Indian Journal of Science Communication

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Internet radio in science education: A case study of *Muktha Vidya Vani* and *Gyan Dhara*

Intellectual Property Rights' violations and international cooperation documents: Case of Iran

Natural catastrophe: An anthropological perspective

India's Space Odyssey: Chandrayanam in Mohiniyattam at IISF-2018

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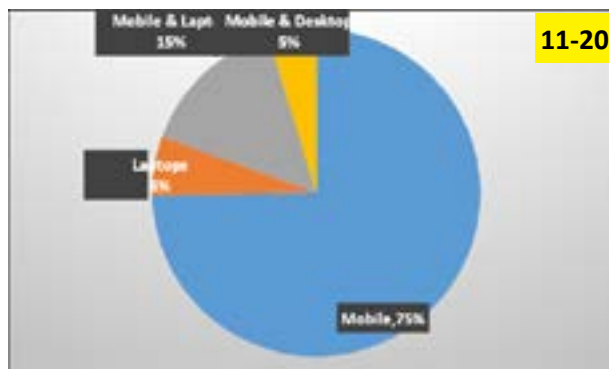
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COVER

Folklore is yet another innovative form of science communication. International Science Literature & Film Festival at IISF-2018, Chennai presented Bharatnatyam, Kuchipudi and Thirayattam depicting scientific themes. The major attraction was a performance "India's Space Odyssey: Chandrayanam in Mohiniyattam".

Scientoon:
Visitors to Antarctica may Harm Penguins by Infecting Them
Artificial sweeteners are Harmful to Guts bacteria

Tackling issues of fake news and ethics in science communication

*T*he written word has been the basis of authentic information and a reliable source of concepts, knowledge and thoughts. For long time in the modern era until now the written word had more value than the spoken word. However, in the recent times the current trends of mass media and social media seem to have deviated from this fundamental bearing and created a kind of illusion over the authenticity of content, be it text, photo, video, audio or info-graphics. A number of fake news are entering the domain of science and technology and challenging the way people view and trust the information, i.e. written, printed, published and broadcast. Generally, in case of any debate, confusion or difference of opinion, people tend to ask "where is it written?" Scientific research also progresses by citing references of earlier published works, but in the age of fast moving social media where fake news are pouring in, it becomes extremely difficult to know the truth and avoid confusion, misunderstanding and resultant ill effects.

The advent of new and easy to handle technologies and techniques ironically makes it possible to create, recreate, manipulate, design, and propagate such illicit information on fast and multiple manner with a cascading effect in the society. Similarly, the business driven companies do sponsor research and support publications that have consequential impact on science and society. It has become quite important that whenever some contradictory information appears in media, it has to be examined from the perspectives "who funds the particular research?" Such incidents of paid news and fake news have become the way of life today and are widespread everywhere. Various communication channels such as whats-app groups, email groups and other such platforms circulate information very fast. The present ethical framework finds it difficult to handle and address such issues as they mainly emerge out of the idea of making profit, creating confusion and misleading society. Therefore, it is pertinent to not only check such practices but have a pragmatic and effective mechanism in place with an ethical and legal framework to curb the flow of spurious information in the name of science and allow the actual science and science coverage to flourish. The present state of affair is full of a range of such incidences and we need to device ways and means to keep away from such propaganda of false science news and tackle them from the raising-head.

Communication of scientific ideas and technological solutions could lead to positive societal transformation by empowering not only the public at large but also policymakers and decision-makers to help them make informed choices to smoothen development and progress. While on the one hand there is a need to ensure the proliferation of information about scientific breakthroughs among the common masses, on the other hand, new challenges have emerged today in the field of science communication. These include among several others paid news, fake news, propaganda and several other issues with ethical dimensions. As social media and social networking are spreading their wings rapidly, so are fake news and paid news. The paid news and fake news phenomenon is widespread and has become a major concern in the field of science and innovation. Hence, it is important to alleviate the spread of false information.

The National Institute of Science Communication and Information Resources (CSIR-NISCAIR) in association with the Indian National Science Academy (INSA) and the Association of Academies & Societies of Sciences in Asia (AASSA), South Korea, will be organizing AASSA-INSA-NISCAIR Regional Workshop on SHARE (Science Health Agriculture Risk Environment) Communication with a focal theme "Science Breakthroughs: Paid News, Fake News and Ethics" during February 20-22, 2019 in New Delhi. The workshop seeks to bring together a diverse array of partners from AASSA member countries in Asia-pacific region, to deliberate on communication strategies and innovative initiatives in communication, especially for the scientific organizations to avoid and deal with such issues of fake news, paid news and ethics, especially when it comes to reporting science breakthroughs. Scientists, communicators and policymakers from several Asian countries will also deliberate on the ethical issues that have cropped up in recent times with regard to scientific information dissemination due to the promotion of business interests, access to social media channels and availability of hands-on affordable gadgets.

CSIR-NISCAIR, for instance, has started a short term course on "social media communication" which, among other subjects, takes care of training on modern tools and techniques to identify and eliminate fake news. Some organizations and websites offer guidelines and tips to combat the menace of fake news. Whats-app has restricted its forwarding tool to only 5 and has started giving advertisements to refrain from spread of fake news. Google runs a short course on verification of content circulated on social media to overcome the problems of fake news. Of course, the information age offers immense benefits, and right information at right time is considered as a boon, at the same time, the issues like fake news, are the perils of information age and need to be tackled properly. Information literacy could be a step forward in this direction through which people should be able to distinguish between good or bad and true or false information!

Prof. Dr. Manoj Kumar Patairiya

Internet radio in science education: A case study of *Muktha Vidya Vani* and *Gyan Dhara*

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The internet radio became popular after availability of huge data at low costs. Today, streaming of music and entertainment programmes on several websites are on demand including general information and news. Muktha Vidya Vani, an internet based radio of National Institute of Open Schooling (NIOS), Gyan Dhara, another internet radio by Indira Gandhi National Open University (IGNOW) are good examples of spreading knowledge through the web radio. The authors have studied both of them and found that the need and demand exist for internet radio for dissemination of educational information. NIOS is an open schooling institution which caters to the needs of heterogeneous groups of learners up to pre–degree level. It was started as a project with in-built flexibilities by the Central Board of Secondary Education in 1979. In 1986, the National Policy of Education suggested strengthening of open schooling system in order to extend open learning facilities, in a phased manner, at secondary level all over the country as an independent system with its own curriculum and examinations leading to certification. NIOS has created state of the art audio and video studios. The video programmes of NIOS are being telecast by the educational TV channel Gyan Darshan and also through the public broadcaster, Doordarshan. NIOS also contributes to DTH based Swayam Prabha channels.

Case 1: *Mukta Vidya Vani* radio of NIOS

To encourage web streaming of audio enabled courses, NIOS started experimenting with web radio from 2012 through the portal iradioindia.com, in association with Newzstreet presently it is streamed through nios.iradioindia.in. Mukta Vidya Vani is a pioneering initiative of NIOS for streaming audio programmes for educational purposes in an open distance learning mode to empower the youth for

future. Mukta Vidya Vani is a modern, interactive, participatory and cost effective programme enabling a two-way communication with audiences having access to an internet connection.

Image 1: *View of Mukta Vidya Vani*

Initially, the internet was not available in many parts of India and the bandwidth was also very low. Hence, NIOS setup listening facilities in all its regional centers and at study centers.

Since mid 2016 onwards, mobile operators started offering data packages at a very low price and these days every cell phone being sold in the market is either a smart-phone or a feature phone with internet. The focus of Mukta Vidya Vani is to reach out to every student from villages to towns and cities to metros. According to an official at the media department at NIOS who is involved in production of programmes for Mukta Vidya Vani said, "Most of our students are housewives, detained students from mainstream education system or the ones who have dropped out from schools due to various reasons. The students of NIOS can listen to their classes and feel the ambience of a lecture in a classroom". He added, "Nowadays the young generation is fully conversant with technology so an audio medium is a good platform as they can stand together and learn together."

Schedules are made one month prior and for each day, it consists of three live lectures for vocational, secondary and senior secondary classes. The duration of lectures is one hour each. All the subjects are chosen rotation wise and delivered by experts. The timings of the programme are as follows: Monday-Friday (02:00 PM - 05:00 PM), Saturday-Sunday (10:30 AM - 12:30 PM) and on Gazetted Holidays (10:30 AM - 01:30 PM). The programmes are of two types, live streaming and audio on demand. Audio on demand is a pre-recorded programme based on the needs of listeners and is streamed throughout the day. During live Personal Contact Programmes, students are invited to call on 1800-180-2543, +91-120-4626949 in-studio 24x7 to ask their queries. The programme is supposed to help students solve their subject related queries.

Image 2: *Recording studio of Mukta Vidya Vani at NIOS, NOIDA*

Image 3: *Listenership of Mukta Vidya Vani from January 2012 to January 2017*

An analysis of the line graph shows steady increase in the visitors to Mukta Vidya Vani from 2015 to 2017. It has increased from 1.3 lakhs to 3.5 lakhs.

Image 4: *Listenership of Mukta Vidya Vani in 2015 (monthly)*

Also an analysis of month-wise listenership revealed that July 2015 recorded highest visitors 36 thousand. The reason for increased listenership was that they were pre-informed.

Image 5: *Listenership of Mukta Vidya Vani 2016 (monthly)*

In October 2016, the researcher observed that some programmes were mandatory to listen, where the students and teachers from rural areas got an opportunity to communicate and participate in PCP programmes.

Image 6: *The line graph shows listenership of Mukta Vidya Vani 2017 (monthly)*

In November 2017, the listenership reached 96,969. The reasons in the sudden spurt in listenership was due to a Diploma in Elementary Education launched for teachers. According to the Ministry of Human Resources Development (MHRD), D.EL.Ed is a teacher training course for those who have not done the teachers training course but are teaching the students of class 1 to class 8, will be given two years time to clear the course and become eligible. There was a very active participation of the students through live PCP programmes.

Schedule of November 2017

The hourly graphs show the time when the page views increase and decrease. The graph shows that from 13:00 to 19:00 hrs listenership increases.

Image 7: *The Hourly Graphs*

Image 8: *Visitors from 2012 to 2017*

The charts show variation of visitors from 2012 to 2017. In 2012, 4,760 page views were registered, 3,635 unique, and 3,002 first time visits. Out of these visitors, only 633 returning visitors were registered. The whole chart shows that number of returning visitors are less in comparison to unique first time page viewers.

Image 9: *Visit length*

It was found that 16.7% listened the program for more than 5 minutes to an hour; 77.2% of them were only web surfers. Some listeners were traced through IP addresses for direct feedback.
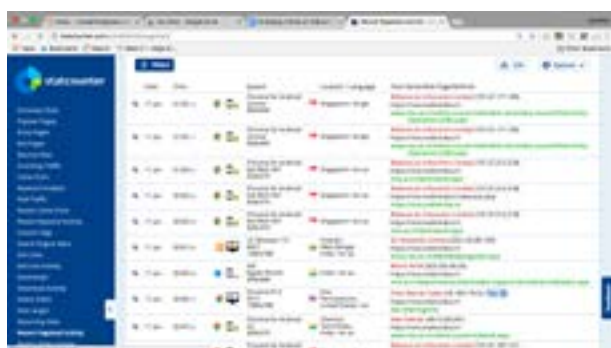
Image 10: *Analysis page load activity*

Analysis

Page load activity gives a real time data, such as operating system, browser, location, internet service provider, and IP address the listener is using. Some 58.4% listeners used mobile browsers to listen the lectures.

Image 11: *Analysis of browsers*

Some 80% visitors to Mukta Vidya Vani are from India, while 15.2% visitors are from Singapore. After analysing the listenership report the researcher conducted face to face interviews with some officials in NIOS who work for Mukta Vidya Vani and asked questions regarding the version of listenership specially returning visitors. Ms. Jayati, Programme Producer at Mukta Vidya Vani, said "listeners nowadays, despite being less in number, want to connect by calling during live programmes to ask their queries".

The sample size was 25, they were interviewed by using standard questions through their pre-registered mobile numbers. In order to understand why audiences chose MVV as a medium of learning, the researcher conducted interviews and administered surveys to gather data from the audiences who listened the programmes for more than 20 minutes. 52% students were in senior secondary and 30% in secondary level. 100% of them wanted to listen to Mukta Vidya Vani of which 12% preferred life sciences and 8% geography lectures. The rest are divided equally to subjects like Hindi, history, yoga, etc.

Image 12: *Subject choices*

When asked about the reasons for listening to Mukta Vidya Vani, they remarked:

- It is easily accessible and I can talk to the experts to solve my queries (2)
- I can understand my subject better (3)
- Mukta Vidya Vani platform is like my Mother
- After listening I became more interested in history
- It is interesting and easily understandable
- Yoga is my passion and I do practice while listening to the lecture

- I like the lecture delivered by subject experts (3)
- I can use it while doing something else
- It is a medium which is affordable as well as easy to communicate with teachers
- Nothing is better than listening to lecture and doing work at the same time
- The way teachers explain lectures are very effective
- The broadcast schedule is convenient for me to listen
- To solve my queries during examination periods

The researcher also interviewed 10 students who participated in the 'live' phone-in- interactions. The names of students are: Ravish, Ramesh Kumar, Shetal, Sona Jha, Surbhi, Arun Kumar, Maya Meena, Junaid, Ashish Halder, Harminder.

20% of them were located in Delhi and the rest were equally from Rajasthan, Madhya Pradesh, Jharkhand, Chandigarh, West Bengal, etc. All the students who were interviewed had participated in the PCP programme of the radio station. 70% asked questions of general nature and only 30% asked questions related to the subject. The reasons given for not asking questions on the subjects were:

- Mostly I prefer books and sometimes I feel it is quite monotonous (2)
- I am working so don't have a time to listen (2)
- I found it is quite boring and if I have a book than why should I listen?
- Lectures are too lengthy
- Difficult to understand the content sometimes

Any suggestion to improve the quality of the program?

- Programmes should be presented more attractively
- Content should be rich
- Variety of audio formats are needed to attract attention
- Programmes should be sharp and crispy

The researcher also collected data by purposive sampling on the student listeners of NIOS. Ten returning and captive students of the D.EL.ED Programme were interviewed regarding the quality of programmes.

Table 1: Questionnaire survey data

S.No.	Questions	Opinion				
		SA	A	NO	DA	SD
1	Learning objects are clearly stated	18%	82%	0%	0%	0%
2	Content meets objectives	36%	55%	9%	0%	0%
3	Content is structured	36%	36%	27%	0%	0%
4	Content is easy to understand	55%	36%	9%	0%	0%
5	The voice of the teacher is nice and clear	18%	55%	27%	0%	0%
6	The audio quality of the material is good	9%	55%	36%	0%	0%
7	There are problems in pronunciation	0%	0%	55%	18%	27%
8	There are grammatical errors	0%	0%	36%	45%	18%
9	There are slips in the delivery	0%	27%	36%	36%	0%
10	On the whole the programme is good	45%	18%	36%	0%	0%

SA–Strongly agree; DA–Disagree; A–Agree; SOA–Strongly disagree; NO–No opinion

It is clearly seen that among the returning visitors, 46% agreed that 'as a whole programme is good'. 55% opined that the audio quality is good and the voice of the teacher is nice and clear. 82% were of the opinion that the learning objects are clearly defined. 27% observed that there were slips in the delivery. 55% of them praised that the contents are easy to understand.

The IR has become popular amongst the education providers in India for reaching out the learners 24X7. The needs of IR emerged around late 2009, when Commonwealth Educational Media Centre for Asia (CEMCA) took the initiative to support educational and livelihood facilitation by introducing IR in an online environment. It reaches the masses with standardised contents for all and with in-built mechanism of online interactions and addressing to the problems of the learners instantly. It is designed to create a community of learning environment both at the school and higher education system. The contents delivered through the IR are enriching and updated due to constant scrutiny by the professionals. The process of standardisation of contents delivered through the IR also requires vigorous scrutiny before developing policy parameters for promoting IR.

The content needs to be unique, innovative, attractive, and participatory. Otherwise the chances of return visitors to site are getting reduced. Also there is a need to check the quality and assure the

students of its high standards,

Case 2: *Gyan Dhara* radio of IGNOU

Indira Gandhi National Open University (IGNOU), world's largest open university enjoys a student strength of more than 3 million. The university had the unique opportunity of launching India's first educational television channel Gyan Darshan in 2000, followed by educational radio Gyan Vani in 2001. IGNOU created 37 such FM stations dedicated to education sector, a non-commercial radio whose frequencies were allotted for free to air by the government, co-located with the India's public service broadcaster Prasar Bharati's transmission towers.

Image 13: *Gyan Dhara* views

After trying out a large number of streaming solutions, in the year 2015 it launched a service called Gyan Dhara - a live internet based radio station in association with i-radiolive.com. The project involved streaming of courses tourism and hospitality, mass communication and journalism. The i-radiolive.com also provided interactivity through Google Chat, Whats-app and Skype. Later, IGNOU started streaming through its own website.

Ravi Kant, Director in-charge of Electronic Media Production Centre at the time of the interview which handled audio lessons, observed: **"There was a need to establish direct and interactive links between students and teachers of IGNOU. For students who prefer distance learning and cannot get in touch with ongoing lectures in colleges, it is a medium of spreading knowledge in a credible manner."** Internet radios are setup for different purposes to fulfil the requirements of the people as per their choices. It

is a wholesome medium of education is for all. To assess the listenership, the university decided to call students for participation through social media. The traditional radio just included listening stuff, whereas internet radio has got a lot. O.P. Dewal, Associate Professor in the School of Journalism and Mass Communication traced the history of Gyan Dhara by quoting the interactive radio counselling sessions with All India Radio followed by Gyan Vani. Dr. Sashidhar from School of Extension and Development Studies described the pilot experiment carried out for the course on urban planning and development using Gyan Dhara.

Table 2: *Gyandhara* – Formative Evaluation Summary

Primary Target: 826 Students of July 2016 session

Date	No of Students logged on to the Gyandhara website	No of Students logged on to the I-Radiolive website	No of question asked through chat on Gyandhara	No of question asked through telephone
03/10/16	294	183	44	10
10/10/16	219	126	32	9
17/10/16	211	110	33	3
24/10/16	218	97	18	1
31/10/16	157	57	7	2
7/11/16	174	70	23	5
21/11/16	137	39	15	9
28/11/16	101	27	4	8

Students logged: Mean 278 (33%); Range 16% to 58%

The experiment was repeated with interactive radio school on PGDUPDL in October-December 2017; the salient features of this exercise were:

● Primary Target: 1049 students of July session
● No. of IRC session: 26 (1- induction session; 2- special sessions; and 23 sessions covering 5 courses)

It was heartening to note that the listenership of both the websites put together amounted to more than 50% students registered for the course. It is also noteworthy that 44 persons asked questions on the subject through web chats and ten over the phone on first day itself. But it is also to be observed that the listenership witnessed a study decline.

Out of 826 students registered average hits were 347, i.e. 33%. The school repeated the experiment in 2017 using the website of IGNOU and still the average listenership was constant. If the listenership of repeat broadcast was taken into account, 45% students availed the facility which should be rated very high.

Image 14: *Comparative data*

The researcher did a random search in June and found out that the daily listenership as on 16th June, 2018, there are only 182 visitors and on an average they spend only 3 minutes and 24 seconds.

Image 15: *Page viewers (first time and others)*

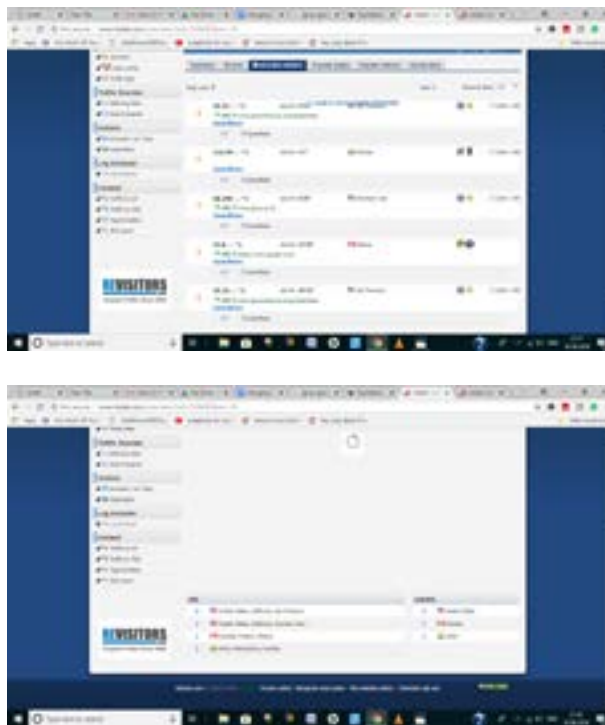The above graph shows the visitors from May till 16th June 2018. There are only an average of 400 visitors per day.
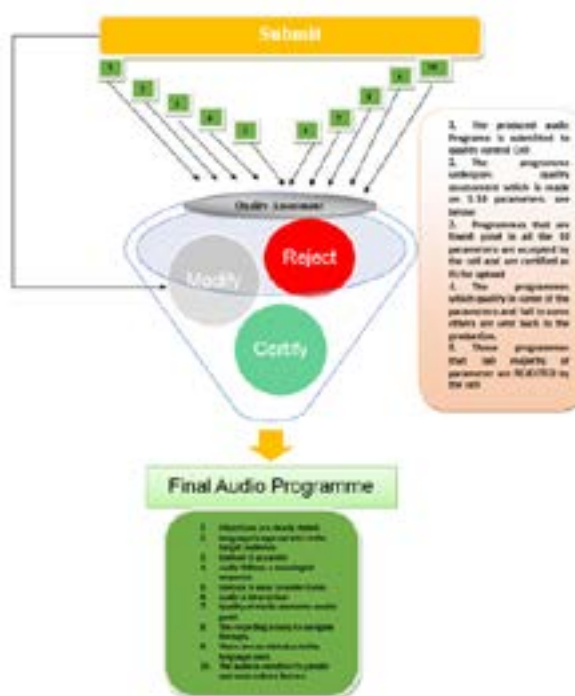

Image 16: *Visitor per day*

Image 17: Quality assurance mechanism

Conclusion

The co-author earlier in his project report on "Radio Enabled Learning" for Commonwealth of Learning, Vancouver, Canada, 2015 suggested a quality assurance mechanism as seen the picture above. He also referred to the need for creating a quality assurance cell at every institution that produces the digital lecture. The cell must include subject experts, instructional designers as well as audio professionals. The Quality Assurance in Multimedia Learning Materials (QAMLM) versions of CEMCA (COL) may be taken as a major guidance for assessing the programmes. The teachers of the institution concerned who produce the audio courses or individual programmers have to submit the completed programmes to the Quality Control Cell. The cell will assess the programme based on the parameters framed by the quality assessment group. After the assessment, the programmes would be placed under three categories: accepted for broadcast, need modifications, and rejected. The Accepted programmes will be certified for upload. Those programmes that need revision, may be sent to the production end with clear instructions about the corrections to be made. After modifications, the programmes may be resubmitted. The rejected ones need not be allowed for broadcast or sharing. In all cases the decisions must be fast and time bound so that there is no disappointment among the teachers. Another way to empower the teachers is self certification of their products. They need to be oriented in quality assurance guidelines and methods of evaluation of audio programmes. Compared to NIOS, even though IGNOU has more experience, infrastructure and human resources, there seems to be a lack of awareness among its students about Gyan Dhara. Though, the experience of its School of Extension and Development Studies is worth pursuing. The content of the programmes on both the internet radio carry a wide spectrum of subjects, ranging from general sciences to high end sciences, arts and literature to commerce and education, etc. The students may take advantage of this ready to listen and learn knowledge!

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■

Social networking experiences on Facebook: A study on students

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This study was to identify the students' experiences on the uses of their favourite social networking sites like Facebook. The overall purpose was to detect the using pattern, advantages, disadvantages and effects of Facebook on their daily life. A survey was conducted on 190 students from 6 faculties of the Comilla University. This study was based on mainly primary data. Data were collected by using a questionnaire during July-October 2016. Majority of the respondents (67%) replied that they used Facebook for communication with their friends and others, getting information, educational purpose, sending birthday greetings, job purpose and entertainment, sharing scientific and educational information, etc. The study also suggests that there is a need for higher education policymakers in Bangladesh to properly connect the students' involvement in social networking to their academic purposes.

Keywords: Social networking, Facebook, Students' experiences.

Introduction

Recently, the world has been shaped and updated by the development of the internet, the most popular communication medium in the world. A large portion of the people in the world is connected by social networks through the internet (Oye et al., 2012). Social networking websites are the technological tool used by internet users to as a platform to develop eventually mutual relationships for personal interests, business, games or academic purposes (William, 2009). From the global perspective, the number of social networking sites are used as a channel for transforming multiple areas of knowledge (Shohrowardhy and Hassan, 2014). The networking through internet particularly the Facebook has become popular with the pace of the global arena. Young people of the country have

been using Facebook for social networking purpose more in the recent time. Considering this reality, this study has been conducted to provide the descriptive information about the use of social networking site like Facebook by the students' of Comilla University. Social networking has been a commonly used term in today's scenario. In the recent past, we had social networking sites that did not survive much as compared to today's ones which are very popular. Major social networking platforms are Facebook, YouTube, Twitter, Myspace, Friendster, LinkedIn, Live Journal, and Bebo, etc., which are member-based internet groups allowing the users to post profile information, such as a username and photograph, and to communicate with others in different ways such as sending public or private messages or sharing photos. These sites disclose important information about how university students

are interacting with each other.

Objectives of the study

The general objective of the study was to explore the students' social networking experiences on Facebook. The specific objectives of the study were to:

a) Identify the using pattern of Facebook on students' daily life;
b) Assess the advantages of using Facebook by the students;
c) Explain the disadvantages of using Facebook by the students; and
d) Find out the effects of using Facebook on their daily life.

Observations

Bangladesh is a South Asian country with over 160 million people. 50% of which are below the international poverty line (UNICEF Report, 2012). 5% of the people (approximately 33.43 million) of Bangladesh are habituated to use the internet and out of them 95% use mobile devices to connect to social networks. In Bangladesh, Facebook and YouTube are the most useful social networking sites. The rapid growth rate of social networking in Bangladesh is 2% or around 50,000 people per year. Based on our national economics, Bangladeshi people are not still familiar with social networking due to the limited income level. There is a dominant age-group (18-24) in the user pool of social networking (Shohrowardhy and Hassan, 2014). According to Collins English Dictionary, Facebook is, "a popular social networking website", and as a verb, meaning "to search for (a person's profile) on the Facebook website." Facebook (www. Facebook.com) is a free-access social networking website that is operated and privately owned by Facebook, Inc. Users can join networks organized by city, workplace, school, and region to connect and interact with other people. People can also add friends and send them messages, and update their personal profile to notify friends about themselves. Facebook gives the opportunity to chat with friends, upload photos or videos, share anything, and create page or applications.

Facebook is one of the important social media that promotes the exchange of messages between people across the world. Facebook.com originated in February 2004 to facilitate social interaction exclusively among college students by Mark Zuckerberg. There are over 500 million users in the world with a population of 6.8 billion, which means that about 1 out of 14 people have a Facebook account. According to Mark Zuckerberg, "If Facebook were a country, it would be the 6th most populated country in the world."

Mark Zuckerberg along with Dustin Moskovitz, Chris Hughes and Eduardo Saverin founded Facebook while they were students of Harvard University in February 2004. Initially, its membership was limited to Harvard students. Then it expanded to other colleges, it later expanded further to include any university student. In September 2005 Facebook was expanded to high school students, and, finally, in September 2006, to anyone aged 13 and over. Now Facebook has over 700 employees and the directors' board is consisted of seven members. On 1 January 2009, according to the Facebook statistics it has over 140 million active users all over the world. The headquarter of the company is in Palo Alto, Calif. U.S. (https://en.wikipedia.org/wiki/Facebook).

Literature review

Previous studies have found that more than 90% of university students use Facebook. Roknuzzaman (2006) has conducted a survey on internet access in a large public university. Mostofa (2011) has scanned the access and use of internet among business studies students of a private university of Bangladesh. Mahmud (2011) has checked up the private university student's attitudes towards internet. Alam (2013) has investigated the future prospect of '3G' network in Bangladesh. Rahaman, Ullah and Shafayet (2013) have explored the factors that are influencing Facebook privacy awareness of Bangladeshi undergraduate university students. But none of them have investigated the reasons of the use of social networking sites on students' academic perspective. Asad, Mamun and Clement (2012) who have surveyed the effect of social networking sites to the lifestyles of teachers and students; on the other hand, apart from Bangladesh few study have found

on Facebook. In one study, U.S. college students reported using Facebook an average of 10 to 30 min daily (Ellison, Steinfield, & Lampe, 2007). Another study found that about half of 12–17 years old with social networking site memberships log on daily: 22% logged on to social networking sites several times per day, 26% once a day,17% three to five days per week, 15% one or two days per week, and only 20% every few weeks or less (Lenhart & Madden, 2007). A recent survey of college students in the U.S. showed that social networking sites are used for social interaction with offline acquaintants in order to maintain friendships rather than to make new friends (Ellison et al., 2007).

The use of such sites is nearly universal. For example, a large survey of college students from several universities in the Midwest U.S. found that 91% of respondents use the site Facebook. com (Wiley & Sisson, 2006). Most of the students originally activated their Facebook account during the summer before college (53.26%), though some did so after they began college (38.04%). On average, respondents had been using Facebook for about 2 years (M=24.32 months, SD=9.93). Only students who had a Facebook account participated in this study, but almost all of the students in the classes were members of Facebook (Ellison et al., 2007; Wiley & Sisson, 2006).

Another study found that, students would often use the Facebook walls to describe and sometimes deliberate on their most recent instances of the university experience – be it lectures, seminars or, on occasion, library visits and individual encounters with teaching staff. For example, students would use Facebook to 'go over' their experiences of recently finished lectures (Selwyn, 2009).

Social networking sites provide web design services that allow users to build a profile within a compact system (Boyd and Ellison, 2007). A number of social networking sites diversify the technological affordances made available to millions of people around the world including the 33.43 million people of Bangladesh. Developing relationships with fans or friends is a basic characteristic of social networking. Students use social networking sites for fun, passing time, communicating with existing friends or finding new ones (Boyd and Ellison, 2007).

All class of students like secondary, higher secondary, graduate and postgraduate use social networking sites not only for connecting with friends but also for sharing information, circulating guidelines, cases, assignments, etc., about classes, examinations, tutorials, class presentations and other purposes like concerts, sports, games, parties, or any other related interests etc. Graduate and postgraduate students also use social networking sites to ask questions about their field of the study and to make comparisons between class materials and the experience from the field. Students are benefited from the contributions of social networking, but what are the actual perceptions of university students who use Facebook for their individual purposes? How can we encourage students to use the social networking sits for academic purposes? This research paper is focuses on these research questions. 'Digitization is the basic slogan of Bangladeshi economy. For effective digitization, proper education and appropriate application are the prerequisites. Social networking is the technological improvement enclosed in the traditional education system. No other research papers were found about the student's experiences on social networking in Bangladesh.

Methodology

This study was conducted on the survey among one 190 students (114 male and 76 females) from the six faculties of 19 disciplines of Comilla University. Five students from each department with three males and two females were selected as sample. Both quantitative and qualitative data were collected and analyzed. The majority of students of those faculties were aged between 18-25 years in which just over three-quarters were females. They were selected according to their level of experiences of using social networking sites, especially on Facebook. This study was conducted through purposive sampling. Data were collected through administering a questionnaire having both open-ended and close ended questions during Sunday July 17 to Thursday October 16, 2016.

Analysis and findings

Demographic profile of the respondents: This study has 190 samples. Here, the data has been considered as basic characteristics of the respondents.

They are: respondents' name, age, profession, sex, department, academic year, address, internet facility and the time of being member of the Facebook etc.

Sex of the respondents: It was tried to gather data equally from both sex groups to make the study representative. It has been almost achieved as there were 60% male respondents and 40% female respondents. This study ensured that male students were more interested to use Facebook than the female students. The detailed data are presented in the Table 1.

Table 1: Distribution of the sex by the respondents

Sex	Number of respondents	Percentage (%)
Male	114	60
Female	76	40
Total	190	100

Source: Field Survey, 2016

Using pattern of Facebook on students' daily life: Social networking sites like Facebook provide new venues for the students' to express themselves and to interact with others. They are getting information by reading news feed about what friends are doing or looking at others' profiles or pictures. They also posted different information to their Facebook walls and posting pictures for others to observe in a public communication style. The study finds that the different pattern of using Facebook on students' daily life are:

Reasons of using Facebook: Data show that students answered an open-ended question about their reasons for using Facebook .Most of the respondents (64%) used Facebook for entertainment and communication, getting information, educational purpose and getting old friends, updated with friends and being closed with friends, sending birthday greetings etc. 14% used only for communication, 11% for getting information, 8% entertainment and communication, 7% for gossip and time passing. Here, this study established that most of the users 'used Facebook for getting different information and staying connected with their friends and other people. The detailed data are presented in the Table 2.

Table 2: Reasons of using Facebook by the respondents

Reasons	Number of respondents	Percentage (%)
Communication, getting Information, educational purpose and getting old friends, updated with friends and being closed with friends, sending birthday greetings, job purpose and entertainment, etc.	121	64
Communication	27	14
Getting information	21	11
Entertainment and communication	15	8
Gossip and time-pass	14	7

Source: Field Survey, 2016   (Multiple responses)

Information sharing in the Facebook: Data shows that majority of the respondents (87%) shared their name, gender, email address, picture, high school, college and their university name, birthday, political view, religion, country, phone number and relationship status. 8% shared favorite music, books, movies and TV shows, but 5% respondents shared no information in their Facebook account. From this findings, the study confirmed that most of the students' used Facebook for sharing their personal information at all. The detailed data are presented in the Table 3.

Table 3: Information sharing in the Facebook by the respondents

Information	Number of respondents	Percentage (%)
Name, Gender, Email, Picture, High School, College, University, Birthday, Major Interests, Political View, Religion, Country, Phone Number and, Relationship Status	165	87

Favorite Music, Books, Movies and TV Shows	16	8
No Information	10	5

Source: Field Survey, 2016   (Multiple Responses)

Duration of using Facebook: The survey data show that the total time spend on Facebook was dispersed throughout the day. In response to an open-ended questions, most of the respondents (29%) claim that they spend one per day by using Facebook, 26% passed two hours, 18% spend three hours, 8% four hours, 4% five hours and 15% spend above five hours by using Facebook. Analyzing the data, this study concludes that Most of the users spend a big amount of time in using Facebook. All over the world, users spend an average of three hours per month in Facebook (com Score press release, April 15, 2009). So, the rate of spending time in Facebook is quietly higher in the Comilla University. The detailed data are presented in the Table 4:

Table 4: Duration of using Facebook by the respondents

Duration	Number of respondents	Percentage (%)
One hours	55	29
Two hours	50	26
Three hours	35	18
Four hours	15	8
Five hours	7	4
Above five hours	28	15
Total	190	100

Source: Field Survey, 2016

Interest level of using Facebook: Another open-ended question asked students what they found most interesting about Facebook. There was a great deal of variability in responses to this question. As seen in Table-05, Majority of the respondents (41%) are moderate interesting of using Facebook, 35% very interesting, 10% very high Interesting, 9% less interesting and, 5% are not interesting about using Facebook. The findings confirmed that most of the

students' are sensible interest of using Facebook on their daily life.

Table 5: Interest level of using Facebook by the respondents

Level of Interest	Number of respondents	Percentage (%)
Very high interesting	19	10
Very interesting	67	35
Moderate interesting	77	41
Less interesting	18	9
Not interesting	9	5
Total	190	100

Source: Field Survey, 2016

Internet Using Facility: Facebook is most useful social media in the modern age but there is very little internet facility in Bangladesh. Most of University campus are not Wi-Fi connected. Broadband connections are also very limited in the university campus, residential hall etc. So, the findings reveals that most of the respondents (75%) used internet by their Mobile phone for using Facebook, 6% used Laptops, 14% used Mobile and Laptop, 5% used Mobile and Desktop. Study found that very few of the students' used Laptop and Desktop computer for using Facebook. The detailed data are presented in the Figure 1.
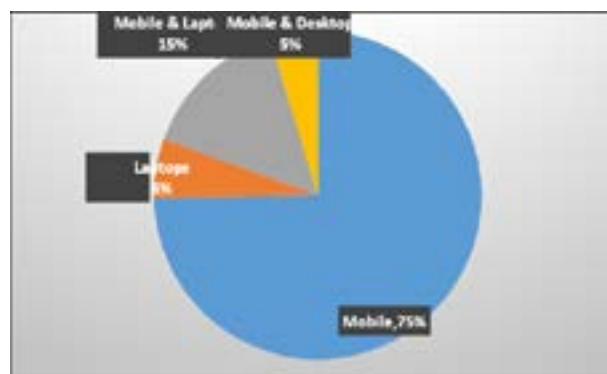
Source: Field Survey, 2016   (Multiple responses)
Figure 1: Internet using facility of the respondents

How long people are on Facebook: Facebook using is relatively new practice in Bangladesh. It is a form of new media for connecting with friends and others. However, the findings from the survey stated that 19% of the respondents became member of Facebook before one year. 16% respondents opened Facebook before two years, 20% respondents opened before three years, 16% respondents opened before four years, 10% before five years, 12% opened more than before five years. The detailed data are presented in the Table-06:

Table 6: Opening time of Facebook account by the respondents

| Duration	Number of respondents	Percentage (%)
1 year	36	19
2 years	31	16
3 years	38	20
4 years	30	16
5 years	19	10
Above 5 years	23	12

Source: Field Survey, 2016   (Multiple Responses)

Number of account holders on the Facebook: As Facebook is very important technological tool for using internet, So most of the users' have more than one or two accounts. Some are fake accounts also. But the present study find that most of the respondents (81%) have one Facebook account, 17% respondents have two Facebook accounts but only 2% respondents have more than two Facebook accounts. The detailed data are presented in the Figure 2:
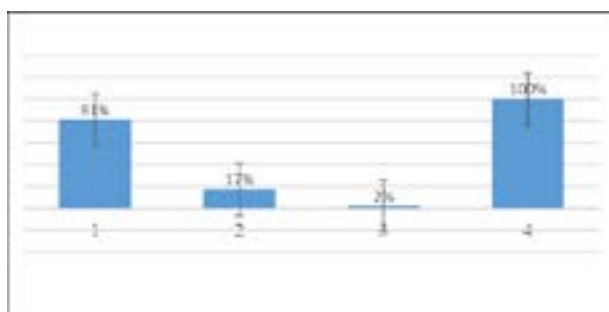
Source: Field Survey, 2016

Figure 2: Number of account holders by the respondents

Time of using Facebook: Most of the students' used to spend the time of using Facebook in different activities. Chatting, gossiping, updating status in their Facebook wall, uploading photos etc. This study reveals that Sixty five percent respondents have no fixed time for using Facebook. A big portion (16%) of the respondents used Facebook at night, 10 % used at morning, 5% used at afternoon, and 4 % used at evening. The detailed data are presented at the Table 7:

Table 7: Time of using Facebook by the respondents

Time	Number of respondents	Percentages (%)
Morning	18	10
Afternoon	10	5
Evening	7	4
Night	31	16
No fixed time	124	65
Total	190	100

Source: Field Survey, 2016

Number of friends on the Facebook: One of the main advantages of using Facebook is the users' ability to make friends. The study finds that users have many friends in Facebook. Most of the respondents (66%) have 1-500 friends, 14% respondents have 500-1000 friends and another 11% also have 1000-1500 friends, 4% have 1500-2000 friends and only 5% have more than 2000 friends in their Facebook account. The detailed data are presented in the Figure 3:

Figure 3: Number of friends in the Facebook by the respondents
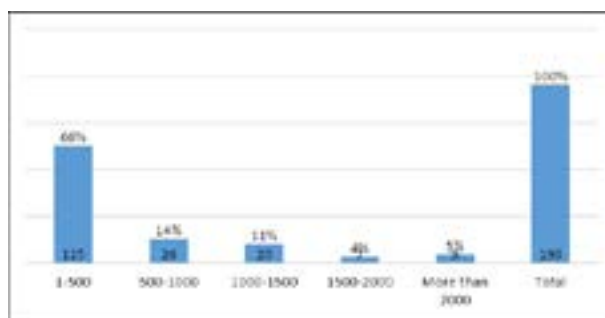
Source: Field Survey, 2016

Changing time of profile picture: Photo mania is a new trend for the Facebook users. Most of the users' changes their profile and cover picture for the several times in a day. It is one kind of phobia for the users'. But the survey data of this study concluded that Fifty three percent respondents changed their profile picture once a month, 8% chanced once a week, 11% changed   twice a week , 8% chanced three or more times a week but 20% of the respondents don't chance their profile picture in the Facebook. The detailed data are presented in the Figure 4:
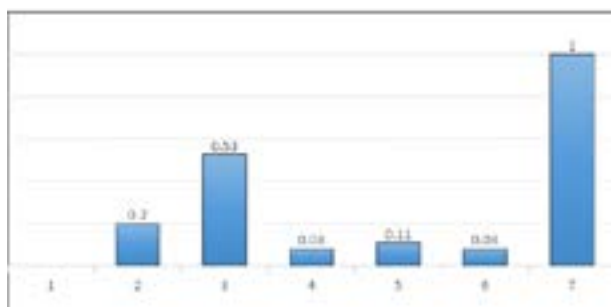
Source: Field Survey, 2016
Figure 4: Changing time of profile picture by the respondents

Visiting time of Facebook in a day: Most of the users are frequently visit their Facebook account in a day. Some are connecting with friends, some are getting information about the contemporary world and some are for educational purpose etc. This study finds that twenty five percent respondents visited their Facebook account 1-2 times in a day, 20% visited 2-3 times, 11% used for 3-4 times, 8% used for 4-5 times but 36% respondents used for Facebook many times in a day. The detailed data are presented in the Figure 5:

Source: Field Survey, 2016
Figure 5: Visiting time of Facebook by the respondents

Message of comment in the Facebook wall

The data of survey show that users mainly express their emotional, personal, social, professional and educational informatio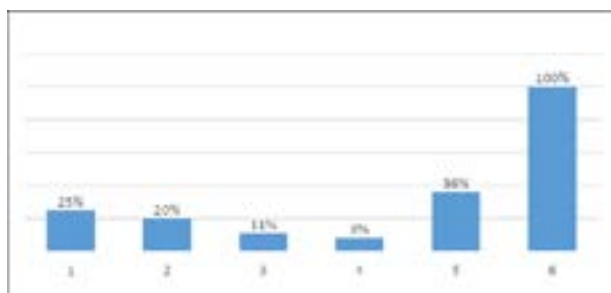n posted on their Facebook wall. Emotional status updates have greater appeal to Facebook friends. Most of the comments to status updates and photos are positive. As seen in the Table-09, Majority of the respondents (34%) commented emotional, personal, social, professional and educational information on their Facebook wall, 26% shared personal information, 14% posted on social and political issues, 8% emotional matters, 7% educational and contemporary issues but only 4% respondents commented about professional information on their Facebook wall.

Table 9: Message of comment in the Facebook Wall by the respondents

Comment	Number of respondents	Percentage (%)
Emotional	16	8
Personal	50	26
Professional	7	4
Educational	13	7
Social and Political Issues	26	14
Contemporary Affairs	14	7
Emotional, Personal, Professional, Educational and Social information	64	34

Source: Field Survey, 2016   (Multiple Responses)

Advantages of using Facebook: Social networking sites have become prominent in the society and integrated into our everyday lives. It is very suitable and effective to communicate with people around the world. Specially, Facebook initiate learning through the exchange of messages and the sharing of links, information, and resources. It has online sources where people can stay socially connected to their friends, family, peers, and acquaintances. Students also gets educational and social information, updated with contemporary world, reduces communication cost, developed social network systems, remove loneliness and also find different

job related information by using Facebook. As seen by Table-10, 28% respondents used Facebook for getting educational and social information, 29% for stay connected with their friends, 11% for updated with contemporary world, 11% for developing social network and 4% only for job related information, 17% for entertainment and others.

Table 10: Advantages of using Facebook by the respondents

Advantages	Number of respondents	Percentages (%)
Getting Educational and Social Information	54	28
Stay Connected with Friends	55	29
Updated with Contemporary World	20	11
Develop Social Networking Systems	20	11
Getting Job Related Information	7	4
Entertainment and others	33	17

Source: Field Survey, 2016   (Multiple Responses)

Disadvantages of using Facebook: On the other hand, there are many disadvantages of using Facebook also. For example, Facebook would take far more time with a slow internet connection, expensive internet megabyte, less security of personal pictures, sometimes harassment by the hackers etc. As seen in the Table-11, Twenty two percent respondents claimed that Facebook is very much responsible for their study hampered, 22% said Facebook disclose their personal privacy in to general peoples, 18% for wastage of time, 16% discloses of political views, 13% respondents think that expensive internet megabyte, 6% faces huge friend requesting problems and 5% faces many other problems etc.

Table 11: Disadvantages of using Facebook by the respondents

Disadvantages	Number of respondents	Percentage (%)
Discloses Personal Privacy	40	21
Expensive Internet Megabyte	25	13
Huge Friend Request Accepting	11	6
Wastage of Time	34	18
Hampered Study	41	22
Discloses Political Views	30	16
Others	9	5

Source: Field Survey, 2016   (Multiple Responses)

Effects of using Facebook: This study reveals that student's affiliation with Facebook in just a small proportion with academic usage. They are mostly driven by followed by social needs. Moreover, Facebook is used for different purposes such as fraud, transferring misinformation, unusual presentation and copy of the statements of people in order to create misunderstandings among the users. These patterns negatively affect the students' and divert their concentration from academic purpose to others. The survey data indicate that 44% respondents have moderate effects by using Facebook, while 17% respondents mentioned very much effects, 19% slight effects, 13% much effects and 7% very slight effects by using Facebook on their daily life. The detailed data are presented in the Figure 6.
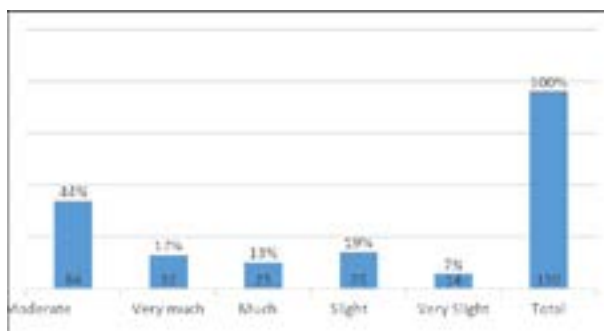
Source: Field Survey, 2016

Figure 6: Effects of using Facebook by the respondents

Discussion

This study has investigated on what are the using pattern of students' social networking, especially on Facebook, why they use it, and how they interact with each other on this website, how much

time they spent by using Facebook, what are the advantages and disadvantages of using Facebook, and what are the effects of using this site etc. The demographic data shows that male students are more prone to use Facebook than female students. This study reveals that Facebook is the part of their everyday experiences, most of the respondents are using Facebook for sharing educational and social information, for staying connected with their friends and others, sending birthday greetings, job purpose and entertainment etc. This study found that most of the respondent also use Facebook for sharing personal identity such as name, gender, email, picture, high school, college, university, birthday, major interests, political view, religion, country, phone number and, relationship status etc. This study also suggested that the communication systems of the past are changing day by day in the modern age. Most of the users used to spend the time of Facebook using in different activities. They had to change their social, familial, personal and study life, career etc. by using Facebook. This study concluded that there is a dramatic changes are happened in whole daily life of the students.

Conclusion

Finally, it can be said that the findings of the study can help understand the using pattern of Facebook users in the Comilla University. Based on data, the study concludes that though Bangladesh is not much advanced in technology, the users of Facebook are very much active. They don't just log on to Facebook but use many options of the site. Most students' don't use Facebook only for entertainment but many of them use it for constructive purposes like sharing information, feelings, or scientific and educational matters with others. This study revealed a lot of limitations while using Facebook, like slow internet connection, expensive internet megabyte, less security of personal pictures, and sometimes harassment by the hackers, etc. So, the policymakers, like the Ministry of Education and concerned authorities should assist the development of a digital education system that takes advantage of the potentially beneficial uses of Facebook for the students.

Recommendations

As Facebook is not an old medium of communication in the world as well as in Bangladesh, this study can be seen as a primary research about Facebook. This study hasn't attempted to critically analyze the using pattern of Facebook. Based on the users' data, it has just tried to explore the using practices. So a lot of things remain uncovered in this study. But as Facebook is a popular medium, there is a lot of scope to conduct further research about Facebook. However, this study can offer some suggestions for further research about Facebook. The suggestions are stated below:

a) This study has been conducted within a short time frame with only 190 students. Further research can be done on a wider scale with a large sample so that every aspect of using Facebook gets in-depth attention.
b) This study has only tried to explore the using practices of Facebook. Further research can be conducted to measure the impacts of using Facebook.
c) This study has been conducted with only the Facebook users. Further research can be conducted on the general internet users to find the rate of using Facebook.
d) A comparative study can be conducted to find the difference of using of male-female, and new-old members.
e) A comparative study can be conducted to find the difference of using pattern of other social networking sites.

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Intellectual Property Rights' violations and international cooperation documents: Case of Iran

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Introduction

Although intellectual property doesn't have a long background, it has become an important and valuable capital by development of commercial and economic relationships in today's world and with regard to role and position of this branch of legal knowledge in economic, social and cultural development in domestic and international dimension. In this regard, opportunist persons by violating intellectual creativity rights try to gain money and neglect recognized exclusive right of owners of these works. Appropriate and efficient criminal policy is that by providing good support for this valuable legal knowledge in domestic laws, by international cooperation through signing international treaties, and by strong and effective guarantees for intellectual innovation encourage authors to innovate and punish violators of literary-artistic property rights, industrial-commercial property, etc., in the light of Convention Bern and Trips Agreement.

Intellectual Property Rights (IPR) is a branch of law that while is not tangible and objective, has economic value and gives its owners exclusive right of using these international and humanistic activities and this branch of legal knowledge in spite of traditional division of law is divided to literary-artistic property and industrial property and each branch is divided to many other branches that make two types of rights for owner which are intellectual rights and physical rights. Of these two important branches of intellectual property, literary-artistic property gives rights to owner which by creating work exclusive right is made for owner and doesn't require documentation. In this regard, in clause two of article five of Convention Bern, this important international document in this branch of Intellectual Property Rights belongs to necessity of supporting literary-artistic works of member countries without need to formality of documenting these works. In spite of this, observing formality of documentation to support owners is necessary in some instances of industrial property like invention or trademarks. However, today inventors and owners of intellectual works need support and receive exclusive right for their intellectual innovations and inventions and government should support by making effective execution guarantee such as criminal execution guarantee. Thus, supporting these intellectual creativeness and respect for their owners by different kinds of execution, especially criminal execution guarantee even if it be light but be executable, appropriate and effective is efficient.

Subject I: Criminalization and criminal execution guarantee of intellectual property

Since Intellectual Property Rights can be divided into literary-artistic property rights and industrial property rights, we discuss about criminalization

and execution guarantee of each branch of legal knowledge separately in Iranian law.

Sermon I:Criminalization and criminal execution guarantee of literary-artistic rights

Since we don't face with a united right in supporting literary-artistic works in domestic laws and sometimes a united approach has not been adapted, in this section we consider criminalization of the most important rights which have been supported, generally and in another time period criminalization and this important branch of law, especially.

Clause I:Criminalization of literary-artistic property in criminal code 1931

After establishment of conditional system and development of book publication, there was a need to rights for supporting authors which on this basis articles 245-248 of criminal code approved in 1931 (sermon of com plot and falsity in business and trade) were related to authors' rights. However, this code didn't meet expectations of authors because according to these articles only publishing book, compilation or ballad of another person without permission; impermissible adaptation; illegal sale and publication were considered crime (Asqari Aqmashhadi, 2010:43). Legal gap and lack of good support for authors, persuaded members of parliament to codify a law to better support which finally "supporting authors, composers, and artists code" was approved in 1969.

Iranian lawgiver under certain conditions in articles 23-31 of this code have aggressed to criminalization and criminal execution guarantee in violation each one of its instances. In this code, violating some works like translating books, booklets and publications was not considered.

In this regard, comprehensive bill of supporting literary-artistic property was prepared in 2010 so that if it approved by transforming previous codes can response to recent changes of society and support creators of intellectual works and overcome deficiencies of previous codes. Most of crimes and violations related to literary-artistic works have been cited in article 23 of supporting author code: "everyone who publishes, distributes or presents whole or part of another person's work which is supported by

this code under his/her name or author name without his/her permission or under another person's name shall be convicted to correction custody from six months to three years".

Of primary problems of this code is using the term "everyone" in article 23. It was better that lawgiver used the term "any person" which includes violating each one of mentioned works by legal entities. In supporting intellectual property bill 2010, supported works were appropriately defined in article 2.

Physical pillar of these crimes can be divided to more parts:

a) Perpetrator's behavior; realization of above mentioned crimes is as positive physical actions and criminal behavior of perpetrator shall be as positive actions in publishing, exposing and presenting other person's work like most of crimes. Physical behavior of perpetrator in these crimes are publishing, exposing or presenting. Publishing is any action which results in making or preparing other copies of original work (Alasti, 2010:62-63). Presenting is distributing these published works and exposition is making available or showing an audio or visual work for public or performing it that is live and direct show of work for some people (Alasti, 1996:126).

a) Perpetrator of criminal behavior; according to article 23 and using the term "everyone", this subject comes to mind that perpetrator of these crimes is only real entities; however, in new bill of supporting literary-artistic works in article 23 the term "everyone" is also used which like article 131 of new bill and because of inadequacy of previous code, if violator of these works be a real entity court in addition to punishing real entity which crime has originated from his/her decision, can also convict legal entities to fine, temporary or permanent suspension of all activities and those parts of activities which were violators of rights. The interesting point which has been neglected in new bill about legal entities is that with regard to broad facilities which legal entities have, possibility of committing crimes in broad spectrum by these entities is more; thus, it was better than considered punishment in new bill for legal entities has been more than for real entities.

b) Subject of criminal behavior; all instances of

subject of criminal behavior in article 23 of Supporting Authors Code 1969 and for realization of mentioned crimes there is no need that whole work be violated without author permission, but by violating a part of work physical pillar of crime is realized.

On one hand, mentioned crimes are among absolute crimes and whether a result obtains or not or a harm or injure makes or not is not important. Therefore, upon committing criminal behavior for each instance of article 23 like exposing, presenting, and publishing another person's work without permission of law, criminal prosecution is made for perpetrator.

Therefore, in committing mentioned crimes, criminal behavior of external action of crime shall be done with ill-will and with purpose of realizing it. Psychological pillar in above crimes is awareness and intention. Awareness means that knowing that this work belongs to another person and in time of committing crime perpetrator's intention and will have been healthy. Article 140 of Islamic criminal code states that: "if person doesn't have general conditions of obligation when committing crime, he/she will not have criminal responsibility".

On the other hand, accused should have intention in violating copyright and if it be with purpose of gaining financial benefits or be reproducing and distributing the work by electronic means or in general be publishing it completely or partly will be considered violating copyright and will be include criminal execution guarantee. In case of reproducing and using electronic means or exposing the work, it can be punished as criminal offence (Marshall, 2013:15). Thus, type of violation, purpose of violator and instruments and means of committing crime are effective in type and amount of punishment in laws of some countries like U.S and thus is considered as a criminal offence.

It is obvious that proving ill-will of persons who directly violate rights of owners of works in article 23 of Supporting Authors Code will be easy for court, but persons who directly or by order of other persons (spiritual agent) commit this criminal behavior like distribution of works without owner permission require positive claim reasons because their ill-will is clear but in second group that is distributors it is possible that distributing or exposing works lacks criminal ill-will. In this case, court should be careful in proving ill-will of second group and should have more precision and try to realize ill-will and intention of these persons (Alasti, ibid:64).

Supporting Authors Code 1969 has always been prison-based and with regard to amount of violation, determined punishment is not consistent with committed crime and harm made for authors and society and lacks preventing and inhibitory effects. Therefore, criminal law while keeping relationship with social entities should support them by arguing values accepted by society.

However, new bill didn't change amount of prison and by considering current conditions has tried to decrease prison and emphasized more on financial punishment and with regard to this that has increased fine from 50 million Rial to 500 million Rial and in some conditions considered both punishment executable has overcome partly legal gap of previous code.

Clause II: Violating literary-artistic works in translating and proliferating of books, publications and audio works law

As it can be seen in supporting authors code, according to clauses of article 2 of this code and also emphasis of clause 12, this article can include proliferation and republication right or any exploitation and publication, distribution or translating of other works; however, lawgiver in 1973 again approved a law named translating and proliferating books, publications and audio works law. Lawgiver has not considered violating some works like translating booklets and publications in Supporting Authors Code 1969 which tried to codify translating and proliferating publications and audio works law to overcome this legal gap. This type of codifying is out of standards of criminalization and codifying. Because in article 24 of Supporting Authors Code and in clause 1 of article 7 of Translating and Proliferating Code 1973 with reference to article 1 have convicted proliferation, republication, exploitation and distributing any translation to punishment of above article. Article 24 of Supporting Authors Code states that: "everyone who publishes, distributes and exposits translation of another person under his/her name or under another person's name will be convicted to correction custody from three months to one year." By comparing two mentioned

codes, it becomes clear that some instances of latter code have been present in former code and criminalization and criminal execution guarantee have been considered.

It is obvious that physical pillar of violating literary works in above code is accompanied with violating any attribution right and is effective when perpetrator publishes, distributes or exposits another person's work under his/her name. Despite article 23 of mentioned code which doesn't refer to supposition of committing crime by name of perpetrator itself.

Lawgiver in article 23 of Supporting Authors Code has considered works absolutely and article 24 has devoted to translation. Of course, it should be said about translation that if translation is done by author of original copy, work resulted from translation is beneficial for author itself. However, if translation be done by another real or legal entity because of hire contract, physical rights belong to translator (Zarkalam, 2014:369). With regard to words used in articles 23 and 24 of mentioned code by lawgiver and the term "another person's translation", it includes both cases which translator and author are same person and are different persons.

Thus, it is observed that by considering criminal execution guarantee contained in Supporting Authors Code and Translation and Proliferation Law 1973 and by considering clause a of article 3 of collecting some of government incomes and using it in certain cases law 1994, amount of prison in mentioned laws is less than 91 days and is among class eight punishments according to article 19 of Islamic criminal code which can be change to fine which this fine is not consisted with committed crimes and lacks preventing and inhibitory aspects. Lawgiver should considered this fact that whether purpose of convict was gaining financial benefits or when considering criminalization and criminal execution guarantee.

Of course, new Bill of Supporting Creators of Literary-Artistic Works is a complete bill which contains all aspects of physical and intellectual rights by article 127 and argues their instances and conditions in previous articles and includes any violation of these works.

Clause III:Violating rights of owners of literary-artistic works by falsifying and changing

other works without permission

One of the ambiguities in Supporting Authors Code 1969 and other related codes is that instances has not been defined. In other words, meaning of falsification and change has not been stated clearly which this problem fortunately has received attention in new Bill of Supporting Literary-Artistic Property.

Lawgiver has considered any action to violate literary-artistic rights like falsification and change as criminalization and has considered criminal execution guarantee for violators, despite that these criminal executive guarantees are not consistent with type of committed crime and lack prevention and inhibitory power. Thus, subject of this literary-artistic rights violation is more violating intellectual rights of owner which observing intellectual right has mentioned in article 3 of mentioned code.

The term "change" in mentioned code means that person has substituted contents of supported works like changing chapters of book or any work and "falsification" means that contents of supported work have been changed physically or in terms of meaning.

Therefore, definition of mentioned crimes is "any change or conversion in work supported by code and publishing it without permission of creator" (Hosseini Nik, 2013:112). With regard to words and rationale of Supporting Authors Code in defining above crimes, any physical or content change or falsification shall be without permission of owner and if these actions be with permission of owner are not crime and don't have punishment or criminal execution guarantee.

Physical pillar of mentioned crimes is doing one of change or falsification instances in article 19 as positive physical behavior which each one of these instances with regard to words used in article 19 are absolute committed crimes. Even no harm or injury is made for owner, mentioned crime is realized (ibid: 173). Thus, harm made for owner and even benefits of violators don't have any effect on crime realization. Whenever changing or falsifying and publishing works has done above crime is realized and violators can be punished.

Most of crimes related to literary-artistic property like changing and falsifying literary works are among crimes that type and quality of achieving result is not important and publishing it after change

or falsification is enough for realization. On this basis, means of committing crime is not important and mentioned crime shall be rendered committed. However, in laws of some countries like U.S, "copyright" not only violating these works is rendered crime, but also have more punishment if is done by "electronic means" (Marshall, 2013:16) (section 17 of U.S copyright, clause a, article 506). It was better than our lawgiver considered using means in amount of punishment.

With regard to lack of necessity of committed means used by violator of literary-artistic works and with regard to first term of article 19 of Supporting Authors Code 1969 that is "any change or falsification", it is inferred that in above article realization of publishing is used without permission, it should be mentioned that in doing any change or falsification and illegal publication of supported works, lawgiver considers ill-will and psychological element of crime and in case of lack of criminal ill-will, he/she can't be rendered convict and can't be punished (Mir Mohhamad Sadeqi, 2013:106). Therefore, only by committing external operation and eternal body of crime subject (physical pillar), person can't be punished but his/her ill-will should be clear. In other words, violator should have awareness intention in doing change, falsification and publishing (general ill-will).

Clause IV: Behavior of violator of intellectual rights in Translation and Proliferation of Books, Publications and Audio works Law 1973

Another case of intellectual rights of owners of literary-artistic works is supporting "reverence of work". By looking on clause one of article 7 of mentioned law and with regard to last part of article 1 of this law, it is inferred that citing the name of translator is necessary in all cases. It can be said that regardless purpose or aim of translation such as instruction, research, commercial and non-commercial, the name of translator should be cited (ibid:376).

Physical pillar and eternal operation of committing this crime have been considered by article 1 and article 18 of mentioned law and means of achieving result is not important for realization of crime. Thus, crime is realizable by any means. However, physical behavior and physical pillar of crime is realizable with regard to last term of article 1 that

is "not citing the name of translator".

Therefore, committing any criminal behavior requires psychological pillar and criminal ill-will of perpetrator. That is perpetrator has chosen it with awareness. However, psychological pillar of crimes of proliferation, republication, exploiting, exposing and distributing another person's translation is supposed with regard to criminalization of that psychological pillar. Perpetrators of mentioned crimes can be real or legal entities. If crime is committed by individuals, perpetrator is convicted to prison from three months to one year according to article 7 of law approved in 1973.

Clause V: Violating rights of owners of literary-artistic works in Supporting Computer Software Creators Code

According article 1 of above code, lawgiver has devoted right of exposing, offering, implementing and physical and intellectual exploitation of computer software to creators and if anyone violates physical and intellectual rights supported by lawgiver, in addition to compensation is convicted to prison from 91 days to six months and fine from ten million Rial to fifty million Rial. Physical pillar and external operations of mentioned crime are as positive physical behavior and include exposing, offering, implementing and physical and intellectual exploitation right and harm for owners of these literary-artistic works.

Whenever person has the intention of doing any instances of this code that is has awareness in doing so, crime is realized and there is no need to ill-will. Therefore, violating any instance of physical and intellectual rights supported by this code has criminal execution guarantee and among positive points of this code is that execution guarantees in article 13 of this code have minimum and maximum which directs judicial authority to use between minimum and maximum punishment with regard to intensity of violator action and harms made for owners.

However, lawgiver should consider this point that indiscriminate use of criminal execution guarantee like prison in addition to problems resulted from density of prison, will have social, economic and cultural problems. Therefore, it was better that other punishments such as fine were used unless committing crime be in special conditions and be

repetitive.

Clause VI: Violating rights of owners of intellectual works like proliferation, implementation and distribution in electronic transactions ground

Lawgiver according to articles 61 and 62 of Electronic Trade Code approved in 2003, has place any violation of author right supported by Supporting Authors Code 1969 and Translation and Proliferation of Books, Publications and Audio works Law approved in 1973 and Supporting Computer Software Creators Code approved in 2000 which are as "date message" in electronic transactions ground by putting in action criminal execution guarantee in article 74 of this code which all works supported by Electronic Trade Code have been considered in article 62. Thus, violating any instance in article 62 of mentioned code without creator permission in electronic transactions ground causes realization of mentioned crime.

Intellectual pillar of mentioned crimes like criminal execution guarantees in non-virtual space is authentication of criminal ill-will in electronic transactions ground which courts should pay special attention to this because by paying attention to different methods of and means which are for showing literary-artistic works and other intellectual products in virtual space it is possible that illegal proliferation or illegal exploitation of them is done without ill-will (Zarkalam, ibid: 392). Therefore, authentication of criminal ill-will in electronic transactions ground is necessary for realization of these crimes.

With regard to words like "everyone" in first part of article 74, only real entities can commit these crimes and criminal punishments are done for them. However, in virtual and electronic space, possibility of committing these crimes is more by legal firms and institutions. Therefore, it was better that lawgiver used the term "person".

Sermon II:Criminal execution guarantees of literary-artistic property in international documents

Intellectual property in general and literary-artistic property specifically and support for this branch of legal knowledge which its importance at national and international level is increasing, requires cooperation of governments at international community level. In fact, supporting intellectual property when achieves desirable conditions that legal security and immunity governs through mutual behavior of nations. In this regard, they can provide appropriate execution guarantees for cooperation and preventing from aggression to rights of owners of intellectual works by signing two or multi-party treaties. Intellectual property rights subject has always been present in past periods but there wasn't good execution guarantee in this regard and among intellectual works because writing books and scribing has longer background than other works.

Therefore, rights of creators of intellectual works have been considered thorough human history but different titles and terms and methods have been used according to time. First law which was codified about supporting literary-artistic works or copyright is Anne law in England in 1709 (Brad, 2003:273). With above discussions, supporting literary-artistic works felt out of political borders of governments and by attempts of some governments the importance of supporting this branch of law some international treaties were shaped which the most important of them which formed in supporting this subject and place as backbone of supporting different types of intellectual property will be considered as follow.

Clause I: Convention Bern 1886 (Convention for Supporting Literary-Artistic Property)

Convention Bern was signed in 1886 in Bern, capital of Switzerland and was reviewed several times which the last one was in 1971 in Paris. This convention has three basic principles: (1) principle of national behavior; that is works which have created in one of member countries should give support in all member countries, (2) principle of absolute or automatic support; that is support should be without formality, and (3) principle of support independence; that is support should be independent from existence of support in country which work has been creates in it (Asqari Aqmashhadi, ibid: 20).

Above convention is the most important international comprehensive document in supporting creators' rights and minimum support for literary-artistic works and cases it supports according to Roma Corrigendum 1928 are: "any written or

verbal scientific, literary, artistic, music, painting and translation work in different forms like book, booklet, speech, and show".

Often in international documents and treaties for supporting intellectual property for creators' rights, only forbidden cases and putting those into action have been referred to domestic laws of each country and of conditions of supporting these work is that countries should join to international contracts and conventions and according to clause 4 of article 7 of Convention Bern determination of utilizing rights has given to member countries lawgiver.

According to article 16 of Convention Bern which is the most important article about criminalization of violating intellectual property and its execution guarantee and according to clause 1 of article 16 of this convention, illegal proliferation of supported works in member countries has been criminalized and its executive guarantee is arresting and collecting illegal proliferated works which has security and correction nature. Of course, manner of arresting these works has been referred to national laws of member countries (Haji Deh Abadi and Alami Tameh, 2009:57). Executive guarantees which have been predicted in international documents for violating intellectual works rights according to this convention state that manner of punishment and compensation was referred to national laws of country and executive guarantees for violating these rights can't be done by convention itself.

It should be mentioned that three important principles have been considered for supporting these works in Convention Bern:

1. Principle of national behavior; if work of any author which is national of member countries of this convention is published by a person who is national of non-member countries in a member country for the first time, it will have support of latter country laws like domestic nationals (Ayati, ibid: 146).

Articles 4 and 5 of Convention Bern which refer to principle of national behavior confirm above discussion.

Convention Bern is the first international document which in addition to physical rights, has supported intellectual rights of creators. However, this support is minimum which according to article 19 of this convention it is inferred that regulations of this international behavior don't prevent countries from considering more support for creators according to national laws (Zarkalam, ibid: 451).

2. Principle of guarantying minimum rights; according to Convention Bern this means that member countries should provide minimum support for creators of intellectual works in domestic laws and based on value they give to this branch of legal knowledge.

3. Principle of supporting without formality; which according to clause 2 of article 5 means that exploiting and implementing these rights don't follow any formality. Thus, none of member countries can impose doing formality like registering work, distributing a copy of work or paying tax on other member countries. It should be mentioned that according to articles 12, 14 and 16 of this convention, right of adapting cinema works and also according to clause 1 of article 6 of Convention Bern supporting work reverence and preventing from any falsification or change of work have been considered (Alasti, ibid: 76-78). Some countries in following minimum support which has been predicted in Convention Bern have considered any change in documents nature as criminalization.

For example, according to articles 18-434 of French criminal code, if action has been done by translator in legal or criminal affairs be as change in documents nature, whether translating dialogue or document, shall be rendered crime and two kinds of punishment have been considered: (1) translator which have changed nature of translation but his/her purpose was not gaining benefits or taking revenge from another person is convicted to prison up to 5 years and fine up to 500 000 Franks, (2) if translator action is for gaining benefits he/she will be convicted to prison up to 7years and fine up to 700 000 Franks (Ja'far Kousha, 2002:66-67). Therefore, France with regard to value gives to literary-artistic works and their creators has provided maximum support for creators of these works in line with Convention Bern. Of course, comprehensive Bill of Supporting Literary-Artistic Works of Iran, speech is also supported with regard to clause 2 of article 2 and article 127 of this bill and supporting this work is remarkable. However, problem of this bill is that conditions and circumstances of person who changes and falsifies another person's speech and his/her purpose and aim have not been determined.

Clause II: Agreement on Related Aspects of Intellectual Property Rights (Trips)

This agreement was signed in 1994 and is among inseparable elements of final document in Uruguay round and is one of three pillars of World Trade Organization Agreements (including agreements on trading goods, services, and intellectual property). This is the most comprehensive international document on International Property Rights (Asqari Aqmashhadi, ibid: 28). Trips Agreement in addition to industrial property rights include author rights (copyright) and related rights.

Contents of clause 1 of article 41 of Trips Agreement have obligated member countries to warrant that executive procedures settled in this section are available according to their national laws so that effective action against any action which violates Intellectual Property Rights contained in Trips Agreement be possible and predicts means for quick compensation to prevent from violation (Bozorgi, Fatehi, and Seyedi, 2015:170).

Article 61 of Trips recommends putting in action criminal rights to member countries. Despite appearance of this article which only refers to deliberate forgery of trademarks or copyright theft and execution guarantee of these two cases, nature of this international agreement determines minimum support in supporting Intellectual Property Rights. However, member countries can utilize different types of efficient execution guarantees about other instances of intellectual property by setting conditions in this agreement to support creators of intellectual works with regard to their domestic laws and value they give to this branch of law.

However, with regard to emphasis of mentioned article on forging trademarks and theft copies and copyright, prison or fine punishments are used as a preventive factor according to level of common punishments for crimes and also in some cases doing actions like arresting, distraining and destroying goods include violation and also materials and means have been used in committing crime. Emphasis of above article is that it only includes deliberate violation and violation in commercial trade. Therefore, whenever violating these cases of intellectual property in committing these crimes is not knowingly and deliberate, it is out of coverage of above article.

Another important point is that arresting, distraining, and destroying goods which include violating intellectual property are only about means and instruments which had the most utilization for committing crime (Haji Deh Abadi, Tameh, ibid: 68).

In this agreement, member countries have also been obligated according to principle of national behavior to behave equally with nationals of other countries for rights which have been considered for them according to this agreement. In this agreement, in addition to supporting physical rights like record right, any protest to any falsification, crime, and any change which harms reputation of performers is supported and member countries have obligated to make codes for audio discs and utilize effective criminal execution for violating these works and employ severe punishment for repeating crime (Mir Hosseini, 2014:277-279).

Subject II:Criminalization and criminal execution guarantee of violating industrial property

In this section, first we examine criminalization and criminal execution guarantee of industrial property in Iranian domestic laws and regulations and then consider violation and criminal guarantees of industrial property in international documents and treaties.

Sermon I:Crimes and criminal execution guarantees in Iranian laws

In this section, we consider crimes and criminal guarantees in Iranian laws with purpose of examining the most important laws.

The most important criminal instances in this field are forging registered trademarks in Iran, imitating trademarks, installing signs on goods and papers, selling forged goods or trademarks, importing or exporting any good with forged or imitated trademark, not inserting mandatory signs on goods which are sold, any record or proliferate of audio works without permission, using another person's work without permission, violating intellectual rights of owner. These instances are among the most important criminal instances in this branch of legal knowledge which unfortunately have not been criminalized integrative and dispersion of laws regarding criminalization of these cases often disperses courts

votes. The most important cases of these laws are presented as follow.

Clause I: Criminal Code 1925

Article 249 of criminal code approved in 1925 about criminal execution guarantee of violating trademarks states that "everyone utilizes fraudulently industrial or trade signs of another person which have been registered according to industrial signs code shall be convicted to pay 500 to ten thousand Rial unless this case be among instances of forgery and deception". With regard to this fact that this article has not supported all crimes related to trade and industrial signs, this article was changed and corrected in 1931 as follow. In new law, forging and using forged signs without permission of owner and selling products with forged signs or signs which belong to another person were considered crime and shall be convicted to correction custody from three months to three years and fine from ten hundred to ten thousand Rial or both.

Thus, single article of code for correcting articles 244 and 249 of criminal code approved in 1925 considered illegal competition to prevent from harm to owners of trademarks in trade competition.

Clause II: Sanctions Law 1983

According to articles 120 to 125, this law has been codified as a criminal mechanism for achieving to social control and regulating people behavior in society and preventing from violating orders of lawgiver and committing some behaviors which violate people rights, any complot and falsity in business and trade in order to healthy competition in market and preventing from illegal competition and seducing consumers.

Of negative points of this law is that considered punishment doesn't have minimum or maximum and/or in article 122 the only argued punishment is flagellum and in articles 123 and 124 only has been prison-based. It was better that lawgiver considered appropriate fine punishment and minimum and maximum for prison with regard to purpose of violators of this branch of law which often is gaining financial benefit. And another point is that crime is silent at the beginning these crimes.

Clause III: Islamic Criminal Code 1996

In this code, the only case which was referred in clause 2 and remarks of article 525 of Sanctions Law criminalizes forgery and deception and using work with intention. Claims made in this field are often about aggression to trademarks and invention which we refer to some of them:

Copying trademarks registered in Iran, incorporating or changing part of trademark which belongs to another person, installing trademarks on papers and advertisement on products, using forged marks, exporting, importing, not using mandatory marks on goods which should install trademarks shall be rendered criminalization.

Of problems of above code is that criminal titles and their instances that is marks and inventions in industrial property field are not clear which in turn disperses votes and decision-making in this regard. Necessity of lawgiver attention in this respect and other branches of industrial property is required, because dispersion of laws and regulations in this regard results in dispersed votes.

Clause IV: Supporting Geographical Indications Code 2004

Instances of geographical indications have been stated in article 2 of this code and also in article 1 in defining it states that: "geographical indication is an indicator that relates origin of a good to a territory or region of country provided that quality, reputation or other characteristics of good can be assigned to geographical origin." Geographical Indications term is relatively new and before 2003 domestic laws were silent in this regard and in 2004 lawgiver began to consider it criminalization. Supporting geographical indication is important in national and international dimension, especially for countries which have specific traditional products and handicrafts (Mir Hosseini, 2013:197) like Lalegin earthenware and Qaenat saffron which have world reputation.

Geographical indications are different from trademarks in some ways:
1. Geographical indications reveal place of producing good but trademarks reveal producer of good;
2. Using trademarks is exclusive and others can be inhibited from using them;

3. Trademark have transfer ability but geographical indications can't be transferred due to dependency on a certain place (Asqari Aqmashhadi, 72).

Another important point is that in geographical indications there is no need to track producer because place of production is important and despite trademarks any producing firm which offer production with certain quality in that place can request for support (Mir Hosseini, ibid, 200). However, due to legal gap in this regard goods which their quality, reputation or other characteristics are related to a certain geographical territory or traditional products of local regions have not been supported by domestic laws against different abuses (Mir Hosseini, 2006:144), like Behbahan date or Tran's pistachio which have world reputation.

Therefore, if there isn't any efficient law for supporting products related to a certain place, ground is provided for abuse of opportunists and causes many harms to economic benefits and/or cultural identity is at risk in producing and shaping traditional products related to local regions.

Clause V: Illegal Disclosure of Trade Secrets

With regard to this that purpose of economic institutions and firms in innovation and technical information like designing a product or formula and/or manner of production is gaining physical and economic exploitation and on the other hand with regard to this fact if this confidential information goes on to hands of competitors causes huge harm, lawgiver took actions for criminal support for them in some national laws in order to support owners of this right and encouraging and motivating them.

Thus, lawgiver has considered criminalization in article 648 of Sanctions Law approved in 1996 and with regard to the term "all persons who become confident due to their job or profession", it is inferred from this term that is also includes violating trade secrets. Trade secrets in article and for trade institutions and firms include more confidential information, production formula and/or even process of producing a good. For example, if an employee of a company gives formula and/or manner of producing a good or product to a competitor company can be included by this article and his/her behavior can be criminal.

Therefore, by looking on result of a file in branch 31 of appeal court of Tehran province, it is observed that employee of "Medicine and Computer Company" has extracted and copied information in company's computer against terms of his contract and by adding other information has offered this information through diskette in an exhibition which court has considered his action against article 674 of Sanctions Law 1996 (Mir Hosseini, 2014:227-228).

It seems that in laws of some countries like U.S any information which has trade value for owner which can't be observed and used by public is considered as trade secrets and considered violating it as crimes and having criminal execution guarantee such as business background, data engineering, financial information and even customer list and considered 15 years prison and 5 million $ fine for trade secrets theft and it can be "Economic Spionage" according to U.S copyright 1831 when a foreign government be theft of this information. And in other cases, 10 years prison and 250 000 $ fine have been considered (article 18, copyright code 1832) (Marshall, 2013:8). An example of customer list as trade secrets of a trade institution can be found at U.S claims in 2000 against Martin which considered eligible customers list of tourism agency and/or technology of producing intraocular lens and list of optometrists which were customers of this institution (ibid, 169). Therefore, this criminal behavior is considered as theft and in cases which foreign agent take part in it is considered as "Economic Espionage" in U.S laws.

Clause VI: Crimes resulted from violating instances of intellectual property in Registering Inventions, Industrial Plans, and Trademarks Code 2007

Lawgiver in Registering Inventions, Industrial Plans, and Trademarks Code 2007 has considered possibility of criminal litigate for any violation of trademarks without permission of owners according to articles 46 and 47 of this code. However, this code has been silent in relation to criminal actions and their punishment and in correction code of articles 244 and 249 of criminal code approved in 1931 punishment was determined for violating trademarks and invention. Thus, violating trademarks and invention was criminalized in laws before revolution.

On one hand, with an approach apart from past laws, lawgiver in Registering Inventions, Industrial Plans, and Trademarks Code approved in 2007 has convicted any person who commits criminal actions like violating rights resulted from invention, registering industrial plans and trademarks and brands which are considered as rights of owner according to article 61 of this code and using brands by third party whether as brand or fake mark or any use of them which causes seduction is considered crime and in addition to compensation, is convicted to fine from ten to 50 million Rial and prison from 91 days to six months or both according to article 47.

In laws of some countries like U.S, violating invention right lacks any criminal execution guarantee. However, in two cases related to invention right there is criminal execution guarantee which are forging invention license and fraudulent sign of registered invention. In section 35 of copyright and article 101 of this, exclusive right has given to inventors and other persons have been deprived from making, using, selling, and presenting sale offer. U.S laws has resorted to civil remedy for violating invention but has considered punishment for forging invention license and forging, falsifying, or imitating trademark in order to support legal competition (ibid, 267).

Lawgiver, without separating any instance of intellectual property in Registering Inventions, Industrial Plans, and Trademarks Code approved in 2007 and in article 60 of this code, states any violation of rights of owners of invention, industrial plans, and trademarks: "any aggression by persons other than owner of rights supported by this code and without owner agreement is total violent of owner of right." On the other hand, in article 61 of this code, any person who commits actions with intentions which are against article 15 (invention license), article 28 (right resulted from registering industrial plans) and article 40 (rights resulted from trademark) or against article 41(mandatory registration of trademarks) shall be rendered crime.

Despite this fact that in mentioned code attempts made for criminalization and criminal execution guarantee, of problems of this code is that lawgiver should considered difference between invention and rights resulted from it.

Lawgiver in article 61 has confined to criminal execution guarantee and collected cases which provided support for them and solely committing criminal behavior that is doing positive criminal actions in article 61 of Registering Inventions, Industrial Plans, and Trademarks Code approved in 2007 can't be called crime unless each one of these actions done with criminal intention and conditions which physical pillar of violating rights resulted from registering industrial plans is very close to characteristics of physical pillar of violating rights of owner of invention license. In fact, criminal title here is exploiting registered industrial plan without permission of owner.

Psychological pillar of violating rights resulted from registered plan by exploiting registered plan without permission of owner like violating invention license results from ill-will that is free will in doing its instances and awareness that this industrial plan belongs to another person. It should be mentioned that in order to realize psychological element of violating right in this branch of industrial property, intention of committing any instance in clause b of article 28 should be cleared.

On one hand, in Sanctions Law 1996, articles 525, 528, and 529 refer to forging signs of public companies, public institutions and private companies, respectively perpetrator in addition to compensation is convicted to prison from three months to two years which in this case lawgiver is prison-based and it was better that punishments like fine have been considered.

Sermon II: Criminalization and criminal execution guarantee of industrial property in international documents

Although international community still doesn't achieved enough power to deal with violators in this branch, there are some treaties and contracts to support in this regard and criminalization, criminal execution guarantee, and performing them have been referred to domestic laws of countries based on need to serious support.it seems that of problems of these international conventions for supporting intellectual property is that they are silent in relation to implementation and/or solely have obligated members countries to take executive actions. Therefore, effective execution guarantees will not be useful if they don't utilized.

However, the most important international

document in terms of criminalization and criminal support for intellectual property is Trips Agreement which in article 61 of this agreement two basic conditions have been argued for violating each one of intellectual property branches which are (1) willful violation, and (2) violation in trade scale. This agreement which is the most important international document contains criminal execution guarantees in terms of intellectual property which is an inseparable element of mandatory documents of World Trade Organization and one of the most comprehensive and complete regulations about intellectual property rights at international level.

Trips Agreement includes different types of intellectual property rights such as author right, copyright and side rights (rights of performers, producers and … of audio works), geographical indications, industrial plans, invention right of integrated circuits production plans, and non-disclosed information.

This agreement has determined minimums. Although in this document according to article 6 for supporting intellectual properties willful forgery of trademark or copyright theft in trade scale have been criminalized, members can criminalize and determine criminal execution guarantees in other cases of violating intellectual property rights willfully and in trade scale based on their values. It should be mentioned that with regard to emphasis of article 6 of this document, criminal ways of compensation like arresting, distraining, and destroying goods which incorporate violating different types of intellectual property only include means that have been used mostly in committing crime (Bozorgi, ibid, 292).

Conclusions

By examining increasing importance of intellectual property in economic-social development and position of this branch of legal knowledge, it is obvious that in developed and developing countries different mechanisms have been considered for registering and recording and different supports have been considered in national laws and sometimes in consistency with international document. Beginning of international documents in literary-artistic property field backs to Convention Bern and Paris Convention in order to support industrial property in which Iran joined it in in 1958.these international documents support rights of creators of intellectual works and

have obligated member countries to criminalize and use criminal execution guarantees according to their national laws.

In international agreements, with regard to violation and its effects in terms of prioritizing execution guarantee, first civil execution guarantees have been considered and then criminal punishment. However, in our domestic laws criminal punishments have been used without paying attention to violation and its effects and inconsistency between crime and punishment.

Thus, Iranian laws approach in different periods has not been in line with international treaties and documents and codifying a comprehensive and complete law is necessary and on the other hand citizens and even some lawyers don't have awareness of intellectual property rights. Therefore, in order to make unity and integration for intellectual property rights system and overcome legal gaps and achieving efficiency, taking scientific actions in order to overcome deficiencies in supporting Intellectual Property Code, following recommendations are presented which are in line with goals of intellectual property nature in international documents and domestic laws:

1. Universal instruction about intellectual property in order to prevent from crimes against intellectual property and codifying a comprehensive complete law which responses to needs of current society, because damage resulted from violating intellectual property for society and owners of intellectual property and always is done by educated and knowledgeable person should have more effective execution guarantee than other crimes.

2. Providing appropriate ground for Iran in order to join some of important international conventions and approving domestic laws in order to implement different conventions like Bern, Paris and Trips with priority of keeping national benefits and public interest.

3. Execution guarantees in laws for supporting intellectual property by observing values govern society, manner of committing crime and benefits obtained and their effects in society, be punishments other than prison and preferably fine unless in case of repeating or severity of crime.

4. Therefore, it is emphasized that no criminal system can be successful and efficient against vio-

lators of human intellectual creativeness unless become consistent with current conditions and social changes that have affected all social, political, cultural, and economic structures and try to codify an integrative criminal policy.

Finally, with regard to current article, there is necessity for transparency in duties and obligations of persons in relation to intellectual property in literary-artistic property and industrial-commercial intellectual property field. Lawgiver should take actions to approve integrative and precise laws with cooperation of intellectual property departments of law schools and professors which have expertise in this discipline and by observing minimum principle of international documents and treaties which collect all instances of intellectual properties so that contrasting decisions and pronouncements in judicial authorities about claims related to this field reach to minimum. Not considering scientific foundations, society values and effects of intellectual products in making and developing legal competition and supporting intellectual producers and consumers can result in reverse results for criminal justice system.

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Commissioned Studies/ Papers

Indian Journal of Science Communication encourages potential scholars to undertake short term studies/ research/ surveys on specific area/ topic/ sector concerning S&T communication. It is expected that such studies will also lead to writing of a paper/ article and can subsequently be published in IJSC, if found suitable. A committee of experts will evaluate and recommend carring out of such studies. A nominal amount towards honorarium may be granted for undertaking such studies. Proposals, including information pertaining to title of the study, scope and objectives, methodology, expected outcome, budget estimates and time schedule, etc., may be sent to the Editor, IJSC.

Natural catastrophe: An anthropological perspective

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The Present study emphasises the value of disasters for anthropologists and scholars interested in analysing cultures and the important insight that an anthropological perspective can offer to the academic study of disasters and the policymakers. The study of catastrophe by social scientists is a fertile area for the development, both to tackle the immense human problems and their involvement. At the time of increasing globalization and worldwide vulnerability, the study of disasters become an important area of concern for anthropological research. The present study aims to explore the potentials of calamities for ecological and socio-cultural approaches to anthropology along with the perspective of archaeology and history. Worldwide statistics revealed the increasing number of disasters and disaster impacts within the last decade. Indeed, only within the last four decades, natural disasters have caused more than 3.3 million death and 2.3 trillion dollars economic damage (WB 2010:10). In last three decades many developing countries especially those in Asia, have increasingly been impacted with collective disaster events causing various challenges. It is not one blow that is likely to be devastating for a society but rather a recurrent set of blows and problem caused by attempted interventions. Most civilizations have either met a slow demise or were wiped out by natural disasters or invasion, however there are a few societies whose disappearance confused the scholars totally. The main theory which emerged as the reason for disappearance was the climate change and natural disaster. The study of collapse of past societies raised many questions. Interest in the extinct, extends into the natural sciences and sustainability policy. Recognition of the dynamic role of social processes that lies at the heart of the human communities and connection between theory and practice is important. Thus, the role of anthropologists in disaster management cannot be overlooked. There are still other than December 2012 blackout (NASA), predicted dates for apocalyptic events, such as rapture, last judgement or another event that would result in the end of humanity, civilization, the planet or the entire universe!

In the course of globalization and worldwide vulnerability, the studies of disasters become an important focal point for anthropological research. Nature has created certain natural disasters like earthquake, flood, drought, famine, tornado, hurricane, volcanic eruption, heatwave, and landslide, etc., leading to enormous financial, environmental or loss and suffering to the mankind. The resulting loss depends on the vulnerability of the affected population to resist the hazard, also called their resilience. These disasters are at one hand maintained the ecological balance on earth and at the other are equally disastrous for human race. This could be better understood as disasters occur when hazards meet vulnerability, eg. strong earthquakes in uninhabited areas are hazardous where as disastrous in the densely populated areas. Man has therefore always endeavoured to estimate, control and mitigate the damage caused by these natural disasters.

The term *natural* has consequently been disputed because the events simply are not hazards or disasters without human involvement. A natural hazard is a threat of naturally occurring event that will have a negative effect on people or the environment. Many natural hazards are interrelated, eg. earthquakes can cause tsunamis and drought can lead directly to famine or population displacement. The differences that appear between disaster and ca-
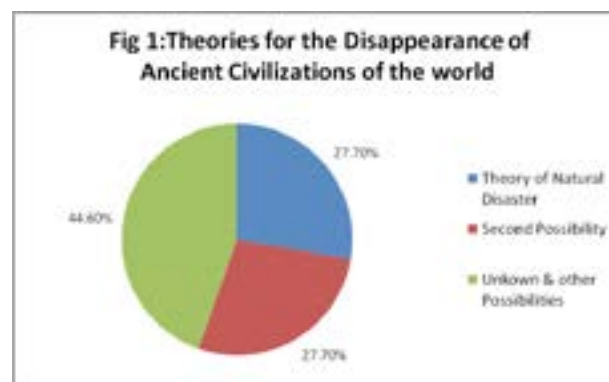
tastrophe can be especially seen at the organizational, community and more likely from the individual to the societal level. The study of catastrophe by social scientists is a fertile area for the development; both to tackle in immense human problems and their environment. Effects of natural disaster vary from immediate to long term. The human impact of natural disaster is population displacement, health risks, food scarcity and emotional aftershocks.

Natural disasters are global phenomenon, which may occur, any time with or without any indication. These adversely affect almost every part of human lives and cause considerable damage to the property, environment and the infrastructure worldwide, leading to physical distress, massive economic loss, innumerable environmental problems and emotional concerns. India is major disaster prone country in Asia-Pacific region. 85% of land area is vulnerable to one disaster or the other. Among the country's total states and union territories, 22 are multi-disaster prone. As much as 40 million hectare of land in the country is identified as flood prone, and on an average 18.6 million hectare land is flooded annually. About 57% of area is vulnerable to seismic activity. 18% of the area is drought prone; approximately 50 million people are annually affected by drought and 685 of total sown area of the country is drought prone. Long coast line of 8400 Kms which is exposed to tropical cyclone arising in Bay of Bengal and Arabian Sea in the ratio of 4:1. Indian ocean is one of the six major cyclone prone regions of the world. The coromndal coastline is extremely cyclones prone, with about 80% of the cyclones generated in this region (Jain A. K., 2008).
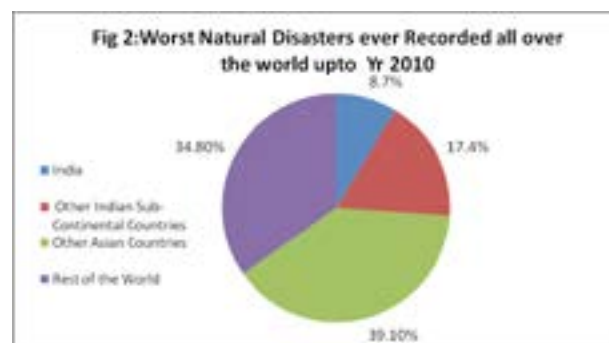
In recent years anthropology has added significant width to the study of disasters. Anthropology's long term perspective, an in-depth field work has added significantly to assimilate the elongated repercussions. Calamities provoke furthers enhancing the inclusion of the factors that lead to people's vulnerability. An attempt has been made to give a comprehensive account on natural disasters with reference to Indian susceptibility, based on world's experience. In retrospect, records of the disappeared ancient societies of the world were included. Chronological data of the occurrence of natural catastrophe all over the world led to the longitudinal study.

In a developing country like India mounting

rage of nature is quiet alarming. Following figures have been drawn as a result of the study of occurrence of natural catastrophe all over the world since ages. Several ancient civilizations disappeared in mystery giving the insight to conservation of human race. It has been derived that most popular theory of disappearance of ancient civilizations, is of the natural disaster and climatic changes followed by invasion theory.

Fig 1: Theories for the Disappearance of Ancient Civilizations of the world

- Theory of Natural Disaster
- Second Possibility
- Unkown & other Possibilities

On the basis of archaeological studies, excavations and the author's views, the theory of natural disaster and climatic changes show an equal percentage i.e. 27.7% probability of the theory of the natural disaster causing disappearance, and 27.7% for the second possibility of the extinct of the civilization. 44.6% of the total is under the unknown or other possibilities for the end of the ancient civilization all over the world.

Fig 2: Worst Natural Disasters ever Recorded all over the world upto Yr 2010

- India
- Other Indian Sub-Continental Countries
- Other Asian Countries
- Rest of the World

According to the records of the world's worst natural disasters till year 2010, out of total occurrence of natural disasters, India witnessed 8.7% whereas other countries of Indian Sub-continent observed 17.4%. However, other Asian countries suffered up to 39.1% and the rest of the world facing 34.8% in totality.

Indian sub-continent along with the other Asian

countries has been victim of natural catastrophe throughout. 65.2% i.e. approximately 2/3rd of the total number of recorded natural disasters occurred in Asia which has affected the large population inhabiting the respective continent.
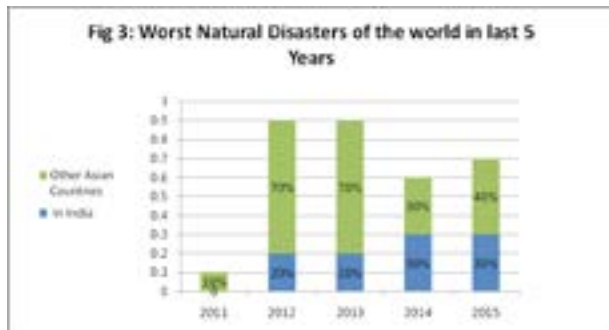
As shown in the figure, India in year 2011 recorded no major natural hazard, however the possibility of minor calamities with negligible destruction and human loss is not denied. In the years 2012 and 2013 the percentage of occurrence of natural disasters all over the world, 20% each year suffered by India, followed by 30% in year 2014 and 2015. Noticeable rise in the occurrence of natural catastrophe in India in recent years must be viewed as a threat to the environmental and socio-cultural sustainable development. This should be viewed as an alert to the existence of human race.

Disturbances arising from natural disasters continue to mount worldwide, though the most alarming social and economic dislocations are occurring in developing countries. This paper is an attempt to assess anthropological contribution to natural disaster studies and appraises their relevance for disaster mitigation policy. An inclusive account of the nature of disaster, this complex includes physical, biological and socio-cultural aspects, and their use in the explanation and appeasement of social life which is the goal of the anthropologist as well.

The studies of the collapse of past societies raise many questions for the theory and practices. Interest in collapse, extends into the natural sciences as well as environmental and sustainability policy. The social and economic consequences, of recent natural disasters across the world have recapitulated the need to place more attention to natural disaster, as part of the global agenda for sustainable development. There is mounting evidence that global climate change is increasing hazards in vast parts of

the world, such as hurricanes and floods.

The literature on natural disaster and its social and economic consequences is still scarce and can be divided mainly in these strands. One factor exacerbates vulnerability to natural events. They have developed a framework considering changing climate, deforestation and geophysical factors (McGuire, Mason and Kilburn, 2002), in addition to increasing urbanization which brings environmental hazards and exposure to risk from lack of adequate urban planning and dual political discourse (Pelling, 2003 and 2003a), or even geographical proximity to exposure, access to assets and public facilities as well as political and social networks (Bosher, 2007).

Despite the fact that human has made tremendous progress in various aspects in terms of technological growth, yet thee is one area where they have not been able to surpass and that is the supremacy of nature. Even though there are lot of technological and scientific advancements and achievements, nature has always proved itself much more powerful than the human race. In spite of development in weather forecast techniques, disaster at many times cannot be prevented. In today's age, the natural calamities in the form of flood, tsunamis, famines, cyclones, earthquakes are mainly due to global warming. Time and again we have seen and read about many natural disasters occurring in the country and outside which has caused a great havoc in the society, killing thousands of people and destroying lives and properties.

The worst that comes to one's mind are the Paradeep super-cyclone (1999), Gujarat earthquake (2001), and the tsunamis of 2004 affecting life across 14 countries. The Gujarat earthquake of 2001 happened on January 26, India's Republic Day. The earthquake measure 7.6 on the Richter scale. The Paradeep cyclone hit the coast of Odisha, one of India's states on east coast. Though, India learned lessons of disaster management through these unlikely events. When the cyclone Phailin struck in 2013, over 9 lakh people were evacuated and rescued, bringing the death toll to a minimum. Jammu & Kashmir flood in September 2014, region's worst flooding in over a century led to flooding of many rivers causing property loss and heavy causalities. In October cyclone Hudhud caused massive loss. Assam floods affected the lives of more than one lakh people. Due to heavy rains and deforestation,

Malin village in Ambegaon area in Pune suffered landslides. Odisha, Meghalaya, Allahabad, Guwahati and some other regions were also affected by floods in 2014. India was among the top three most disaster-hit countries in 2015 with a whooping economic damage worth $3.30 billion, a new analysis released by UN Office for Disaster Risk Reduction (UNISDR) revealed. India's cities might be expanding but are more vulnerable to natural disasters.

The Asia continent witnessed almost 90% of the world's catastrophes occurred in the years 2012-2013. In 2014-2015, a decline was observed to 60%-70%, yet the susceptibility of the geographical region remains. The ecological and socio-cultural vulnerability of the region appears significantly high which may lead to massive destruction of properties and life and even to the disappearance of it all.

With respect to the percentage of occurrence of natural catastrophe in India at large, an ascending trend is noticed from 0% in 2011, 20% in 2012-2013 heading to 30% in 2014-2015. Natural disasters are hindrance to attain sustainable development as they can derail hard-earned development plan and progress. A shift from reactive disaster management to disaster risk management at all levels of societies is needed. Post disaster recovery processes should be considered as opportunity for development, revitalizing local economy and upgrading livelihood and living conditions.

The increase in number of disasters and their consequences is related to increase in the vulnerability of communities throughout the world as the result of the development model adopted. Recent rage of nature in the form of catastrophe could be an alarm to the mankind as a whole. In view of the inferences drawn from the extinct ancient civilizations and swelling frequency of disasters in recent years, subsequent increase in global vulnerability should be the main focus for sustainable development. Limiting human intervention and endeavour sustainability of socio-cultural development, may stand up to minimise the effects of catastrophe or to some extent lead to the preservation of our existence and also to the revival and rehabilitation of the sufferers. The increase of vulnerability is not uniform and there is significant variation and the consequential damage by and large can be minimized by awareness of disaster preparedness, mitigation and adaptability.

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CSIR-NISCAIR-DST National Workshop

Science, Technology and Innovation Policy: Optimizing Communication and Information Research

CSIR-National Institute of Science Communication and Information Resources (CSIR-NISCAIR) and the Department of Science & Technology (DST), Ministry of Science & Technology, Govt. of India, have jointly organized a National Workshop on "**Science, Technology and Innovation Policy: Optimizing Communication & Information Research**", during 23–25 January 2018 at Lecture Hall, NASC complex, Dev Prakash Shastri Marg, Todapur, Pusa, New Delhi attracting over 150 participants from across the country.

Shri Jayanta Rao Sahasrabudhe, National Organizing Secretary, Vigyan Bharati; Dr. H. Purushotham, Chairman & Managing Director, National Research Development Corporation (NRDC); Prof. K.K. Dwivedi, Vice Chancellor, ITM University, Gwalior; Dr. R.S. Sangwan, Director, Academy of Scientific & Innovative Research (AcSIR); Dr. Neeraj Sharma, Head & Advisor, Policy Research, DST; Prof. Manoj Kumar Patairiya, Director, CSIR-NISCAIR were amongst the dignitaries, who expressed their views and shared ideas during the workshop.

Appropriate information and its timely communication to stakeholders assume much significance especially in today's highly dynamic and ever changing world. Policies for instance are formed on the basis of data, evidence and analysis by employing different tools and mechanisms including future modeling, forecasting, forward, reverse planning, and so on. Information communication research and resultant data form basis of evidence for guiding the future actions by governments, institutions, societies and public at large.

The Science, Technology and Innovation indicators are crucial in the innovation system and are used to monitor the progress, evaluate the efficiency and effectiveness and set the benchmark for the desired goals of the entire STI ecosystem. Forecasting technological trajectories and foreseeing the future development is yet another significant area.

The workshop aimed at providing a platform to ponder over the issues with workable solutions. This is particularly important in view of promoting evidence-based decision-making and policy framework processes in India. During the workshop, the following points were discussed in detail by the panel of experts drawn from various organizations, government departments, academics and industry:

- Understanding STI Structure in India
- Communication Implications & Opportunities
- Global Scenario: Comparative Analyses
- Innovative Tools, Modes & Means
- Pre and Post STI Policy Impact: Information Analytics
- Science Communication Research & STI Policy
- Information & Informatics Support
- Towards a Comprehensive Indian STI Ecosystem

A Mobile Application was launched on the occasion which can be downloaded freely on android mobile phone from Play Store. All Open Access Research Journals and other publications of CSIR-NISCAIR can be accessed through the App.

With this backdrop, the workshop has been able to offer valuable insights for policymakers and scholars to underscore the interventions of communication and information research while devising and implementing the science, technology and innovation plans and policies.

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The 18th Indian Science Communication Congress (ISCC-2018)

Jointly Organized by
**CSIR-National Institute of Science Communica-
tion and Information Resources
(CSIR-NISCAIR)
Indian Science Writers' Association (ISWA)
Indian Science Communication Society (ISCOS)**
at
**Vigyan Sanchar Bhavan, CSIR-NISCAIR, Pusa
Campus, New Delhi, India**
December 20-21, 2018

Main Theme:

The focal theme of ISCC-2018 is "Celebrating 200 Years of Science Journalism in India".

ISCC Format:

The scientific sessions will have presentation of contributory research papers, review papers, survey analyses, case studies, posters, and invited talks. Discussions in split groups would offer close exchange of thoughts and ideas. Deliberations will be in English and/ or in Hindi. The prescribed time for paper presentation will be around 10 minutes (7 minute for presentation + 3 minute for discussion). Power Point presentation facility will be available. Best paper awards would be given in junior and senior categories. Selected papers can be published in *Indian Journal of Science Communication* <www. iscos.org>.

Who can participate?

Some 200 researchers and practitioners of science communication, i.e. scientists, technologists, academicians, writers, journalists, editors, scholars and faculty members, public relations and information officers of scientific organizations, representatives of media, science activists from NGOs, and senior government officials/ public representatives, policy-makers, decision makers from India and abroad are likely to participate.

Special Features:

A display of science communication products, software materials, a special session for young researchers and students, face-to-face interaction with experts, open forums and debates on current issues under the focal theme, cultural programme, and field visit will be some of the attractions of ISCC-2018.

Abstract/ Paper/ Poster:

Last Date for Submission of Abstract (500 Words): December 10, 2018
Intimation of Acceptance of Abstract: December 10, 2018
Last Date for Submission of Full Paper/ Poster: December 10, 2018

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