	127.40	15.23	1.41	Not significant
	Aided	351	129.00	13.65		

From the table 14, it was found that the mean scores of Social Interaction obtained for Government and Aided Higher Secondary School Students are 127.40 and 129.00 respectively. It also shows that the standard deviations are 15.23 and 13.65 respectively. Government and Aided students do not differ significantly in the mean scores of Social Interaction as the t-value obtained 1.46 is below 1.96 the required value for significance at 0.05 level. Hence it can be interpreted as there is no significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School Students.

Discussion

The analysis of the above data shows that there is no significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School Students. Government and Aided Higher Secondary School students are similar in their Social Interaction.

Comparison of the Mean scores of Social Interaction between Government and Unaided Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School students. Comparison of total mean scores of Social Interaction between Government and Unaided Higher Secondary School Students was done and the result obtained is presented in the table 15.

Table 15

Data and results of the test of significance of difference in Social Interaction between Government and Unaided Higher Secondary School Students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Social interaction	Government	303	127.40	15.23	3.84	0.01
	Unaided	116	121.44	13.80		

From the table 15, it was found that the mean scores of Social Interaction obtained for Government and Unaided Higher Secondary School Students are 127.40 and 121.44 respectively. It also shows that the standard deviations are 15.23

and 13.81 respectively. Government and Unaided students differ significantly in the mean scores of Social Interaction as the t-value obtained 3.84 is above 2.58 the required value for significance at 0.01 level. Hence it can be interpreted as there exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School Students.

Discussion

The analysis of the above data shows that there exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School Students. Government and Unaided students differ significantly in the mean scores of social interaction as the t-value obtained 3.84 is above 2.58 the required value for significance at 0.01 level. An estimation of mean score indicated Government students are more socially interactive than unaided students.

Comparison of the Mean scores of Social Interaction between Aided and Unaided Higher Secondary School Students.

In this analysis, the investigator compared the significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School students. Comparison of total mean scores of Social Interaction between Aided and Unaided Higher Secondary School Students was done and the result obtained is presented in the table 16.

Table 16

Data and results of the test of significance of difference in Social Interaction between Aided and Unaided Higher Secondary School Students.

Variable	Groups	N	Mean	SD	t-value	Level of significance
Social Interaction	Aided	351	129.00	13.65	5.18	0.01
	Unaided	116	121.44	13.80		

From the table 16, it was found that the mean scores of Social Interaction obtained for Aided and Unaided Higher Secondary School Students are 129.00 and 121.44 respectively. It also shows that the standard deviations are 13.65 and 13.80 respectively. Aided and Unaided students differ significantly in the mean scores of Social Interaction as the t-value obtained 5.18 is above 2.58 the required value for significance at 0.01 level. Hence it can be interpreted as there exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School Students.

Discussion

The analysis of the above data shows that there exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School Students. Aided and Unaided students differ significantly in the mean scores of social interaction as the t-value obtained 5.18 is above 2.58 the required value for significance at 0.01 level. An estimation of mean score indicated Aided students are more socially interactive than Unaided students.

Relationship between Technophilia and Social Interaction among Higher Secondary School Students for the total sample and subsamples.

The collected data were analysed to find out the relationship between Technophilia and Social Interaction among Higher Secondary School Students for the total sample and subsamples based on Gender, Locale of the student and Type of management of schools. The coefficient of correlation (r) shows the relationship between the two variables. Details are given in table 17.

Table 17.

Coefficient of Correlation between Technophilia and Social Interaction among Higher Secondary School students.

Sl.No:	Sample	Correlation (r)
1	Total	0.090
2	Male	0.125
3	Female	0.007
4	Rural	0.153
5	Urban	0.029
6	Government	0.082
7	Aided	0.163
8	Unaided	0.017

The Coefficient of Correlation between Technophilia and Social Interaction among Higher Secondary School students were analyzed for the total sample and the subsamples, based on Gender, Locality of the student and Type of management of schools.

Discussion

The Coefficient of Correlation between Technophilia and Social Interaction among Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.090, which shows that Significant positive correlation is found between the mean scores of Technophilia and social interaction in the total sample. The association between these two variables is significant at 0.05 level. The magnitude of 'r' indicates that there exists negligible positive correlation between the variables, Technophilia and Social Interaction for the total sample of Higher Secondary School students.

The Coefficient of Correlation between Technophilia and Social Interaction among Male Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.125, which shows that Significant positive correlation is found between the mean scores of Technophilia and social interaction in the subsample. The association between these two variables is significant at 0.05 level. It is evident from the result that when Technophilia increases Social Interaction will also increase, and Vice versa.

The Coefficient of Correlation between Technophilia and Social Interaction among Female Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.007, which shows that negligible positive correlation is found between the mean scores of Technophilia and Social Interaction in the subsample.

The Coefficient of Correlation between Technophilia and Social Interaction among Rural Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.153, which shows that there exists significant positive correlation between the mean scores of Technophilia and Social Interaction in the subsample. The association between these two variables is significant at 0.01 level.

The Coefficient of Correlation between Technophilia and Social Interaction among Urban Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.029, which shows that there exists significant positive correlation is found between the mean scores of Technophilia and Social Interaction in the subsample.

The Coefficient of Correlation between Technophilia and Social Interaction among Government Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.082, which shows there is significant positive correlation is found between the mean scores of Technophilia and Social Interaction in the subsample. It is evident from the result that when Technophilia increases Social Interaction will also increase, and Vice versa.

The Coefficient of Correlation between Technophilia and Social Interaction among Aided Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.163, which shows there is significant positive correlation is found between the mean scores of Technophilia and Social Interaction in the subsample. The association between these two variables is significant at 0.01

level. It is evident from the result that when Technophilia increases Social Interaction will also increase, and Vice versa.

The Coefficient of Correlation between Technophilia and Social Interaction among Aided Higher Secondary School students was analyzed. Coefficient of Correlation 'r' for the total sample is 0.017, which shows there is significant positive correlation is found between the mean scores of Technophilia and Social Interaction in the subsample.

Findings of the study

1. The extent of Technophilia is in a moderate level among Higher Secondary School students for total sample (mean=150.62), Male (161.19), Female (141), Rural (147.54), Urban (157.61), Government (146.65), Aided (151.69) and Unaided (157.70).
2. The extent of Social Interaction is in a moderate level among Higher Secondary School students for total sample (mean=127.25), Male (128.52), Female (126.09), Rural (128.44), Urban (124.54), Government (127.39), Aided (128.98) and Unaided (121.44).
3. There exists significant difference in the mean scores of Technophilia between male and female Higher Secondary School students at 0.01 level (t=10.44)
4. There exists significant difference in the mean scores of Technophilia between Rural and Urban Higher Secondary School Students at 0.01 level (t=4.56)

5. There exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School Students at 0.05 level ($t=2.33$)
6. There exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School Students at 0.01 level ($t=3.49$)
7. There exists no significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School Students at 0.05 level ($t=1.86$).
8. There exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School Students at 0.05 level ($t=2.33$).
9. There exists significant difference in the mean scores of Social Interaction between Rural and Urban Higher Secondary School Students at 0.01 level ($t=3.46$).
10. There exists no significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School Students at 0.05 level ($t=1.41$).
11. There exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School Students at 0.01 level ($t=3.65$).

12. There exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School Students at 0 .01 level (5.13).
13. There exists a significant positive relationship between Technophilia and Social Interaction among higher secondary school students ($r=0.090$).
14. There exists a significant positive relationship between Technophilia and Social Interaction among Male higher secondary school students ($r=0.125$).
15. There exists a positive relationship between Technophilia and Social Interaction among Female higher secondary school students ($r= 0.007$).
16. There exists significant positive relationship between Technophilia and Social Interaction among Rural higher secondary school students ($r= 0.153$).
17. There exists positive relationship between Technophilia and Social Interaction among Urban higher secondary school students ($r= 0.029$).
18. There exists positive relationship between Technophilia and Social Interaction among Government higher secondary school students ($r= 0.082$).
19. There exists significant positive relationship between Technophilia and Social Interaction among Aided higher secondary school students ($r= 0.163$).
20. There exists positive relationship between Technophilia and Social Interaction among Unaided higher secondary school students ($r= 0.017$).

SUMMARY, FINDINGS, CONCLUSIONS AND SUGGESTIONS

- *Restatement of the Problem*
- *Variables of the Study*
- *Objectives of the Study*
- *Hypotheses of the Study*
- *Methodology*
- *Findings of the Study*
- *Conclusions*
- *Feasibility of Hypotheses*
- *Educational Implications of the Study*
- *Suggestion for Further Research*

SUMMARY, FINDINGS, CONCLUSIONS AND SUGGESTIONS

This chapter provides a retrospective view of the study, major findings, tenability of hypotheses, educational implications and suggestions for further research.

Restatement of the problem

The present investigation was entitled “TECHNOPHILIA AND SOCIAL INTERACTION AMONG HIGHER SECONDARY SCHOOL STUDENTS”.

Variables

III. Independent Variable

“Technophilia” was considered as the independent variable.

IV. Dependent variable

“Social interaction” was considered as the dependent variable

Objectives of the study

- To find out the extent of Technophilia among Higher Secondary School students in the total sample and the relevant sub samples based on
 - Gender.
 - Locale of student.
 - Type of management of school.

- To find out the extent of Social Interaction among Higher Secondary School students for the total sample and the relevant sub sample based on
 - Gender.
 - Locale of student.
 - Type of management of school.
- To find out whether there exists any significant difference between the Male and Female Higher Secondary School students in Technophilia.
- Find out whether there exists any significance difference between the Rural and Urban Higher Secondary School students in Technophilia.
- To find out whether there exists any significant difference in Technophilia among Higher Secondary School students in the sub sample based on type of management of schools.
- To find out whether there exists any significant difference between Male and Female Higher Secondary Students in their Social Interaction.
- To find out whether there exists any significant difference in Social Interaction between Urban and Rural Higher Secondary School students.
- To find out whether there exists any significant difference in Social Interaction among Higher Secondary School students for the sub sample based on type of management schools.
- To find out whether there exists any significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub samples based on
 - Gender.

- Locale of student.
- Type of management of schools.

Hypotheses of the study

- There exists significant difference in the mean scores of Technophilia between Male and Female Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Urban and Rural Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Urban and Rural Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School students.
- There exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School students.

- There exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School students.
- There exists significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub sample based on
 - Gender.
 - Locale of student.
 - Type of management.

Methodology

Method

For the present study survey method is employed as the method of research.

Sample

The investigator conducted the present study on a sample of 770 Higher Secondary School Students at plus one level, from Calicut and Malappuram districts drawn by stratified sampling technique giving the due representation to gender, locale of student and type of management of school.

Tools

- Technophilia Assessment Scale was developed and standardized by the investigator with the help of supervising teacher.

- Social Interaction Scale was developed by Mumthas and Shameena (2008) and was modified and standardized by the investigator with the help of supervising teacher.

Data collection procedure

The investigator got permission from the heads of the institution of selected schools. After getting permission, Technophilia Assessment Scale and Social Interaction Scale administered on students with clear instruction. After completing the responses the investigator collected the response sheets and scored it based on the scoring key.

Statistical techniques used

- Preliminary statistical techniques like Mean, Median, Mode, Skewness and Kurtosis.
- Test of significance of difference between means (t-test).
- Pearson's product moment coefficient of correlation

Findings of the study

1. The extent of Technophilia is in a moderate level among Higher Secondary School students for total sample (mean=150.62), Male (161.19), Female (141), Rural (147.54), Urban (157.61), Government (146.65), Aided (151.69) and Unaided (157.70).
2. The extent of Social Interaction is in a moderate level among Higher Secondary School students for total sample (mean=127.25), Male (128.52),

Female (126.09), Rural (128.44), Urban (124.54), Government (127.39), Aided (128.98) and Unaided (121.44).

3. There exists significant difference in the mean scores of Technophilia between male and female Higher Secondary School students at 0.01 level (t=10.44)
4. There exists significant difference in the mean scores of Technophilia between Rural and Urban Higher Secondary School Students at 0.01 level (t=4.56)
5. There exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School Students at 0.05 level (t=2.33)
6. There exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School Students at 0.01 level (t=3.49)
7. There exists no significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School Students at 0.05 level (t=1.86).
8. There exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School Students at 0.05 level (t=2.33).

9. There exists significant difference in the mean scores of Social Interaction between Rural and Urban Higher Secondary School Students at 0.01 level ($t=3.46$).
10. There exists no significant difference in the mean scores of Social Interaction between Government and Aided Higher Secondary School Students at 0.05 level ($t=1.41$).
11. There exists significant difference in the mean scores of Social Interaction between Government and Unaided Higher Secondary School Students at 0.01 level ($t=3.65$).
12. There exists significant difference in the mean scores of Social Interaction between Aided and Unaided Higher Secondary School Students at 0.01 level ($t=5.13$).
13. There exists a significant positive relationship between Technophilia and Social Interaction among higher secondary school students ($r=0.090$).
14. There exists a significant positive relationship between Technophilia and Social Interaction among Male higher secondary school students ($r=0.125$).
15. There exists a positive relationship between Technophilia and Social Interaction among Female higher secondary school students ($r=0.007$).
16. There exists significant positive relationship between Technophilia and Social Interaction among Rural higher secondary school students ($r=0.153$).

17. There exists positive relationship between Technophilia and Social Interaction among Urban higher secondary school students ($r= 0.029$).
18. There exists positive relationship between Technophilia and Social Interaction among Government higher secondary school students ($r= 0.082$).
19. There exists significant positive relationship between Technophilia and Social Interaction among Aided higher secondary school students ($r= 0.163$).
20. There exists positive relationship between Technophilia and Social Interaction among Unaided higher secondary school students ($r= 0.017$).

Conclusion

Analysis and interpretation of data helps to discover solutions to the research problem. In the preliminary analysis it was found out the level of Technophilia and Social Interaction among Higher Secondary School Students, and the study reveals that it is in a moderate level. Major analysis shows that the comparison of the mean scores of Technophilia and Social Interaction among Higher Secondary School Students for the total sample and the subsamples. The study reveals that there exists a significant difference in Technophilia between male and female, Rural and Urban, Government and Aided and Government and Unaided Higher Secondary School Students. The study also shows that there exists no significant difference in the mean scores of Technophilia among Aided and Unaided Higher Secondary School students. The study also reveals that there exists significant difference in the mean scores of Social Interaction between male and female, Urban and Rural, Government-Unaided and Aided - Unaided Higher Secondary School students. The study reveals that there

exists no significant difference in the mean scores of Social Interaction between Government and aided Higher Secondary School students. The study reveals that there exists significant positive relationship between Technophilia and Social Interaction among Higher Secondary School Students for the total sample and the subsamples based Gender, Locale of the student and Type of management of schools.

Tenability of Hypotheses

The first Hypothesis states that “there exists significant difference between the Male and Female Higher Secondary School students in Technophilia”. The study reveals that there exists a significant difference between Male and Female Higher Secondary School students in their Technophilia ($t=10.44$). Hence the first Hypothesis is accepted.

The second Hypothesis states that “there exists significant difference between the Urban and Rural Higher Secondary School students in Technophilia”. The study reveals that there exists a significant difference between Rural and Urban Higher Secondary School students in their Technophilia ($t=-4.56$). Hence the second Hypothesis is accepted.

The third Hypothesis states that “there exists significant difference in the mean scores of Technophilia between Government and Aided Higher Secondary School students”. The study reveals that there exists significant difference in the mean scores of Technophilia between Government and Aided ($t=2.33$). Hence the Hypothesis accepted.

The fourth Hypothesis states that “there exists significant difference in the mean scores of Technophilia between Government and Unaided Higher Secondary School students”. The study reveals that there exists significant difference in the mean scores of Technophilia between Government and Unaided ($t= 3.49$). Hence the Hypothesis is accepted.

The fifth Hypothesis states that “there exists significant difference in the mean scores of Technophilia between Aided and Unaided Higher Secondary School students”. The study reveals that there is no significant difference in the mean scores of Technophilia between Aided and Unaided ($t= 1.93$). Hence the Hypothesis is rejected.

The sixth Hypothesis states that “there exists significant difference in the mean scores of Social Interaction between Male and Female Higher Secondary School students”. The study reveals that there exists significant difference in the mean scores of Social Interaction between Male and Female ($t= 2.33$). Hence the Hypothesis is accepted.

The seventh Hypothesis states that “there exists significant difference in the mean scores of Social Interaction between Urban and Rural Higher Secondary School students”. The study reveals that there exists significant difference in the mean scores of Social Interaction between Urban and Rural ($t=3.46$). Hence the Hypothesis is accepted

The eighth Hypothesis states “that there exists significant difference in the mean scores of Social Interaction between Government and aided Higher Secondary School students”. The study reveals that there exists no significant difference in the

mean scores of Social Interaction between Government and Aided ($t=1.41$). Hence the Hypothesis is rejected.

The ninth Hypothesis states that “there exists significant difference in the mean scores of Social Interaction between Government and unaided Higher Secondary School students”. The study reveals that there exists significant difference in the mean scores of Social Interaction between Government and Unaided ($t=3.65$). Hence the Hypothesis is accepted.

The tenth Hypothesis states that “there exists significant difference in the mean scores of Social Interaction between aided and unaided Higher Secondary School students”. The study reveals that there exists significant difference in the mean scores of Social Interaction Aided and Unaided ($t=5.13$). Hence the Hypothesis is accepted.

The eleventh Hypothesis states that “there exists significant relationship between Technophilia and Social Interaction among Higher Secondary School students for the total sample and the sub sample based on Gender, Locale of the student and Type of management of students”. The study reveals that Significant positive correlation is found between the mean scores of Technophilia and Social Interaction in the total sample($r=0.090$), Male students($r=0.125$), Rural students($r=0.153$) and Aided students($r=0.163$). The study also reveals that no significant positive correlation is found between the mean scores of Technophilia and Social Interaction in the Female students($r=0.007$), Urban students($r=0.029$), Government students($r=0.082$) and Unaided students($r=0.017$). Hence the Hypotheses are partially accepted.

Educational Implications

In the present study the investigator attempted to find out the relationship between Technophilia and Social Interaction among Higher Secondary School students. The result revealed that there is a significant positive relationship between Technophilia and Social Interaction among Higher Secondary School students.

Based on the findings of the study the investigator put forward the following implications in the field of education by using technological innovations and there by increasing social interaction among the students.

- Through technology embedded classroom the teacher can improve social interaction among all types of students.
- Necessary training should be provided to the teachers to make use of the technological innovations and gadgets in teaching learning process of their own discipline.
- Smart classrooms should be equipped with internet services and other technological innovative gadgets.
- By merging facilities of technology in education like virtual class rooms, flipped classrooms students are able to understand the concept very quickly and easily by incorporating multisensory approach in learning.
- Through the development of online interactive learning environment such as Social networking sites, Online discussion forum, Blogs, Individual websites etc. the teacher can maintain the relationship with the students in their learning and can also promote the interaction between the learners.

Suggestions for Further Research

The findings of the study and limitations encountered in the present study helped the investigator to suggest the following for further research.

- The study can be replicated on samples from different levels of education.
- Study can be conducted to find out the effect of social network usage on social commitment.
- A comparative study can be conducted in higher secondary school students of various states in India.
- A study can be conducted to find out the relationship of digital literacy and technophobia among the Higher Secondary School teachers.
- A study can be conducted to find out the influence of social media on social interaction.
- A study can be conducted to find out the technology addiction and related problems among students.

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APPENDICES

FAROOK TRAINING COLLEGE, CALICUT

TECHNOPHILIA ASSESSMENT SCALE (FINAL)

Dr. T.K. Umer Farooque

Asst. Professor

Farook Training College

Dilshad C. K

M. Ed Student

Farook Training College

Instructions

Some of the statements are given below to examine your social commitment. For each statement there given five responses, strongly agree, agree, undecided, disagree, strongly disagree. Put (✓) mark for your responses. Give one response for each statement. Your response should keep confidential. It should be used for research purpose only.

1. I prefer using latest model smartphones.
2. I never try to know about usage of latest softwares.
3. I try to download and use latest softwares in the market.
4. I use to download latest applications from playstore.
5. I select games after checking its rating.
6. I prefer playing new games.
7. I prefer using Windows 10 operating system.
8. I depend on Google for information about softwares.
9. I learn to install softwares from tutorials.
10. My friends get help from me for buying new electronic gadgets.
11. I have knowledge about applications related to different operating system.
12. I use to check the reviews from website before buying a new phone.
13. I use to keep more than one phone at a time.
14. I use to enjoy when others asking me about my phone.
15. I use to grab attention of others by using new applications.
16. I feel it difficult when I see new phones with my friends.

Appendices

17. I use mobile phones continuously for more than 2 hours.
18. I use to surf a long time in internet for latest free gaming softwares.
19. I use to keep record of curricular and extracurricular activities in phone.
20. I get news from online channels.
21. I used to store important documents in Google account.
22. I save class timetable in my mobile phone.
23. I prefer storing study materials in phone memory over taking Photostat of them.
24. I prefer texting over voice chats.
25. I use Whats app to inform my classmates about important information's.
26. I used to know about latest applications from others phones.
27. I use short codes for texting in Whats app.
28. I use more than one email account.
29. I use to read books using reading softwares.
30. I make use of bookmark feature while using internet.
31. I never use Multitab facility while searching in internet.
32. I use to avail facility of using database from different search engine to know about same topic.
33. I use more than one application at a time in laptop.
34. I use social networking sites to maintain communication with my friends.
35. I use to gather information about new products through blogs.
36. I find it difficult to be active in all whatsapp groups as I am a member of more than one group.
37. I use to communicate with my friends through Skype.
38. I use GPS facility to travel to different places.
39. I use to purchase products online.
40. I find it confusing with long list of products available online.
41. I find it difficult with long list of products saved in add to cart.
42. I never use to turn off mobile data in phone.

Appendices

43. I enjoy browsing in my free time.
44. More than one password makes it difficult for me to remember them.
45. I like to read electronic copies of magazines.
46. I spare even my sleep to search online about new advancements in technology.
47. I use to depend on electronic newspapers to get updated on news.
48. I find it difficult when my internet gets disconnected.
49. I use the facility of net banking for recharging mobile phones.
50. I have activated net banking with my bank account.
51. I find it difficult to do more than one work at a time in laptop.
52. My friends use to force me to install video calling apps in my phone.
53. I try to get all new technological gadgets as soon as possible

FAROOK TRAINING COLLEGE, CALICUT
TECHNOPHILIA ASSESSMENT SCALE (FINAL)

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താഴെ കൊടുത്തിരിക്കുന്ന പ്രസ്താവനകൾക്ക് നിങ്ങളുടെ പ്രതികരണങ്ങൾ ഉത്തരക്കടലാസിൽ രേഖപ്പെടുത്തുക. ഓരോ പ്രസ്താവനകൾക്കും പൂർണ്ണമായി യോജിക്കുന്നു, യോജിക്കുന്നു, അഭിപ്രായമില്ല, വിരോധിക്കുന്നു, പൂർണ്ണമായി വിരോധിക്കുന്നു എന്നീ അഞ്ച് വിധത്തിലുള്ള പ്രതികരണങ്ങൾ കൊടുത്തിട്ടുണ്ട്. ഉത്തരക്കടലാസിൽ അതാത് പ്രസ്താവനകളുടെ നമ്പറിന് നേരെ നിങ്ങളുടെ പ്രതികരണം ✓ മാർക്ക് ഉപയോഗിച്ച് രേഖപ്പെടുത്തുക. ചോദ്യപേപ്പറിൽ ഒന്നും തന്നെ എഴുതരുത്.

1. സ്മാർട്ട്ഫോണുകളിൽ ലോഗ്‌ഇൻ ഉപയോഗിക്കാൻ താല്പര്യപ്പെടുന്നത്.
2. പുതിയ സോഫ്റ്റ്‌വെയറുകളുടെ ഉപയോഗത്തെക്കുറിച്ച് പഠിക്കാറുണ്ട്.
3. വിപണിയിൽ ഇറങ്ങുന്ന സോഫ്റ്റ്‌വെയറുകൾ ഉടൻ തന്നെ ഡൗൺലോഡ് ചെയ്ത് ഉപയോഗിക്കാറുണ്ട്.
4. പുതിയ ആപ്ലിക്കേഷനുകൾ ഡൗൺലോഡ് ചെയ്യാൻ പ്ലേസ്റ്റോറിനെയാണ് ആശ്രയിക്കുന്നത്.
5. റേറ്റിംഗ് നോക്കിയാണ് ഗെയിമുകൾ കളിക്കാൻ തിരഞ്ഞെടുക്കുന്നത്.
6. ഗെയിമുകളിൽ പുതിയത് കളിക്കാനാണ് താല്പര്യപ്പെടുന്നത്.
7. ഓപ്പറേറ്റിംഗ് സിസ്റ്റമായി വിന്റോസ് 10 സോഫ്റ്റ്‌വെയറാണ് ഉപയോഗിക്കാൻ താല്പര്യപ്പെടുന്നത്.
8. സോഫ്റ്റ്‌വെയറുകളെക്കുറിച്ചറിയാൻ ഗൂഗിളിനെയാണ് ആശ്രയിക്കുന്നത്.

9. സോഫ്റ്റ്‌വെയർ എങ്ങനെ ഇൻസ്റ്റാൾ ചെയ്യണമെന്നത് ട്യൂട്ടോറിയലുകളിലൂടെയാണ് പഠിക്കുന്നത്.
10. സുഹൃത്തുക്കൾ പുതിയ സാങ്കേതിക ഉപകരണങ്ങൾ വാങ്ങാൻ വേണ്ടി എന്റെ സഹായം തേടാറുണ്ട്.
11. ഓരോ ഓപ്പറേറ്റിംഗ് സിസ്റ്റത്തിനും യോജിച്ച ആപ്ലിക്കേഷനുകളെക്കുറിച്ച് അറിവുണ്ട്.
12. പുതിയ ഫോൺ വാങ്ങുന്നതിനു മുമ്പ് തന്നെ അതിന്റെ റിവ്യൂ വെബ്സൈറ്റിൽ നിന്ന് ശേഖരിക്കാറുണ്ട്.
13. ഒന്നിലധികം മൊബൈൽഫോൺ സ്വന്തമായി ഉപോഗിക്കുന്നുണ്ട്.
14. എന്റെ ഫോണിനെക്കുറിച്ച് മറ്റുള്ളവർ ചോദിക്കുന്നതിൽ ആനന്ദം അനുഭവിക്കാറുണ്ട്.
15. പുതിയ ആപ്ലിക്കേഷനുകൾ ഉപയോഗിക്കുന്നതിലൂടെ മറ്റുള്ളവരുടെ ശ്രദ്ധ പിടിച്ചുപറ്റാൻ ശ്രമിക്കാറുണ്ട്.
16. സുഹൃത്തുക്കളുടെ പക്കൽ കാണുന്ന പുതിയ ഫോൺ എന്നെ അലോസരപ്പെടുത്താറുണ്ട്.
17. മൊബൈൽ ഫോൺ രണ്ട് മണിക്കൂറിലധികം തുടർച്ചയായി ഉപയോഗിക്കാറുണ്ട്.
18. ഫ്രീ ഗെയിമിന് സോഫ്റ്റ്‌വെയറുകളുടെ പുതിയ പതിപ്പിന് വേണ്ടി ദീർഘസമയം നെറ്റിൽ തിരയാറുണ്ട്.
19. പാവ്യാപാഠ്യേതര പ്രവർത്തനങ്ങൾ മൊബൈലിൽ സൂക്ഷിക്കാറാണ് പതിവ്.
20. സാങ്കേതികവിദ്യയിലെ പുതിയ പ്രവണതകൾ അറിയാൻ ഉറക്കമിളച്ച് ഓൺലൈനിൽ തിരയാറുണ്ട്.
21. പ്രധാനപ്പെട്ട രേഖകൾ ഗൂഗിൾ അക്കൗണ്ടിൽ സൂക്ഷിക്കാറുണ്ട്.
22. ക്ലൗഡ് ടൈംടേബിൾ മൊബൈൽ ഫോണിൽ സൂക്ഷിച്ചുവെക്കാറുണ്ട്.
23. പാഠഭാഗങ്ങളുടെ നോട്ടുകൾ ഫോട്ടോസ്റ്റാറ്റ് എടുക്കാതെ ഫോൺ മെമ്മറിയിൽ സൂക്ഷിക്കാറാണ് പതിവ്.
24. വോയ്സ് ചാറ്റിങ്ങിനേക്കാളേറെ ടെക്സ്റ്റ് ചാറ്റിങ്ങിനാണ് താല്പര്യപ്പെടുന്നത്.

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25. സഹപാഠികളെ അറിയിക്കേണ്ട കാര്യങ്ങൾ വാട്സആപ്പിലൂടെയാണ് പങ്കുവെക്കാറുള്ളത്.
26. പുതിയ ആപ്ലിക്കേഷനുകളെക്കുറിച്ച് മറ്റുള്ളവരുടെ ഫോണിൽ നിന്നാണ് അറിയുന്നത്.
27. വാട്സആപ്പിൽ ഷോർട്ട് കോഡുകൾ ഉപയോഗിച്ചാണ് ചാറ്റ് ചെയ്യാറുള്ളത്.
28. ഒന്നിൽ കൂടുതൽ ഇമെയിൽ അക്കൗണ്ടുകൾ ഉപയോഗിക്കുന്നുണ്ട്.
29. ഒന്നിലധികം പാസ്‌വേഡുകൾ ഉള്ളത് ഓർമ്മിക്കാൻ പ്രയാസപ്പെടാറുണ്ട്.
30. ഇന്റർനെറ്റ് ഉപയോഗിക്കുമ്പോൾ ബുക്ക്മാർക്കിംഗ് സൗകര്യം ഉപയോഗിക്കാറുണ്ട്.
31. ഇന്റർനെറ്റിൽ ഒന്നിൽകൂടുതൽ ടാബുകൾ ഓപ്പൺ ചെയ്ത് സെർച്ച് ചെയ്യുന്ന സൗകര്യം ഉപയോഗപ്പെടുത്താറുണ്ട്.
32. ഒരു പാഠഭാഗത്തെക്കുറിച്ച് അറിയാൻ വ്യത്യസ്ത സെർച്ച് എൻജിൻ നൽകുന്ന ഡാറ്റാബേസ് ഒരേ സമയം ഉപയോഗപ്പെടുത്താറുണ്ട്.
33. ലാപ്ടോപ്പിൽ ഒരേ സമയം ഒന്നിലധികം ആപ്ലിക്കേഷനുകൾ ഉപയോഗിക്കാൻ സാധിക്കാറുണ്ട്.
34. സുഹൃത്തുക്കളുമായി ആശയവിനിമയം നടത്താൻ സോഷ്യൽ നെറ്റ്‌വർക്കിംഗ് സൈറ്റുകളെയാണ് ആശ്രയിക്കുന്നത്.
35. ബ്ലോഗുകൾ വഴി പുതിയ പ്രൊഡക്റ്റുകളെക്കുറിച്ച് അറിയാൻ ശ്രമിക്കാറുണ്ട്.
36. ഒന്നിലധികം വാട്സആപ്പ് ഗ്രൂപ്പിൽ അംഗമായതുകൊണ്ട് എല്ലാ ഗ്രൂപ്പുകളിലും പ്രവർത്തന നിരതനാവാൻ പ്രയാസപ്പെടാറുണ്ട്.
37. സ്കൈപ്പ് ഉപയോഗിച്ച് സുഹൃത്തുക്കളുമായി ആശയവിനിമയം നടത്താറുണ്ട്.
38. മറ്റു സ്ഥലങ്ങളിലേക്ക് യാത്ര പോവാൻ GPS സംവിധാനം ഉപോഗപ്പെടുത്താറുണ്ട്.
39. ഓൺലൈൻ ഷോപ്പിംഗിലൂടെയാണ് ഉൽപ്പന്നങ്ങൾ വാങ്ങുന്നത്.
40. ഓൺലൈൻ ഷോപ്പിംഗ് സൈറ്റിലെ സാധനങ്ങളുടെ നീണ്ട നിര ആശയക്കുഴപ്പം ഉണ്ടാക്കാറുണ്ട്.

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41. ആഡ് ടു കാർട്ടിൽ സേവ് ചെയ്ത ഉല്പന്നങ്ങളുടെ നീണ്ട ലിസ്റ്റ് അലോസരപ്പെടുത്താറുണ്ട്.
42. ഫോണിൽ മൊബൈൽ ഡാറ്റാ ഓഫ് ചെയ്യാറില്ല.
43. ഒഴിവുസമയങ്ങളിൽ ബ്രൗസിംഗ് നടത്താനാണ് ഇഷ്ടപ്പെടുന്നത്.
44. റീഡിംഗ് സോഫ്റ്റ്‌വെയറുകൾ ഉപയോഗിച്ച് പുസ്തകങ്ങൾ വായിക്കാറുണ്ട്.
45. മാഗസിനുകളുടെ ഇലക്ട്രോണിക് കോപ്പി വായിക്കാനാണ് ഇഷ്ടപ്പെടുന്നത്.
46. ഓൺലൈൻ ചാനലുകളിലൂടെയാണ് വാർത്തകൾ അറിയുന്നത്.
47. വാർത്തകൾ അറിയാൻ ഇലക്ട്രോണിക് പത്രങ്ങളെയാണ് ആശ്രയിക്കുന്നത്.
48. ഇന്റർനെറ്റ് ഡിസ്കണക്ട് ആകുന്നത് എന്നെ പ്രയാസപ്പെടുത്താറുണ്ട്.
49. മൊബൈൽ റീചാർജ്ജ് ചെയ്യാൻ നെറ്റ് ബാങ്കിംഗ് സൗകര്യം ഉപയോഗിക്കാറുണ്ട്.
50. സ്വന്തം അക്കൗണ്ടിൽ നെറ്റ് ബാങ്കിൽ ആക്ടിവേറ്റ് ചെയ്തിട്ടുണ്ട്.
51. ലാപ്ടോപ്പിൽ ഒരേ സമയം ഒന്നിലധികം പ്രവൃത്തികൾ ചെയ്യാറുണ്ട്.
52. സൂപ്പർമാർക്കറ്റുകളുടെ ഫോണിൽ വീഡിയോ കോളിംഗ് സോഫ്റ്റ്‌വെയറുകൾ ഇൻസ്റ്റാൾ ചെയ്യാൻ നിർബന്ധിക്കാറുണ്ട്.
53. പുതുതായി ഇറങ്ങുന്ന സാങ്കേതിക ഉപകരണങ്ങൾ ഉടൻ സ്വന്തമാക്കാൻ ശ്രമിക്കാറുണ്ട്.

FAROOK TRAINING COLLEGE, CALICUT

SOCIAL INTERACTION SCALE (FINAL)

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Instructions

Some of the statements are given below to examine your social commitment. For each statement there given five responses, Always, Often, Sometimes, Rarely, Never. Put (✓) mark for your responses. Give one response for each statement. Your response should keep confidential. It should be used for research purpose only.

1. I used to discuss studies related matters with the teachers.
2. I don't share my personal life and emotions with friends.
3. I wish to spend my leisure time with my friends.
4. I used to discuss the current affairs with elders.
5. I actively participate in all studies related activities.
6. I help those who are back in their level of studying.
7. I maintain a good relationship with my friend's parents.
8. I used to play with my friends in the play ground during afternoon.
9. I share every matter with my parents.
10. I always have my food with my family.
11. I prefer direct conversation with my friends than through calls.
12. I used to participate in social awareness campaigns.
13. I maintain a good relationship with neighbors.
14. I am not able to participate in public service in my locality.
15. I used to work as volunteer in social service units.
16. I actively participate in all the events in my neighborhood.

Appendices

17. I take part in student welfare campaigns that promote in student achievements.
18. I help my friends to complete their works in studies.
19. I don't try to find time to visit my relatives.
20. I spend time with my old classmates.
21. I use to work as a member of active clubs in my native place.
22. I actively participate and organize events for the clubs.
23. I try to help and sort the issues that my friends face.
24. I feel happy when i hang out with my friends.
25. I like to spend time with people from different cultures and traditions.
26. My classmate used to consult me when there is an issue with in the class.
27. I put in my maximum effort to all group works assigned to us.
28. I keep a good and intimate relationship with my siblings.
29. I don't share my doubts in studies with my classmates.
30. I try my best to solve the issues between friends and bring them back together.
31. I ask for guidance and assistance when it is hard for me to reach the goal.
32. I never try to be a part of social service activities.
33. I help my friends to keep them away from negative preferences.
34. I prefer direct guidance from the teachers for better education.

FAROOK TRAINING COLLEGE, CALICUT
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Farook Training College

നിർദ്ദേശങ്ങൾ

താഴെ കൊടുത്തിരിക്കുന്ന പ്രസ്താവനകൾക്ക് നിങ്ങളുടെ പ്രതികരണങ്ങൾ ഉത്തരക്കടലാസിൽ രേഖപ്പെടുത്തുക. ഓരോ പ്രസ്താവനകൾക്കും എല്ലായ്പ്പോഴും, മിക്കപ്പോഴും, ഇടയ്ക്കിടെ, അപൂർവ്വമായി, ഒരിക്കലുമില്ല എന്നീ അഞ്ച് വിധത്തിലുള്ള പ്രതികരണങ്ങൾ കൊടുത്തിട്ടുണ്ട്. ഉത്തരക്കടലാസിൽ അതാത് പ്രസ്താവനകളുടെ നമ്പറിന് നേരെ നിങ്ങളുടെ പ്രതികരണം ✓ മാർക്ക് ഉപയോഗിച്ച് രേഖപ്പെടുത്തുക. ചോദ്യപേപ്പറിൽ ഒന്നും തന്നെ എഴുതരുത്.

1. പഠനസംബന്ധമായ സംശയങ്ങൾ അധ്യാപകരുമായി ചർച്ച ചെയ്യാറുണ്ട്.
2. സ്വകാര്യദുഃഖങ്ങൾ സൂഹ്യത്തുക്കളുമായി പങ്കുവെക്കാറുണ്ട്.
3. വിശ്രമവേളകളിൽ സൂഹ്യത്തുക്കളുടെ കൂടെ ഇരിക്കാനാണ് താല്പര്യപ്പെടുന്നത്.
4. ആനുകാലിക സംഭവങ്ങളെക്കുറിച്ച് മുതിർന്നവരുമായി ചർച്ച ചെയ്യാറുണ്ട്.
5. പാഠ്യപാഠ്യേതര പ്രവർത്തനങ്ങളിൽ സജീവമായി പങ്കെടുക്കാറുണ്ട്.
6. പഠനത്തിൽ എന്നേക്കാൾ താഴ്ന്ന നിലവാരത്തിലുള്ള സൂഹ്യത്തുക്കളെ സഹായിക്കാറുണ്ട്.
7. സൂഹ്യത്തുക്കളുടെ വീട്ടുകാരുമായി സുദൃഢമായ ബന്ധം പുലർത്താറുണ്ട്.

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8. വൈകുന്നേരങ്ങളിൽ സൂഹൃത്തുക്കളുമായി ഗ്രൗണ്ടിൽ കളികളിൽ ഏർപ്പെടാറുണ്ട്.
9. മാതാപിതാക്കളുമായി എല്ലാ കാര്യങ്ങളും പങ്കുവെക്കാറുണ്ട്.
10. കുടുംബാംഗങ്ങളുമായി ഒരുമിച്ചിരുന്നാണ് ഭക്ഷണം കഴിക്കാറുള്ളത്.
11. സൂഹൃത്തുക്കളുമായി ഫോണിൽ സംസാരിക്കുന്നതിനേക്കാൾ നേരിട്ട് സംസാരിക്കാനാണ് താല്പര്യപ്പെടുന്നത്.
12. ജനകീയ ബോധവൽക്കരണ പരിപാടികളിൽ പങ്കെടുക്കാറുണ്ട്.
13. അയൽവാസികളുമായി നല്ലബന്ധം പുലർത്താറുണ്ട്.
14. നാട്ടിലെ പൊതുപ്രവർത്തനങ്ങളിൽ പങ്കാളിയാകാറുണ്ട്.
15. സന്നദ്ധപ്രവർത്തനങ്ങളിൽ വളണ്ടിയർ ആയി പ്രവർത്തിക്കാറുണ്ട്.
16. അയൽപക്കങ്ങളിൽ നടക്കുന്ന എല്ലാ പരിപാടികളിലും സജീവമായി പങ്കെടുക്കാറുണ്ട്.
17. വിദ്യാർത്ഥികളുടെ ആവശ്യങ്ങൾ നേടിയെടുക്കുന്നതിനുള്ള പ്രവർത്തനങ്ങളിൽ പങ്കാളിയാകാറുണ്ട്.
18. സഹപാഠികളുടെ പാഠ്യപ്രവർത്തനങ്ങൾ പൂർത്തീകരിക്കുന്നതിന് സഹായിക്കാറുണ്ട്.
19. ബന്ധുവീടുകളിൽ സന്ദർശനം നടത്താറുണ്ട്.
20. പഴയ സഹപാഠികളുടെ കൂടെ സമയം ചിലവഴിക്കാറുണ്ട്.
21. നാട്ടിലെ സന്നദ്ധ സംഘടനകളിൽ അംഗമായി പ്രവർത്തിക്കുന്നുണ്ട്.
22. ക്ലബുകൾ സംഘടിപ്പിക്കുന്ന പരിപാടികളിൽ നേതൃപരമായ പങ്ക് വഹിക്കാറുണ്ട്.
23. സൂഹൃത്തുക്കളുടെ പ്രശ്നപരിഹാരത്തിന് മാർഗ്ഗനിർദ്ദേശങ്ങൾ നൽകാറുണ്ട്.
24. കൂട്ടുകാരുമായി നേരിട്ട് ഇടപഴകുമ്പോൾ സന്തോഷം ലഭിക്കാറുണ്ട്.

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25. വ്യത്യസ്ത സംസ്കാരമുള്ള വ്യക്തികളുമായി ഇടപഴകാൻ താല്പര്യം കാണിക്കാറുണ്ട്.
26. ക്ലാസിലെ പ്രശ്നങ്ങൾക്ക് പരിഹാരം കാണാൻ സഹപാഠികൾ എന്നോട് ആവശ്യപ്പെടാറുണ്ട്.
27. ഗ്രൂപ്പ് പ്രവർത്തനങ്ങളിൽ എന്റെ കഴിവുകൾ പരമാവധി ഉപയോഗിക്കാറുണ്ട്.
28. സഹോദരങ്ങളുമായി സുദൃഢമായ ബന്ധമാണ് കാത്തുസൂക്ഷിക്കുന്നത്.
29. പാഠ്യപാഠ്യേതര വിഷയങ്ങളിലുണ്ടാകുന്ന സംശയങ്ങൾ സഹപാഠികളോട് പങ്കുവെക്കാറുണ്ട്.
30. സുഹൃത്തുക്കൾ തമ്മിൽ അഭിപ്രായഭിന്നതകൾ ഉണ്ടാകുമ്പോൾ അവരെ രമ്യപ്പെടുത്താൻ കഴിയാറുണ്ട്.
31. സ്വയം ചെയ്യാൻ ബുദ്ധിമുട്ടുള്ള കാര്യങ്ങളിൽ മറ്റുള്ളവരുടെ സഹായം തേടാറുണ്ട്.
32. ജീവകാരുണ്യ പ്രവർത്തനങ്ങളിൽ പങ്കാളിയാകാറുണ്ട്.
33. സഹപാഠികളിലെ ദുസ്വഭാവങ്ങൾ മാറ്റാൻ ശ്രമിക്കാറുണ്ട്.
34. അധ്യാപകരിൽ നിന്നും നേരിട്ട് പഠിക്കാനാണ് താല്പര്യപ്പെടുന്നത്.

FAROOK TRAINING COLLEGE
TECHNOPHILIA ASSESSMENT SCALE

RESPONSE SHEET

Name:

Class:

Gender: M/F

Name of School:

Locality of student: Rural/Urban

Type of Management: Govt./Aided/Unaided

No	പൂർണ്ണമായി യോജിക്കുന്നു	യോജിക്കുന്നു	അഭിപ്രായമില്ല	വിയോജിക്കുന്നു	പൂർണ്ണമായി വിയോജിക്കുന്നു
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FAROOK TRAINING COLLEGE

SOCIAL INTERACTION SCALE

RESPONSE SHEET

Name:

Class:

Gender: M/F

Name of School:

Locality of student: Rural/Urban

Type of Management: Govt./Aided/Unaided

No	എല്ലായ്പ്പോഴും	മിക്കപ്പോഴും	ഇടയ്ക്കിടെ	അപൂർവ്വമായി	ഒരിക്കലുമില്ല
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No	എല്ലായ്പ്പോഴും	മിക്കപ്പോഴും	ഇടയ്ക്കിടെ	അപൂർവ്വമായി	ഒരിക്കലുമില്ല
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