CHAPTER 1

INTRODUCTION

This chapter brings introduction to the study as it highlights the aims and objectives, research questions, rationale, scope and background of the study. The brief history and growth of the internet in the state of Mizoram is also documented in this chapter using primary data in order to get better understanding of how the internet bring changes in the life of the people since its inception. It also contains review of literature, the existing work related to the topic studied, without which a research work is empty or incomplete. A brief note on Mizoram and its status on internet usage as well as operational definitions of certain terminologies can also be found. Being an underdeveloped state, dependence on the government is great and the public often wait and watch upon the government to take the initiatives regarding development of all sorts. Therefore, in order to look into the growth and development (of any area) in the state, the best available option is to consult the concerned government officials. Keeping that in mind, this research also tries to document the condition of the internet in Mizoram by first consulting the government officials and then turn to the public to look at certain phenomena from multiple angles.

1.1. Introduction

One of the most remarkable human inventions is the Internet (Naughton, 2000). The term internet has become an umbrella term for different forms of technology, a generic label referring to the electronic system where users can express themselves (Mitra 1997, 58). The internet is a global system of interconnected network which has gone through various technological advances since its inception in 1960s. Internet has become the spirit without which an individual feels lifeless regardless of their geographical location or social environment as Park et al. (2013) stated that dependency could mean a channel becomes an everyday life's essential tool. It is unquestionable, however, that we are at present in the middle of a considerable change in the way we communicate with one another, that is brought by the internet – sudden yet significant that alter the way we organize ourselves and think about what is right and what is wrong (Poe, 2011). The popularization of the internet results in bringing together the *three C's – c*omputing, communication and content, facilitates merging of computer industries, media house and telecommunications into one digital form

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while reducing the dividing lines between the various platforms (Nwammuo & Nwafor, 2019). The growing use of the internet over the years is a result of the advent of commercial internet with a relatively low price offered to individuals along with the availability of user friendly softwares and applications (Glowniak1995, 56). To understand the reason why people become dependent on the internet, distinguishing the motivations for internet use may be beneficial (Hilts, 2008).

The dawn of the internet era has immensely influenced mankind. Though not intended for public use initially, its existence has undoubtedly influenced culture of every kind. Modern internet unifies and brings development in a number of social, cultural, and technical streams (Haigh et al, 2005). It has become not only a resource but something that has influenced the everyday human behaviours (Rangaswamy & Cutrell 2012, 54). Internet can be multidimensional and its history can also be more than just one kind (ibid) and as the global culture focuses more on governance and policy making based on the internet, paying heed to the internet history could make a remarkable effect on its growth, use and development in the present as well as the future. Therefore, it is also important to look into the history of the internet while studying how it influences the lives or culture of the people. Knowledge about the diffusion of internet is extremely relevant to economic development agencies and local governments across the nations (Singh & Singh 2023, 29). Technologies and cultures can by no means be precisely separated as technologies are continually used in certain cultural settings that reshape them whilst they partly reshape the cultural contexts as well (Reed, 2009). The age of the internet also ushers users to digitalization of culture (Çöteli, 2019) which can be the outcome of individuals' detachment from real life and acquiring digital identities, as they strive to build up their identities in that medium. The characteristics of internet dependency, including the term itself has been primarily studied in the context of psychology, hence, most existing work focus on the adverse effects of internet dependency owing to its disciplinary origin (Chen et. al, 2004). Therefore, it is also important to study the other aspects of internet dependency, not only its detrimental effects.

Even though we say that the internet shapes culture, we cannot measure how far it does, hence, that, brings to mind the concept of digital divide which refers to the "gap between households that have access to the internet and that do not have since the mid-1990s (Van Dijk, 2006)". While digital divide can be seen as either out-of-date since those who want

computer and internet access can easily afford them in the richest countries, or inappropriate because the ones who do not have Internet access don't actually need it (Warschauer, 2003). Glitch between the skill in human resources and infrastructure are digital divides that remain regardless of the efforts to obtain more affordable devices (Pierce, 2019) as digital divides are multilayered and not just a binary concept. Knowingly or unknowingly, the internet has become a central part of every society, culture and individual. Since the internet is a very recent phenomenon in Mizoram and yet very dominant in the life of the people, it is vital for researchers to pay attention to how it jiggles their daily life as there is not much work done in this area yet.

1.2 Mizoram

Mizoram, previously known as Lushai Hills or Mizo Hills, is located in the southernmost corner of northeast India (Nunthara, 1996). The 23rd state of the Indian Union has a total area of 21, 087 sq. km. and according to Census of India report, the population of Mizoram is 10, 91,014 of which male and female are 555,339 and 541,867 (Ratnamala & Malsawmzuala, 2021, 211). Among the Northeastern states, Mizoram scores the highest in Human Development Index (HDI) in terms of literacy level but a substandard National State Domestic Income (NSDP) slackens its progress (Guha 2017, 2). According to Ralte (2014), in Mizoram, 242 out of 365 in four localities of Aizawl are internet users – 50.09% are male and 40.90% female; where 50.13% access internet with computer while 60.84% use mobile phones and 90.8% are using both mobile and computer devices (Lallianzela, 2014). After the Indian independence, the region was known as the Lushai Hills District of Assam and became a Union Territory as Mizoram in 1972 (Pachuau, 2014). The inhabitants of Mizoram are known as Mizo(s). The term Mizo may not be a name of a tribe or a clan but a generic term to designate a racial cultural group by which all people living in Mizoram are known (Lalremruati, 2012).

One of the smallest states in India, Mizoram has a very dynamic and flexible culture that is easily swayed by the dominating practices around the world and the people are vulnerable to change even within a short span of time. Internet reached the state in the late 1990s; the general public started accessing it by the early 2000s. With the increasing dependency on technological devices, human cognitive abilities have been enhanced and extended by digital

tools. Digital enhancement, brought forth by technological devices as well as context-specific tools is becoming a reality in various professions as well as daily life. The elementary understanding of digital divide, that is, mere accessibility of computers and internet connection more than matter of content, dialects, ability to read and write as well as community resources is still difficult to get rid of. Whilst a group called the "choose nots" are not interested in engaging with technology, several questions arise – "Will digital knowhow be useful in bridging the gap of digital divide? Can digital understanding outdo the divide demarcated by the native-immigrant separation? Or does digital enhancement widen the gap by endowing the 'haves' while the 'have-nots' keep adding numbers to the digital left behind?" The convenience as well as constraints and the changes the internet brought in Mizo society needs to be studied as it has become an integral part of every individual's life.

Mizoram is chosen as the universe of this study so that the researcher can collect data from an insider's perspective. Gair (2012) said that a researcher who belongs to the group where the participants of the belong is an "insider" who can identify and relate with the ethnicity, gender and various practices of the population. Insider researchers are believed to have an advantage when conducting qualitative research as the participants can be more comfortable to disclose information to them (Hayfield & Huxley, 2015). Insider perspective helps researcher to gather data with their "eyes open" but with an open mind assuming that the phenomenon being studied is not known by the researcher (Dwyer & Buckle, 2009). The insider doctrine believes that outsider researchers may not fully understand a culture or a situation unless they experienced it, insider researchers can engage with the participants better in order to get more data (Kerstetter, 2012). Sharing common characteristics like language, gender, ethnicity, race etc. with the participants can provide researchers with distinctive insights to the topic studied (Giwa, 2015).

1.3 Internet and Mizoram

Internet connection to the districts and rural areas is still very poor in Mizoram. Some initiatives have been taken by the government such as installing Gigabit Passive Optical Network (GPON) and one of the government projects, *Bharat Net* aims to connect 763 Village Councils in Mizoram (Economic Survey, 2021). The problem faced by the government sector when it comes to internet service is the formalities (to be followed) and

the restriction from higher authorities as they cannot merely compete with their rival private companies who keep coming up with exciting offers/tariffs to expand their business. The common problem faced by the non-government internet service providers is the restriction made by the local or higher authorities with reference to internet cable/wires placement as they have to rent Power and Electricity (P&E) Department poles to give new connections which costs around Rs. 5-7 per cable for some of them.

In spite of its short history, the internet in Mizoram has an extensive reach. The arrival of mobile phones boosted its growth, making it accessible for wider users. Majority of the people, irrespective of their age, are depending somewhat heavily on the internet. The adoption of digital technologies is fairly good at basic and entertainment level for daily use. But, as one of the IT company heads said, Mizoram has a long way to go to meet the required skill to work in offices, not to mention working in IT companies. Some of the most common mobile applications used by the Mizo digital immigrants are WhatsApp and YouTube, Bible app, Dictionary app and money transfer app (like mobile banking) and they consume more of hard news and non-fictional contents while the digital natives are more into soft news and entertainment – OTT (movies, web series, music,), various social media, chat and gaming apps. The flexible nature of Mizo culture makes it more vulnerable to alterations, be it by the digital culture or any other dominating practices. In spite of its geographical disadvantages and economic conditions, number of mobile users in Mizoram has significantly increased. With the internet having its way among the general public by the early 2000s brought forth by BSNL which also started mobile internet (2G) connection by the year 2004, there has been an enormous growth in mobile internet connection the following two decades. The Covid-19 pandemic has apparently boosted Mizos dependency on the internet as in all other parts of the globe where all kinds of activity be it education, meetings, church gatherings became online. The inevitable lockdown had made the people engross in telecommunication medium as the government also promote online activities during such times. The state government issued an order of temporary shutdown of all educational institutes and brought about online teaching and learning in order to safeguard academic activities (Dey, 2022). Mizoram educational institutions transitioned to online learning and teaching right after the Covid-19 lockdown which also impacted the quality of the education system, teaching quality as well as the students' understanding of lectures and syllabus (Lalduhawma, Thangmawia & Hussain,

2022). Many young students were compelled to own a mobile phone for online classes which in a way hamper their offline daily performances. According to Economic Survey (2020-2021) by the Planning and Implementation Department, Government of Mizoram, number of mobile connections during 2018-19 (shown in Table 1.3) is 11,35,632 out of which 4,57,566 are Airtel users while 3,12,413 are Reliance Jio users, 2,05,835 are BSNL users and 1,60,088 are Vodafore/Idea users (Mizoram Statistical Abstract, 2021). This table shows the district-wise number of mobile connections in Mizoram, specifying the figure of telecom providers in the 11 districts of Mizoram during the year 2020-2021.

Table 1.3 District-wise number of Mobile connections in Mizoram (2020-2021)

DISTRICT	AIRTEL	BSNL	AIRCEL	VODA & IDEA	JIO	TOTAL
Mamit	44916	7080	0	1846	12325	66167
Kolasib	47236	17807	0	6720	28273	99586
Aizawl	316981	105681	0	73938	232924	729524
Champhai	85318	5958	0	6471	11497	109244
Serchhip	52480	18817	0	3364	21781	96442
Lunglei	92068	70203	0	8751	61400	232422
Lawngtlai	33353	30998	0	977	14055	79383
Siaha	32060	23187	0	956	12145	68348
Saitual	138	75	0	0	0	213
Khawzawl	1374	30	0	0	0	1404
Hnahthial	260	220	0	0	0	480
Total	**706184**	**280056**	**0**	**102573**	**394400**	**1483213**

Source: Mizoram Statistical Abstract 2021 by Directorate of Economics & Statistics, Govt. of Mizoram

Table 1.3 (number of internet connections) helps this research in identifying the study area or the universe of the study. The three region with the highest internet mobile internet connection were considered to be the universe of this research.

As internet makes life easier and faster, the tendency of dependency seems to increase. This study will try to delve into how internet dependency alters communication behaviour and shapes the worldview of the people in Mizoram while looking into the role played by the digital media on Mizo culture by tracing the history of the internet, mobile operators and internet service providers.

1.4 Emergence and growth of internet in Mizoram

When it comes to history, internet in Mizoram does not have a lot to write yet. It is indeed a challenging task to write a piece about it as there is not much work to be found. As there is very little or no secondary source to rely on, the pioneers who started the internet in Mizoram – Mr. Lalhmachhuana, Director General, Telecommunications Department, Govt. of Mizoram, Shri Lalthathanga, Senior Scientist, National Informatics Centrre (NIC) Mizoram, Mr. Rony Lallianmawia, Informatics Officer, Department of Information & Communication Technology, Government of Mizoram, Mr. Lalthanhawla Varte, Sub Divisional Engineer at Telecommunication Department, Mizoram and Managers and staffs of private Internet Service Providers in Aizawl, Mizoram agreed to narrate their history to the researcher. Some of the most diversified changes in society over the past hundreds of years have been brought by digital media, nevertheless, there is little harmony in the social sciences about disciplinary specialization (Schroeder, 2018). Haigh et al. (2015) said, "The ever-unfolding history of the internet consequently has the possibility of falling into a sort of disciplinary no-man's-land – which can be quite out of date to be of interest to policy scholars or sociologists, but on the other hand too recent and way too unstable for most historians to comfortably work there". Therefore, let us hope that communication discipline can fill this gap so that the study of internet history will no longer fall into a no-man's-land discipline and try to trace the history of internet in Mizoram. The following information is collected through interviews of the representatives of the concerned departments and offices.

1.4.1 NIC Mizoram

The first available internet in Mizoram called NICNET (NIC network) was used by NIC (National Informatics Centre) Mizoram using VSAT (Very Small Aperture Terminal) technology in 1991 with a speed of 512 kbps initially in all the available districts at that time viz. Aizawl, Lunglei and Saiha. The very-small-aperture-terminal (VSAT) is a fixed satellite

communication network where numerously distributed micro terminals attempt to send data in a packet form via a Random Access/Time-Division Multiple-Access (RA/TDMA) satellite channel with transmission delay (Chakraborty, 1988). NIC Mizoram started operating in 1989 at Chaltlang, Aizawl and was shifted to Old Secretariat building, Annexure II, Treasury Square, Venghlui, Aizawl, Mizoram in 1998 where they started using antenna and cable (BSNL) internet with their own bandwidth, the internet speed was also upgraded to 2 Mbps which was then upgraded to 2.5 Gbps and again to 10 Gbps. After the upgrade to 10 Gbps, 2.5 Gbps still serves as a backup link. Hence, these two became NIC Internet Core Link – 10 Gbps uses PGCIL (Power Grid Corporation of India Ltd) line with NIC bandwidth (Kolkata to Aizawl) while 2.5 Gbps uses BSNL line (Guwahati to Aizawl). They had around 5 IP addresses by the year 2000. Yahoo chat and Internet Relay Chat were the common social networking sites back then. NIC installed Community Information Centre (CIC) in 2001 in all the Block Divisional Offices using VSAT. The staff of NIC started using email (smtp) in 1997. The NIC network expanded to other parts of Mizoram as new districts came into existence one after another. Then, NIC hired a lease line from BSNL to connect the upcoming districts accordingly at 2 Mbps using its bandwidth. Eight districts of Mizoram are covered by the NIC network while the three new districts – Hnahthial, Saitual and Khawzawl (created in the year 2019) are yet to be connected. There are 3000 – 4000 connections provided to various government offices till 2021. Under the National Network Knowledge (NKN) project which aims to link all educational, medical and other government institutions, libraries, laboratories, hospitals etc. to share data and resources with gigabit abilities in and across the country (National Knowledge Commission Report, 2007), NIC also provided internet connections to 8 different institutions such as – Mizoram University on 12th May 2014 at 100 Mbps, Advance Research Centre for Bamboo & Rattan (ARCBR on 18th April 2013, National Institute of Technology (NIT) on 8th August 2015, Indian Institute of Mass Communication (IIMC) on 17th June 2015 at 1 Gbps, Mizoram SWAN (State Wide area Network) on 2nd April 2014 at 100 Mbps, Mizoram State Data Centre (SDC) on 3rd April 2014 at 1 Gbps, Regional Institute of Paramedical & Nursing Sciences (RIPANS) Aizawl on 20th August 2014 at 100 Mbps, Mizoram Forensic Science and Laboratory on 20th October 2020 at 8 Mbps. The NIC network provides internet connection only to government offices and institutions. The full-fledged internet as understood today became available to the public in Mizoram by 1999 brought forth by BSNL (Bharat Sanchar Nigam Limited) a

telecommunication service provider owned by the government of India. There were 660 connections by 2001 (Lalfakzuala, 2008). Cyber café was started around the year 2000 which used to cost around ₹100 per hour.

1.4.2 BSNL

Broadband

BSNL (Bharat Sanchar Nigam Limited) a telecommunication provider run by the government of India introduced dial up internet services in Mizoram in December 1997. BSNL Mizoram started broadband service on 28th Jan. 2006. Initially, there were three points/locations in Aizawl – Khatla (Main Exchange), Mc Donald Hill and Zemabawk. They covered all the districts of Mizoram – Aizawl, Lunglei, Champhai, Siaha, Kolasib, Serchhip, Lawngtlai and Mamit by 2008. Prior to 2006, there was a dial up connection, the speed of which was around 256 kbps. Fiber to the home (FTTH) service was started in 2019 which happened to overtake many of the existing broadband Asymmetric Digital Subscriber Line (ADSL) connections. There are 5306 FTTH connections in 2020.

Mobile

Mobile internet connection (2G) started in 2004 in Mizoram led by BSNL. Only GPRS internet was available at that time. 3G internet was introduced in 2012, upgraded to H+ in 2015 which was expected to offer the fastest speed possible in a 3G network. 4G network paved its way in 2019 allowing users to access the fastest available internet yet it covers only Aizawl – the capital city and district headquarters.

Wireless Services

Wireless Local Loop (WLL) service started in 2008. The scheme was meant for rural areas. As the number of users kept declining and due to the arrival of better schemes WLL service (which provided internet service for a decade) was discontinued in 2018. *Wimax* internet wireless service, a rural development scheme, was installed after 2012. This service was also closed in 2019; the internet speed offered by this service is also slow. *WiFi Hotspot is* another wireless service installed in 22 places in Mizoram. It still exists but since better and more advanced networks and services are available, there are only few users as it is not very user

friendly even though the internet speed offered by this service is quite good. Wifi hotspot is used in various vital public places including Mizoram University and Lengpui Airport.

1.4.3 ICT Department Mizoram

ICT Department, Government of Mizoram started functioning from 10th July 2008. With its mission *"ICT Development through creation of e-Infrastructure for delivery of e-Services, promote Information Communication Technology, facilitate Research Development, Capacity building and empowerment of Government employees and Citizen, provide awareness on Cyber Crime and Security"* ICT Department, Government of Mizoram provides internet connection to various government offices but not to the public. The department has taken up various central and state government projects to utilize *ICT as a transformational tool for the State of Mizoram*. ICT Department of Mizoram started SWAN (State Wide Area Network) also MSWAN, a central government project in March 2012 which have in view of formulating and executing the information highway so that the most updated technology for e-governance can be used for a better and more efficient administrative work by the Mizoram state government. Initially, they provided internet connection to 10 different departments in Aizawl. In 2017, under NEDP (New Economic Development Project) funding, District Wireless Project vertical connection was set up in the Deputy Commissioners' (DC) Offices of all districts (except for the newly created 3 districts – Hnahthial, Khawzawl and Saitual). This vertical connection is followed by horizontal network distribution from DC Offices which is separately funded by the North Eastern Council (NEC). Internet connection using GPON fiber technology was installed at the Chief Minister's office as well as the New Secretariat Complex in Aizawl.

1.4.4 Private Internet Service Providers

The following private Internet Service Providers (ISPs) as well as Software Developer Companies were visited and their representatives at their office informed the researcher about their history as follows:

1.4.4(i) Airtel reached Mizoram on 26th June 2006 (Sharma, 2020), but officially started functioning from 2007. Initially, it covers only Aizawl with 40 towers and 1 distributor and is able to branch out in all district capitals of Mizoram with 140 towers by 2008

(Lalhmingthanga, 2019). They launched 3G mobile internet in 2009 and 4G by 2014. Airtel has 249 towers by 2018, the double of which is in function by 2020. They started broadband service by October 2021 and gave connections to 400 users in December 2021 covering only Aizawl. They are planning to launch broadband service in Champhai district by January 2022. Airtel has 4,57,566 users in Mizoram (Government of Mizoram Economic Survey, 2021).

1.4.4(ii) Netsurf, the first amongst the existing private (broadband) Internet Service Providers (after Tulip which does not exist anymore) started on 12th December 2012 using wireless antenna and is owned by Zoram Business Enterprise Pvt. Ltd. The former employees of Tulip set up two private companies – Netsurf followed by Nextcomm. Netsurf has branched out in other districts – Lunglei, Champhai, Kolasib and there are ongoing projects in other towns – Hnahthial, Khawzawl, Chawngte and Vairengte. They upgraded their infrastructure by introducing GPON (Gigabit Passive Optical Network) in 2017. They have more than 5000 subscribers by 2020. One of the challenges faced by the Netsurf at the initial stage was to start up a private limited company which is one of the requirements to get license from the government. As there were no such precursors ahead of them, they have to boldly plunge into the unknown with no one to look up to. They have given 6253 total connections till March 2021, out of which 5315 are still active and 919 are not active anymore. They have around 40 new users in one week. With a tagline *Pioneer of fixed wireless broadband and GPON in Mizoram,* Netsurf is also the first Telecom Regulatory Authority of India (TRAI) license holder amongst private internet service providers. They got their license in 2017.

1.4.4(iii) Nextcomm Internet Service Provider started in 2014. They claimed to be the first to give fiber internet connection in Mizoram. They have 700-800 connections by March 2021.

1.4.4(iv) Netsky Internet Service introduced a coupon system wireless internet (WiFi) in 2015. At first, it was their intention to cover places in Aizawl where there is high population using rechargeable wireless wifi coupons. But the existence of Jio led to their downfall as high speed internet was offered free of cost by JIO. Recently, they decided to start up Fiber to

the home (FTTH) connections covering Saitual, Seling and Serchhip. They have 300 connections by 2021, of which 40 are in Aizawl.

1.4.4(v) Reliance Jio entered Mizoram in March 2015 with its USP "4G network" evoking the existing internet service providers to pull up their socks by introducing unlimited high speed internet (and voice call) free of cost for one year at the initial period. The problem they faced at first was that their network can be used only with 4G support mobile phones. Jio fiber connection started in July/August 2019 covering the entire Mizoram. Existing FTTH connections till March 2021 is 2500 with a growth rate of around 300 new users per month. The Jio fiber (broadband) section has 4 members in the sales team and 12 members at the home connect team who take care of installation for new customers. They have around 40 staff members at Jio Aizawl. There are around 3 lakh Jio mobile users in Aizawl, total users in Mizoram is expected to be around 5 lakh by 2021.

1.4.4(vi) Zipro (Zoram Internet Provider) came into existence on 1ˢᵗ December 2016 with 100 customers at the beginning which came up to 750 by March 2021. Zipro covers only Aizawl. As some of the staff of Zipro come from difficult backgrounds and have overcome various challenges they give importance to social responsibility. It is not solely for profit that Zipro existed but also with an open heart towards philanthropy. They set aside a certain amount (percentage base) depending on the profit they made in a year and carry out an annual charity program where they reach out to those in need. They make an effort to seek/identify and help those who need financial and other support, especially those who are not well-recognized by the community.

1.4.4(vii) Millions Internet Service Provider was started in 2017 providing 60 connections initially. They have around 400 connections by the end of 2021. They cover only Aizawl and their main concern is to provide good internet service to all their users. It is their intention to cover only areas they can handle efficiently. Millions provide only fiber connections and they are the first ISP to use Ethernet Passive Optical Network (EPON) technology in Mizoram. They have eight staff members in their office.

1.4.4(viii) D-3 Internet Service Provider was established in 2017 with 50-60 connections at the beginning. By 2021, they have 560 connections covering only Aizawl South-II area. They have also provided internet (radio) connection at Lungleng village. They use GPON (point to point) technology.

1.4.4(ix) FC Broadband was started in 2018 by an Engineering graduate who had studied in Bangalore. After coming back to Mizoram, he felt the need to have access to good internet as the available ones at that moment seemed to be insufficient for work and studies. They got license from the government in November 2017 and began internet service on 21st June 2018 covering Aizawl first and Serchhip by 2019. They have reached Aizawl, Serchhip, Lawngtlai, Vanlaiphai, Lunglei, Hnahthial and Saiha. There are 12 staff workers in their office and are handling 300 connections in Aizawl. Through their license they gave connections to other Internet Service Providers which is expected to consist of more than a thousand connections altogether.

1.4.4(x) Zonet Cable TV started providing internet connection to their subscribers in 2019. In 2021, they provided 4635 connections in Aizawl, Lunglei and Sihphir to Aibawk. The reason for their internet provision is to meet self-need firstly and as the cost of installation is high they consider distributing it to the public to help in business growth.

1.4.4(xi) LPS Cable TV started internet service in 2020 in partnership with Lalat Pvt. Ltd. The main aim of LPS is to provide internet service to their cable operators as cable is a dying business. They have around 2000 connections in Aizawl. In 2021 they started reaching outside Aizawl and they aim to cover the entire Mizoram by 2022.

1.4.4(xii) Mizo Server Internet Service Provider was formerly known as a gaming parlour (Mizo Server Gaming Arena) during 2008-9 and was also a hub for Internet Relay Chat (IRC) during 2004-5. They began internet service on 11th December 2018 with wireless connections initially. They started giving fiber connections from April 2020. Initially they gave around 20 connections which increased to more than 700 within three years. By 2021, they have more than 10 branches in Mizoram viz. Mamit, Kawrthah, Kanhmun, Zawlnuam, Khawruhlian, East Phaileng, Kawnpui, Khawbung, Farkawn. Mizo Server ISP aimed to reach

the areas which do not have internet access yet, especially rural areas. They do not have good infrastructure at first but they keep upgrading and with their partnership with Muft Internet Mumbai, they develop their infrastructure and are also able to resell internet bandwidth to other ISPs too. With their slogan *Internet for everyone* they try to reach as far (and wide) as possible.

1.4.4(xiii) ONYX Internet Service Provider, one of the newest ISP, started their service in April 2021 using ONU (Optical Network Unit) system offering 300 mbps internet to their customers. Initially, they gave free connections to students who are in need of the internet due to mandatory online classes caused by the pandemic. ONYX covers mostly Aizawl West-II area. They have branches in Reiek and Ailawng and aim to cover other districts and towns in future. Their main reason for starting internet service is to help those who need the internet for work and studies during lockdown. They are against putting up tariffs that do not match their actual bandwidth capacity hence they claim that the speed they offer is accurate. They have 5 staff workers who are on their toes to give the best possible service to their customers.

1.4.5 Mizo Software Developers

The history and development of Mizo software developers, specifically Mizo mobile application developers was also documented using primary data through interview of the companies' leaders.

1.4.5.1 Lailen Consulting Pvt Ltd was started around the year 2018 with three key persons who are interested in software development. They have been freelancing since 2008 before they finally decided to set up their own firm. The CEO of the company used to take up part time job(s) in online software development companies during his undergraduate studies to ease the financial burden in his family. His freelance experience helped him get acquainted with foreign clients and as he got in touch with people who have the same interest and passion, they agreed to collaborate and set up their own company, initially called *Dumde* in 2010. Even though he got the opportunity to work at Infosys, an Indian Multinational IT Company, he declined because he saw the condition of the software industry in Mizoram and his zeal to meet the need and demand of the state by the residents themselves has led him to start this company. Things didn't go as planned as Mizo people in general are so use to

getting software(s) free of cost. Most of the revenue was earned from foreign clients at first but in order to get more clients, they need manpower which is not an easy task as it is difficult to find locals with the required skills and knowledge. By the year 2013, the ICT Department under the government of Mizoram set up an e-governance society where they set up a big State Data Centre and the staff of this firm decided to apply for the available posts. They were all recruited and worked for 5 years. After having a good enough experience from the government sector, they came back to their senses as their passion for software development couldn't die. So, they all resigned from their government job and as they now knew how and where to tap, resulting in the launch of Lailen Consulting Pvt. Ltd. which is a pioneer IT Consultancy and Software Development company in Mizoram. As they became more aware of funding sources as well as available IT projects which can be taken up by a firm like theirs, they decided to run a private company yet partnering with the government while executing certain tasks. They have realized that many of the state government projects are undertaken by companies from outside Mizoram and as they have observed as well as validated some of the works done by various Indian IT companies while they are still in the government sector, they came to know that Mizoram need an IT firm which will work in partnership with the state government. With the estimation of having the same potential and skills that the external companies are showing, they march forward to meet the demand of the government as well as the public. The core of their business is software creation.

They started making Mobile Applications with the intention of serving the needs of the society. So far they don't get much revenue out of it but they want to build trust and provide for the needs of the people by allowing the public to use their applications at minimum cost. Their major achievement in this regard is creating mobile applications during the pandemic which help users get their work done using these applications from their home. Lailen has created numerous mobile applications, some for the Mizoram government as well as private business and organizations and associations, it will not be possible to mention all the applications they have created but we will only highlight the popular ones. Their novel mobile application *Sulhnu,* considered as the most successful one in terms of purpose fulfillment is a contactless visitor recording app which helps users log in to a particular location by simply scanning a QR code is one of the highest downloaded Mizo original mobile applications used by more than 2 lakhs. This application was of immense help during

Covid19 pandemic since it reduces the need of using pen/pencil for noting down personal information as there is a high chance of getting infected if a common pen is shared. Lailen saw the need and developed and published this app within 4 days. The Chief Secretary of Mizoram Government called them for this innovative idea and the Government of Mizoram declared it mandatory to have this app installed in all shops and public places during the 2019 pandemic. Organizers of gatherings and shop owners set up or generate their own QR code using this app which automatically registered the user with the information provided at the time of installing the app. This app is also one of the few applications that run in Mizo language.

Most of the applications made by Lailen are meant for internal use by various private business/companies. The most popular apps intended for public use are *Lersia Play*, *Darbu, Laisuih* college management app *and Sikul* school management app. *Lersia Play* is considered to be their most successful app in terms of revenue. It is an online streaming platform for Mizo movies, short films and TV series. The first (proclaimed) Mizo OTT platform Lersia Play is a joint collaboration of Lailen Consulting Pvt Ltd and Leitlang Pictures, an original Mizo Film Maker. The app was built with a readiness of running on loss for at least three years but they started gaining profit right from the fourth month. The other app *Darbu* (named after a Mizo musical instrument – gong) which was recently launched in April 2022 has the potential to revolutionize Mizoram music industry which does not have a proper marketplace. Mizo professional singers earn mostly from invitations at various events and they don't have other reliable sources of income when it comes to music. Seeing this, Lailen tries to help them earn by creating an application where they can sell their music through digital platform. Through *Darbu,* a Mizo local audio and music streaming app the artiste(s) get 90% of the share while the app developer get 10% share. It helps in preserving Mizo original music and also makes good income for talented musicians and singers.

Tlangau app is launched in 2022 is designed to supplement and not replace the present community information system where most localities use PA system (sound amplification) to deliver the necessary information to the residents of their locality. The disadvantage of this system is that the public may forget the details of the announcement made after a few minutes. So, in order to meet the requisite for persistent information, Lailen Consulting Pvt

Ltd Company has decided to come up with an app that will bring community information to the people using their smartphones. This can also be considered as digitization of *tlangau* meaning herald, also translated as "town crier" which plays a vital role in Mizo culture ever since the ancient Mizo society as it used to be the only source of information for the people.

The CEO also stated that Mizo culture is extremely unstable and the changes that the internet brought in Mizo culture is significant. Since the internet makes the world a global village, propaganda or a popular trend is easily followed by the users and as Mizoram does not have a very strong and rigid culture like other cultures do; it has been greatly swayed by the norms and practices on social media. From the CEOs observation of children's mobile use behaviour, their attention span has been greatly decreased as they prefer watching short clips and scrolling/swiping through home feed rather than watching lengthy YouTube videos. Content filtering is a great concern as Mizo kids consume all kinds of content on various digital platforms without proper censorship.

1.4.5.2 ViaMizo, a Mizo mobile application developer, was started in 2018, the Managing Director of the Company migrated from Lailen Consulting Pvt. Ltd. wanting to pursue his own dream of making products and service delivery app. Their main focus initially was on Android but since iOS users are increasing among Mizos they are also aiming to cater the needs of iOS users. They started merging with *Tirhkohdawla* (meaning "capable of being called and sent". The homonym of which could be *Tirhkoh Paula* that has a totally different meaning i.e the Mizo version of Apostle Paul from the Bible) from 2022, a delivery service which initially uses only social media platforms like instagram and WhatsApp. With one of their mobile applications, *Doorbell Mizoram, ViaMizo is* giving a better platform for *Tirhkohdawla* and also enhance their services.

Some of the applications made by ViaMizo are *Pheichham* – online sport (football) prediction platform, where winners win prizes for accurate prediction. *Doorbell Mizoram* – helps users to make appointments/booking with plumber, home nurse, electrician, beautician, massage therapy. This application provides household utility and personal care services within Mizoram. As it is a home service, the users don't have to leave their home but can easily call an ambulance, home nurses, appliance service, beautician, carpenter, commercial

vehicle, cotton dye, computer repair service, dietician, domestic workers, mobile repair service, photographer, plumber, steel fabricator, veterinary service and several other goods and service delivery using this app. It also gives opportunity to job seekers who want to engage in daily as well as various part time jobs. This app has won the "Most Promising Idea" award in 2019 at the Business Plan Competition organised by Government of Mizoram and IIM Calcutta Innovation Park. *RK Mizo Learning* – is an app for Mizo learners who are preparing themselves for competitive exams, it gives job alerts, and provides materials for civil service exams. *Ecobaby – is* an app that sells and delivers babies and toddlers food all over North east India. *Lehkhabu.in* – is an online digital library where users can borrow and share Mizo original books. Copyright owner of the book will get 60% share. Premium membership is Rs. 150 which can be renewed by paying Rs. 100 annually. There are ebooks which are available free of cost. *Zirlaite Puitu* – is an app which helps Mizo students (Class VIII TO XII) learn Mathematics in Mizo language and also gives users access to career guidance with pre-recorded video lectures. Besides these, ViaMizo has made various mobile applications as per the request of their clients like online admission platform for colleges etc.

The owner of ViaMizo opined that digital media is what the world brings along and is not just a work of technical enthusiasts. He decided to start this company as most of the mobile applications available are made by developers from outside Mizoram. The name *ViaMizo* simply Means through Mizo, named with a heart of Mizo endorsement. Computer Age has moved forward to Mobile Age as most computer websites have an app version of their web content. This prompted him to study a course on mobile applications after his Post Graduation (M.Sc – IT). The outbreak of Covid19 accompanied by total lockdown has resulted in the birth of many mobile applications.

The Managing Director of ViaMizo believed that violence and sex are already prevalent even before the existence of internet. Even though many are of the opinion that existence of internet and digital devices boost the prevalence of violence and sex, it was no less common before the digital era since it was in the mind of the people and it is not just a product of the existence of internet and digital devices. The internet has helped and boosted many businesses as it gives them a platform to sell their products to wider customers. DIY (Do It

Yourself) culture has also improved people's creativity and innovative thinking. Major concern is on kids' usage of internet and mobile devices and also the obsession on gaming.

1.4.5.3 ATBuys Pvt. Ltd

ATBuys Pvt. Ltd is the developer of *Bawmrang TV and Runmawi* apps which are the top OTT platforms in Mizoram. Since the filmmaker partner for Bawmrang TV (which was launched in June 2021) decided to create only Gospel or Christian content, the developer launched another application called *Runmaw*i in September 2021 for streaming more varied content so that they can reach wider audience. The website of Bawmrang TV declared that their server got hacked and their mobile application was not functioning for several months but it was fixed with its successful release of one of the top rated Mizo Christian Movie *Lalpa a tha* in November 2022.

*Runmaw*i is one of the flourishing OTT Platforms in Mizoram streaming Mizo series, movies and live shows. The application was launched in September 2021 with three shareholders – Lalremruata Chhakchhuak, Zothangvunga and Lalengmawia. These Computer Engineers collaborated with Mizo Film makers, signing contract on a yearly basis. This annual partnership allows them to work with film makers. For the year 2022 *Runmawi* has signed an annual contract with Mizo Film Forum. *Runmawi* hosted Mizo Got talent (MGT) during October – November 2021 with the intention of helping Mizo youth in finding their talents and also to provide entertainment to their users. This (MGT) event also helped in promoting *Runmawi* application as it attracts performers or participants as well as audiences from various part of Mizoram.

By September 2022, *Runmawi* has the following content: 14 Movies – *Master Hranga,* (Comedy) 2021, *Tlan rawh,* (Short Movie) 2021, *Nutei Thingpui Dawr*, (Thriller) 2021, *Biak In Ropui* (Kids Movie) 2008, *Thingtlang Tlangval* (Romance) 2020, *Trampa* (Thriller) 2021 *Ṭhian Lungdum* (Romance) 2021, *Mikhual Zaklo* (Comedy) 2022, *Ni khat Chauh* (Romance) 2022, *Inspector Arina* (Comedy) 2022, *Tuizual Ngaw (*Thriller) 2022, *KA U Liana* (Mizo Story) 2022, *Hawrawp Hnuhnung Ber* (Thriller) 2022. 10 dubbed movies – Bounty Hunter (Korean) 2016, The Gifted (English) 2014), I fine thank you, love you (Thai) 2014, Pandora (Korean) 2016, Ghost Ship (English) 2015, Bad Genius (Thai) 2017, Hot Young Bloods (Korean) 2014, Midnight Runners (Korean) 2017, The Battleship Island (Korean) 201, I can

Speak (Korean) 2017. Besides these *Runmawi* app had hosted a reality show called Mizo Got Talent (MGT) which is available in their app. This app also has its original series *Boss Amanda* and *Keimahni*. *Boss Amanda,* a crime serial was released on 113th May 2022 with 2 Seasons having 3 episodes each. *Keimahni,* claimed to be the first Mizo SitCom is *Runmawi*'s original mockumentary which currently has 2 seasons with five episodes each. Most of the dubbed movies/shows are Korean.

Runmawi gets 30%-40% of the revenue earned from their app while 60% to 70% of the share goes to the Filmmakers or production partner(s) and the revenue earned so far is good according to the Managing Director, Lalremruata Chhakchhuak. The Director also said that the demand for good filmmakers and cast and crew is becoming high, not only who can but who are good in acting, videography, cinematography, script writing etc. As film making is not an easy task, unless skilled people are involved, a lot of energy and resources can get wasted. *Runmawi* has customer support/helpline which is available to customers from 10 am to 10 pm every day. In spite of its short existence, they said that their customers are fairly quick in adopting the technology although customers from rural areas are facing more difficulties than the ones in the city.

1.5 Statement of the problem

Internet dependency in its extreme form, that is to say, addiction, can be dangerous as users can be hindered from their daily functioning (Park et. al., 2013) as is has become almost inescapable. There has been a growing concern on the issue of "internet addiction" in Asia, since certain Asian countries have consider it as a serious public health issue (Alam et.al, 2014). Excessive use of internet causes adverse effect on users who gradually become addicted to it (Arefin et.al, 2017). Social disconnection may occur that can lead to many psychological problems as online connection takes over physical interaction. Gadgets and devices are getting more and more advanced and much smarter, but are operators behind these devices getting smarter? Strangers deal with one another, learn from each other and assimilate one another to their worldviews. Medium/media dependency becomes more extreme the more it permits the individual to obtain his objectives (Ruiz Mafé & Sanz Blas, 2006). The most distinct effect of internet is subversion of social practices and values – people will use internet to fuel themselves, developing the "ought" to excuse self-stimulation

as a form of realism that might be called virtual romanticism that will result in hedonized social practices and values (Poe, 2011). Writing a history of internet in Mizoram has been very challenging as there are not much work done yet as Naughton (2000) wrote, "You can see the problem: any starting point for any historical trail is likely to be arbitrary." One needs to break the ice and come up with something so that there will be available work for future reference. Mass communication discipline can be left behind and miss the chance to respond to several key questions that may arise if researchers disregard the research potential of the internet which could result in discrediting some theories of mass communication. Internet has been considered as a technology that is unsafe and uncontrollable, permitting pornography, intense religious/political intolerance including cyber thieves who continually subvert civil society instead of becoming a representation and moderator of 'participatory culture' (Creeber & Martin, 2008). Accusation for making the internet as a tool of suppression have been made against some countries (ibid., p-6). Smartphone enable users to achieve certain goals as one can get many things done in a single tap; therefore, the level of human dependency on personal communication technology is increasing every now and then. So, it has become my interest to do a study on how dependence on this device can be a hindrance for an individual and even a society. Convergence culture is enhanced by the existence of internet yet simplified by arrival of smartphone, Chandler & Munday (2011) stated that "the smartphone is a paradigmatic example of a convergence device." Social media is becoming an intrinsic part of its user's life in an information society and it is smartphone that gives us access to various platforms. Arefin, et.al. (2017) quoting Kandell (1988) said that due to their developmental mechanism, freedom from societal and family responsibilities, students tend to be at higher risk of technology overuse. There is inequality in the geographical and social accessibility of internet yet it also promotes sameness and conformance while a 'big brother' state controlled by personal surveillance control and a fascination on pettiness and capitalism. A book is an instrument for focusing attention while the internet helps in diffusing it, also, a book can take one on a trip to from here to there whereas the internet takes a person on a trip from here to God-knows where, making people lost (Poe, 2011). The term FOMO (Fear of Missing Out) has become more and more relevant to the internet users these days as silent nights are overtaken by restless and unproductive hours spent refreshing newsfeed. Nicholas et. al (2008) stated that research work regarding internet use shows that almost every individual has become a surface level consumer, a passer by, one who doesn't have time for

the 'detail' of any issue but just the main points and depends on the first few pages of quick Google search result. Only a few written material could be found on internet dependency as it has been barely researched (Chen et. al, 2004). Steiglar (2006) mentioned in Siapera (2012) argued that technical objects are exteriorization of memory and thought but the dependence on such devices bring about knowledge diminution which is then displaced and transferred into technological devices. When new technologies exteriorized all the 'know-how', it eventually leads to a kind of human obsolescence as McLuhan (1969) also popularly claimed that the media can be the extensions of human senses (Siapera, 2012). Study on internet addiction is more common and there are more existing work available especially in the field of Psychology but this study will focus more on internet dependency and not necessarily on addiction.

1.6 Rationale of the study

Not many research of this kind is to be found in the present academia even though there are works done on "internet addiction and its effects on behaviour" while this research aim to focus specifically how internet dependency influences the communication behaviour of its users. And when it comes to internet history in Mizoram, the researcher has been looking for sources or literature for the past couple of years but could not find proper work and is compelled to take the initiative of laying the foundation so that the upcoming scholars from Mizoram and those who want to do a study on Mizoram will have work/literature to rely on. Rapid growth and propagation of the internet has offered better opportunity for communication, information and social interaction. Apart from general use, internet is also helpful in dealing mental health issues as it can provide therapies for those having psychological problems and can ameliorate service delivery for clinical personnel and patients in general as well as who have social anxiety disorder specifically (Mazalin & Klein, 2008). Diomidous et.al, 2016 wrote that immoderate internet use can have external and internal effects on the users where the inward effect may result in mental and personality issues, weakened psychological wellbeing while the outward influence is evident in user's reduced to non-existent interaction with the offline social environment. In the long run, the conveniences caused by internet can be the constraints it caused as well, one may ask how – that would be what the researcher will try to find too. This study looks more into context

specific, history and culture of Mizoram and the influence of internet will be focused in depth.

1.7 Aim of the study

This study aims to deal with how internet dependency can alter the communication behaviour and shape the worldview of the Mizo internet users and the way in which digital culture is influencing their lifestyle as they incorporate the internet in their daily lives.

1.8 Objectives of the study:

1) To find out the level of internet dependency while examining the prevalence and severity of internet obsession in Mizoram.
2) To identify problems/constraints caused by internet dependency among Mizo Digital Natives.
3) To map the difference in perceived communication behaviour before and after the existence of internet among Mizo Digital Immigrants.
4) To study how digital technology as an extension of self has shaped the worldview of Mizo internet users.
5) To examine the influence of digital culture on Mizo society.

1.9 Research Questions:

Q1. What effects does internet dependency have on Mizo culture?

Q2. How does digital technology influence the communication behaviour and worldview of Mizo internet users?

Q3. Is there any difference between the internet use pattern of the digital natives and the digital immigrants?

Q4. Does Convergence Culture lead to myopic worldview?

Q5. Does 'digital enhancement' help in bridging the digital divide?

1.10 Background of the study

The concept of *zeitgeist* originate in German philosophy around 18th to 19th century, meaning "spirit of the age" or "spirit of the times" which imply an unseen causal agency or power controlling the nature of a given period of the world account (Jung, 2014). This original term "zeitgeist" will be used in this study rather than its equivalent English translation since it describes best the aspiration of this study. In the internet era, people make their own *fun* using the web as traditional entertainment companies, publishers and broadcasters do not dominate the internet as in print and audio-visual media. The age of internet is preceded by Speech, Manuscript, Print and Audio-visual ages chronologically, Poe (2011) described print era as an era of toleration, audiovisual era as multiculturalism era and internet age as an era of transculturalism – that goes beyond cosmopolitanism. Transculturalism allows and even encourage the creation of new unique identities, be it offline or online, the real as well as imaginary (ibid p-240). The preliminary stage of information and network technologies development began during the 1960s pertaining to the arrival of the first computer network Advanced Research Projects Agency Network (ARPANET) (Tomić, 2009). The "internet" – network of networks, was blooming by the mid 1980s as it linked big institutions, universities and offices across the globe. At the research facility CERN in Geneva, Switzerland, Tim Berners-Lee started the World Wide Web in 1989 as an initiative to share information over wide area network among physicists and the Web has become the standard for hypermedia execution over the internet since then (Berners-Lee et.al., 1994). Then a team of young geeks in Illinois had a monumental insight, these college students create a really intuitive, clean, multimedia "Web browser" for users of PCs. The browser was something like a combination of a glossy magazine – full of pictures and text – and a TV beamed right into one's home that made the internet easy to understand (Poe, 2011). Surfing the net became a daily activity like engaging with newspapers, radio and television by the mid 1990s. The internet provides its users better control with its changeable and flexible attribute over their access, creation and exchange of information where its technical supremacy is rooted in the continual progress and reinvention of its applications (Bryant & Oliver, 2009). The number of internet users in India as mentioned in Telecom Regulatory Authority of India (TRAI) Press Release on 31st January 2019 is 1203.7 million in total out of which 1181.97 million are wireless users and 21.79 million are wireline users; 672.91million from urban areas and 530.86 million from rural areas. In print and audiovisual eras, there was no other way to get cheap thrills except by purchasing them while the internet made "cheap thrills" possible for nothing but by simply

copying and distributing them that caused many right thinking people to wonder whether stealing might not be stealing and as Poe (2011) wrote that the dominance of the internet will become greater as the other media continue to migrate in it – which is termed as 'convergence'.

1.11 Scope of the study

Internet is often talked about as a medium but one may ask whether internet is a medium or not. If it is, why do we still need a device or gadget to access the internet? If it is not a medium, then what is it, depot of data? There may be multiple platforms for accessing the internet hence this study will focus on the effect of use of internet through digital devices among digital natives and digital immigrants. The term "smartphone" will also be used to distinguish the availability or accessibility of various applications from typical mobile phone. Its portability has made it available for wider use. The central argument of the media dependency theory "*on an individual level, as a person becomes more dependent upon media use in order to fulfill their goals, the media would havemore influences on him or her*" is suitable to describe the usage of digital devices as their functions and features are improving significantly (Park et. al., 2013). Studying internet dependency can bring along issues with online gaming, cyberbullying, online socialization, sexting etc. along with many other activities. How internet dependency can be a hindrance or constraint along with its conveniences as it becomes a requisite tool for a person's everyday life is will also be reckoned. Digitalization generates a certain degree of emotional attachment and dependency, particularly in terms of smartphone usage (Dirin et. al, 2019). Technology is considered by instrumentalism as a neutral tool, used by people to reflect their societal goals and values where the problems, limitations and adverse effect are never the fault of technology but the consequence of problematic activities (Siapera, 2012: 106). This study will consider internet as a neutral tool and will try to find out the consequences of internet dependency. Study on smartphone dependency can be considered as synonymous to study on internet dependency but are not actually the same. As one of the main reasons for smartphone use can be the availability of internet, both the terms may be used interchangeably yet the study is not limited to smartphone. Research in smartphone related topic where comprehensive aspects of communication are embedded has been anticipated to contribute in theory building for communication technologies. (Park et. al., 2013). A brief history of emergence and growth of

internet in Mizoram will also be traced along with how convergence culture results in intolerance and incompetency of among users. William Derham primarily used the term convergence in his work P*hysico-Theology: Or a Demonstration of the Being and Attributes of God, From His Works of Creation* in 1713, the Latin origin of which is *convergere* (to gather) which means coming together *(*Kopecka-piech, 2011*)*. Today the term convergence is used in different ways and may differ in various contexts and denotes very diverse practices and applications. In technological perspective, it could be the process of integrating or bringing together conventional media and their programming units (Tomić, 2009). The development of computers and the web could be the root of its utilization in media context as the internet transforms technology of information and entertainment access by making it possible to digitize and digitalize information storage where all types of media come together and are accessible by the consumers through a common platform. Mobile phone is becoming the extension of a person, similarly, smartphone has become an extension or expansion of an individual as it makes one's life easier - it becomes his/her memory, not just in terms of space, but also helps one remember certain events and dates and becomes an extension of his/her memory. The view of technology as fashion rather than its instrumental and ethical use can be expected to link to the socially expressive use of mobile phone (Campbell, 2008). Chen et. al (2004) opined that dependency can connote something healthy and unhealthy just as reading a book can be part of a daily routine but is not usually considered as a harmful dependency – leaving a blurry line between a healthy and unhealthy dependency. In this research, we will look only at internet dependency but not internet addiction which is a mere structural relationship between individuals and internet and not the pathological issue caused by excessive use of the internet.

1.12 Operational definitions

Zeitgeist – *the general set of ideas, beliefs, feelings, etc. that is typical of a particular period in history* (Cambridge dictionary). It was originally used by German philosopher Hegel who considered that the culture of the time is reflected by the nature of the art created during a given period.

- *the general mood or quality of a particular period of history, as shown by the ideas, beliefs, etc. common at the time* (Oxford Learner's Dictionary)

- *zeit* = time *geist* = spirit "spirit of the time" is what is happening culturally, religiously, or intellectually during a certain period; the spirit or essence of a particular time (vocabulary.com)
- the general intellectual, moral, and cultural climate of an era (Miriam Webster)

Media system dependency or media dependency is defined by Ball-Rockeach as a relationship in which the capacity of individuals to attain their goals is dependent on the information resources of the media system to create and gather and to process and disseminate information (Park et. al, 2013).

Convergence: the availability of content in multiple platforms, the collaboration between various media industries as well as the translocating activity of media audiences who tend to switch platforms here and there seeking for the type of information and entertainment they wish to experience (Jenkins, 2006).

Convergence culture – where old and new media come together, where the basic and commercial media meet, where there is an unpredictable interaction of the power of media consumers (Jenkins, 2006). Media convergence alters the relationship between existing technologies, industries, markets, genres and audiences, culture precedes technology and technology amplifies the trends of the culture (ibid).

Digital Natives: "Native speakers" of the digital language of computers, video games and the internet, born on or after the year 1980.

Digital Immigrants: who adopted internet and computer technologies at some later point in their lives and were not born into the digital world, probably before the year 1980.

Digital Culture: A focus on culture at the broadest level that implies the affordances and the constraints resulting from digital technologies which shape everyday life across its multiple dimensions that comes with the tangible as well as amorphous implications of digital technologies (Thumim, 2012).

Digital Divide: The gap that exists in between those who have ready access to the tools of information and communication technologies along with the knowledge required for such access, and those without such access or skills (Cullen, 2001).

Internet dependency: First used in an email content in 1996 which was jocularly sent by Dr. Ivan Goldberg, internet dependence appeared as internet addiction and is further studied widely by researchers as well as clinicians (Kayri & Gunuc, 2010).

In this study, internet dependency will not be considered as having only a negative connotation but it also encompasses both the positive and negative aspects of the internet (which is a neutral tool) and is not synonymous with internet addiction.

1.13 Review of Literature

Review of literature, the cornerstone of academic research (Snyder, 2019) and an extensive overview of previous research is an effort given to summarize and evaluate the existing knowledge about a subject to conceive ideas for future research as it helps researchers draw conclusion from prior wisdom about a selected topic (Knopf, 2006). An unsatisfactory literature review may also result in inadequate research work and that a significant research cannot be conducted without prior knowledge of the existing literature in the field (Randolph, 2019). Hence, this chapter will also look into the existing literature – works that had been done earlier about the internet, its history along with the theories and concepts that will be employed in this research.

1.13.1 Internet Genesis

Internet is often defined as a collection of computer networks where two or more computers are connected together with cables that enable them to share information. Internet history is generally narrated as a Western phenomenon yet de-westernising it could also make the story more complicated (Curran et.al 2012, 35). The inception of the internet is often attributed to research project done by a collaborative work of Stanford Institute, University of California and University of Utah (Glowniak 1995, 56). It has a complicated as well as long history and for the first time, two computers – one at the University of California and the other at Stanford Institute in Palo Alto got connected to each other in 1969 October 3 (Beranek, 2000). Bory (2020) opined that more than a history the internet needs a proper biography starting from a mythical genesis. The sullied and almost meaningless expression 'father of the internet' is becoming ambiguous as setting up the internet requires a joint effort; hence, nobody has a stronger claim to it than Paul Baran (Naughton, 2000). Internet pioneers like

Bob Kahn, Bob Taylor, Vint Cerf and Larry Roberts can be considered as "fathers" of the internet including Professor JCR Licklider of MIT, who deserves a legitimate credit and coming up with packet switching theory; Paul Baran and Donald Davies were the grandfathers (Vallee, 2003). Leiner et. al (1997) also wrote that the history of internet is complex as it incorporates multiple aspects such as technological, organizational, and community. They also believe that the internet's influence is not only confined to technical fields like computer studies but also encompasses the entire society as every individual moves toward increasing use of internet enabled technologies to get their daily work done. Therefore, let us look at the origin and growth of the internet in the next section.

1.13.2 The chronicle of internet

1.13.2 (i) Global

Leiner et. al (1997) claimed that the Galactic Network concept, a series of memos written in August 1962 by J.C.R. Licklider, MIT Professor in a series of memos became the first recorded work of social interaction through networking. Licklider passed on this concept to his successors, one of his successors Lawrence G. Roberts team up with Leonard Kleinrock who published papers on Packet Switching in 1961 & 1964. In 1965, they built the first (however small) wide-area computer network ever with a very slow dial-up telephone line in collaboration with Thomas Merill. It was the research grants funded by the US Department of Defense Advance Research Project Agency that paved way for the development of the internet that brings along social and technological transformations (Cohen-Almagor 2013, 46). Beginning in the United States during the peak of Cold War, the idea of "decentralization of defense secrets repository" during wartime resulted in the birth of the internet. Paul Baran, a researcher at RAND Corporation came up with a concept that has the same centrifugal character that defines the nature of what we presently call the internet in 1965 (Ryan 2010, 16). In 1964 this RAND team also had published a paper about packet switching for secure voice in the military and it was such a coincident that the MIT researchers (1961-1967), the RAND team (1962-1965) and the National Physical Laboratory (NPL) UK scientists Donald Davies and Roger Scantlebury (1964 – 1967) were all working on the same thing without knowing each others' work (Leiner et.al 1997, 3). A long distance network of telecommunication called ARPANET was the forerunner of the internet which

aims to develop technology for sharing resources that is capable of controlling computer communications systems which can function even after a nuclear war takes place (Glowniak 1995, 57). The internet connected 20 universities including 1000 computers by the early 1980s which increased to 300,000 computers on 2000 networks by October 1990 (ibid). Connecting 11,000 sites, Usenet (backed by Unix OS developed by Ken Thompson and Dennis M. Ritchie, Bell Labs' programmers in 1969), become the standard operating system in the 1980s through which participants posted around 1800 different articles daily (Rosenzweig 1998, 1543). Reducing the concept of packet switching to practice, Cerf and Kahn (1974) proposed their idea (or vision) for the internet (open architecture for internet) in their seminal paper (Clark et.al, 2010, 7). The term internet, an abbreviation for inter-networking came forth in 1974; the prohibition of its commercial use was lifted in 1991 and was also privatised by 1995 (Curran 2012, 35). In June 1975, MsgGroup, the first e-mail discussion group was launched (Rosenzweig 1998, 1547). Internet Protocol was first used at CERN (CERNET) from 1981-83 linking distant segments of two early local area networks using a satellite channel (Segal 1995, 2). The idea of the internet is argued to be a part of counterculture since it was developed with the intention of having a secure communication in the midst of conflicts which Curran (2012, 34) opined that those who use the internet during its inception could be considered as being a part of a cult that has its inner secrets and sub-culture that requires advanced technical competence for entry. He also wrote that Asia started using the internet by the late 1980s, Africa built its domestic network in the mid 1990s and by 1998 the internet reached the entire world as it grew from 562 users in 1983 to 300 billion by 2003 and by 2010, more than a quarter of the world's population have access to the internet. Featured twice on the front covers of *Times* and *Newsweek* by the end 1995, daily newspapers also came up with their "cyber" beats as the internet became the global topic (Murphy 2002,7). Internet Society recorded that by the year 1996, 134 countries had full internet connection while another 52 countries had limited or partial access to internet (Thanuskodi & Ravi, 2011). In 2011, global internet access exceeded 2095 million people (Rambocas & Arjoon, 2012). The United States had 28.8 million adults who had access to the internet by 1996 which grew to 147 million by the early 2006 (Riffe, Lacy & Varouhakis 2008). Asia is becoming dominant in the online world accounting for 41% of the world internet users when the United States accounts for only 13% (Sinha et.al 2013, 302). The locus of online dominance has moved steadily towards Asia, which now accounts for 41% of all internet

users; from having 66% of all users in 1996, the United States now accounts for just 13%. Global Digital Statistics in 2014 recorded 2.95 billion, 41% of the world population as active internet users (Pandey et.al 2020, 26)

1.13.2 (ii) India

According to Burkhart et. al (1998), internet connectivity marked its presence in India by the 1989 pioneered by National Education and Research Network (ERNET) India Society, National Informatics Centre (NIC), Software Technology Parks of India (STPI) and Videsh Sanchar Nigam Ltd. (VSNL). They also mentioned that ERNET, the first network in India was established with the help of the United Nations Development Programme (UNDP) which Subramanian (2020, 81) also recorded was launched on 12th February, 1989 but was accessible only by researchers at ERNET and the top academic and research institutions – IITs, IIScs and the staff of Telecommunication Department.

Mar. 1975	NIC established
Oct. 1976	Computer Maintenance Company (CMC) established
1978	CMC takes over former IBM India maintenance operations
1980	NCST developed/deployed proprietary e-mail software for LANs
1982	NCST established indigenous, proprietary VSAT network
	Experimental 32 Kbps packet-switched network, COMNEX, connected Ahmedabad, Mumbai, and New Delhi.
1986	INDONET X.25 network commissioned by CMC
	ERNET project initiated
	NCST established first inter-campus e-mail link (NCST to Indian Institute of Technology, Bombay (Mumbai))
1987	NICNET (first nationwide VSAT network) established
	District Information System (DISNIC) program established by NIC
1988	NCST established first e-mail link with the USA VSNL commissioned Gateway Packet Switching System
1989	NCST connected to I-NET/X.25 via dial-up connection
	NCST connected ERNET to the Internet via UUNet Technologies
	IndiaLink established to serve regional Non-Government Organizations (NGOs)
May 1989	NCST registered as the .in domain manager
1990	NCST established leased line to I-NET
1991	VSNL introduced Gateway Electronic Mail Service
	Election results disseminated in near real-time via NICNET
1992	VSNL introduced 64 Kbps leased line service
	NCST up-graded I-NET leased line to 64 Kbps
1993	VSNL introduced EDI services
Aug. 1995	VSNL started offering commercial Internet access [Sadagopan, 1998b]
Apr. 1998	ERNET reconstituted as an independent "society"

Fig. 1.13.2(ii) Timeline of Indian Network (Source: Wolcott & Goodman 2003, 567)

Wolcott & Goodman (2003, 564) wrote that with the then Prime Minister Rajiv Gandhi identifying the industry of Information Technology as a core sector, telecommunication and information technology went through a temporary hike in 1984 but languished with Mr. Gandhi's electoral defeat. They also noted that three wide area computer networking schemes were launched in 1986-87 by the Indian government viz. INDONET, NICNET, ERNET and the chronological development of internet in India is also shown in Figure 1.13.2(ii)

The Indian government set up the national taskforce to formulate IT Policy in May 1998 that came up with their IT Action Plan in July 1998 (Press et.al 2003, 45). This task force developed an elaborative background report with 108 recommendations within ninety days of its establishment and this IT Action Plan (1998) is further developed into New Telecommunications Policy, 1999, followed by the Information Technology Act 2000 (Wolcott & Goodman 2003, 565). Videsh Sanchar Nigam Ltd. (VSNL), the first Internet Service Provider (ISP) owned by the Indian government began the task of providing internet to the public on 15th August 1995 (Raveendran & Leberknight 2018, 3). The Information and Library Network (INFLIBNET) that became an independent inter-university centre was started in 1991 and the Consortium for Educational Communication (CEC) was established on 26th May 1993 by the University Grants Commission (UGC) (Mishra & Dangwa 2019, 462). The Directorate of Telecommunication started providing wired and wireless licenses to private telecom operators (ISPs) from 1998 – 2G spectrum in 2001, 3G in 2010 with 246 million subscribers in 2008 and by the year 2005, the government was able to disseminate messages via cell phone providers to their subscribers (Subramanian 2020, 80), 4G services were available in 2012, followed by 4G mobile in 2014 (Singh & Singh 2023, 30). During 1995 – 96, there were 0.45 million internet users in India. Bharat Sanchar Nigam Limited (BSNL) launched broadband services (BSNL) launched broadband services in 2004 and in the same year Google entered India (ibid). The Ministry of Information and Communication Technology (MCIT) was inaugurated in 1999 (Mukherjee et.al, 2016, 18). They argued that the exclusive focus of India on improving institutional access for a top-down model of development until the mid 2000s resulted in slow access to digital tools at individual level. Mallapuram district in Kerala became the first e-literate district in India by 2003 as a result of a less than ten years e-literacy campaign under the *Akshaya* Project that trained more than 6000,00 families (Shah 2007, 351). By March 2012, there were nearly 74 million (87.1

million by December 2012) internet users in India which rose to 164.81 million as of March 31, 2013 (Sinha et.al 2013, 302). Mukherjee et.al, (2016) mentioned a report of the Internet and Mobile Association of India (IAMAI) in 2015 which indicated that India had over 317 million users who at least access the internet once a month – 209 million users from urban population and 108 million users from rural population, accounting for approximately 25% of the country's population. They also indicated that on 30th December 2016, the National Payment Corporation of India launched the Bharat Interface for Money (BHIM) so that users can instantly send and receive money online through their phone (Asrani 2020, 4). By 30th September 2019, the number of internet subscribers in India was 687.62 million, 247.63 million from rural areas and 439.99 million from urban areas (ibid). Singh & Singh (2023) further wrote that there were 500 million internet users in India by 2019-2020, 5G service was introduced on 1st October 2022. The internet in India report of IAMAI (2023) shows that there there were 462 million active internet users in 2018, 574 million in 2019, 622 million in 2020 and 692 million in 2021 and 759 million active internet users in India by 2022 that accounts for 52% of all India population. The Universal Service Obligation Fund, an office attached to the Department of Telecommunications under the Ministry of Communications in their website highlighted that through the BharatNet project 210,190 Gram Panchayats were connected by 22nd January 2024, 847,465 Fibre to The Home (FTTH) connections and 104, 675 WiFi Hotspots were initiated (usof.gov.in).

1.13.2 (iii) Northeast India

Hasan (2019) wrote that even though internet connectivity is yet insufficient in Northeast India, mobile phone companies are booming in this region and the Indian government is setting up schemes for economic and cultural development through ICT. She also mentioned that this region has gained recognition more than the "pre internet 1990s era" which depicts that internet was not a popular phenomenon before the 1990s. The establishment of NIC state centre in Assam in 1986 marked an important step in pioneering internet distribution in the region as the other Northeastern states gradually set up their own centres (Gajendran 2020, 3189). He added that the NIC in the states of Tripura, Manipur, Assam, Mizoram, Nagaland, as well as the Information Technology Society in Meghalaya and the Information Technology Department at Arunachal Pradesh were the institutions that help in implementing internet connection in the Northeastern Region (NER). Guha (2017) also argued that this region has

the poorest internet density in India – below the national average, therefore, underdevelopment is very challenging to combat with technological means exclusively. Roy (2015) asserted that even though this region has high literacy rate at or above the national average, the geographical disadvantage (with a total area of about 262,264 sq. km. (Mazumder et.al, 2014)) becomes the major hindrance as it remains isolated from the rest of the country restricting the intelligent and strong English speaking young population to take advantage of the new technologies in their education system. She estimated the number of internet users in this region to be 0.1 million. From April 2002 to March 2009, a total of 430 Community Information Centres were established in Northeastern states of India under a national e-governance plan and the task was executed by the National Informatics Centre (Mazumder et.al, 2014, 39). Mukherjee et.al (2016) considered people of the Northeast India to be digitally excluded as the region gets internet connectivity through Mumbai and Chennai international internet gateway. According to Chanda (2017) there are 4.07 million subscribers in North- East India and the government of India has authorized an international broadband gateway project in this region to be undertaken by the Bharat Sanchar Nigam Limited (BSNL). In June 2015, BSNL signed an agreement with Bangladesh Submarine Cable Company Limited (BSCCL) to provide high internet speed with a larger bandwidth (Mukherjee et.al 2016, 12). Sadashivam & Tabassum (2023, 18) wrote that the National Broadband Mission (NBM) was launched on 17th December 2017 and a scheme called Prime Minister WiFi Network Interface (PM-WANI) was introduced under NBM in 2021. Till 25th July 2022, about100,393 public WiFi Hotspots have been set up under this scheme out of which 1,634 public WiFi hotspots were installed in the Northeastern states – 584 in Arunachal Pradesh, 569 in Assam, 297 in Tripura, 140 in Meghalaya, 29 in Nagaland, 7 in Manipur and Sikkim and only 1 in Mizoram. On 20th January 2009, an agreement was signed between Universal Service Obligation Fund (USOF) and BSNL to provide broadband connection through which 15,313 broadband connections including 270 kiosks were launched and 542 mobile towers were installed on 30th November 2013 in the Northeastern region.

They also considered BharatNet project (started as National Optical Fibre Network (NOFN) under Manmohan Singh's government) to be the backbone of Digital India as they studied the state-wise distribution as well as implementation of Universal Service Obligation Fund (USOF) in Northeast India. In the given figure 1.13.2(iii) by Sadashivam & Tabassum

(2023), we can see that Mizoram got the least amount of share amongst all the eight states. This calls to attention about the need to cover areas such as internet penetration rate and its related issues in this state while keeping in mind the cultural and societal background where it takes place.

States	Disbursed Funds under Phase-I (in crore)	Disbursed Funds under Phase-II (in crore)
Arunachal Pradesh	76.14	29.44
Assam	225.98	0.16
Manipur	57.11	13.37
Meghalaya	82.93	10.56
Mizoram	62.21	4.31
Nagaland	91.73	0.62
Sikkim	15.34	65.05
Tripura	86.67	2.89
North-East States Total Funds	698.11	126.4
Overall Total Funds	14,894.65	12,688.07

Figure 1.13.2(iv): Northeast State-wise Funds disbursed under BharatNet Project (31/12/2021

Source: Sadashivam and Tabassum (2023)

Under the BharatNet Project, broadband connection was inaugurated on 16th October 2021 at Sesawng village, Mizoram by the Village Council President Mr. C. Lalremruata (*Northeast Today*, 2021).

1.13.3 Society, culture and internet

Mobley & Wilson (1998) wrote that the internet's influence on its culture cannot be escaped regardless of how hard a country tries to control or repress an internet. They also believed that cultural factors can be very important considering the internet's effect in the long run even though it may seem less apparent and far more challenging to evaluate than the economic factors. Katz et.al, (2012) suggested that community-specific and 'culturally relevant' effort is required to explain the need when it comes to broadband or internet diffusion among specific ethnic groups. Digitalization of culture brought by the age of the internet is an outcome of the abstraction of individuals from real life in order to attain digital identities (Çöteli, 2019) which can result in identity confusion among users. Marlowe et.al (2017) stated that social cohesion can be enhanced by digital media platforms and on the

other hand these platforms can also disrupt the creation of social bond across greater distances. This is becoming a reality among Mizos who are living inside Mizoram and those who are not. In his study about internet use and family relations among Mizo youth, Lallianzela (2014) found that the generation gap created by the existence of internet frequently results in disputes and deterioration of family bond/relationship as the two generations blamed one another for not respecting or understanding the other. Family problems at a larger scale often becomes societal problem.

Theodore (2019) indicated that digital media is gradually taking over other media because of its numerous advantages and it will be preferred by the modern-day generation to other types of media, hence, it is important for researchers to pay attention to this media. Digital media also serves as attention operator for traditional media (Ren et.al, 2024). Digital culture in its existing precise form is a historically dependent phenomenon, recognizable solely in the milieu of recent technological developments which is historically and culturally constructed and not superimposed (Balbi & Ortoleva, 2014). Sukanya (2012) also wrote that understanding of the micro-level influences between culture and online communication is necessary. How users act in response to the new media and what the new media provides to the users should be considered as well. Coleman (2010) stated that in order to fully comprehend the wide ranging significance of digital media, various frames of analyses, attention to history, indigenous context and the lived experiences of digital media should be involved in the study, likewise, focusing on cultural aspects of digital media use specifically on how, where, and why can also be necessary. Hence, the history and lived experiences of Mizo internet users will be looked upon as we dive into the influence of internet on Mizo culture and society.

1.13.4 Digital culture yields internet dependency

Digital culture is a world with somewhat easy to map continents (Balbi & Ortoleva, 2014) where actors move around by continuous adaptation of and by trial and error of the environments and is not just accumulations of information. Phatic communication has become crucial to digital culture (Miller, 2020). Merely placing the word 'digital' in front of common terminologies nowadays seems to denote an upgraded 21st century meaning (Hlynka, 2010) moreover digital technologies are strongly embedded in contemporary

discourse. Essentially, digitality depicts the use of binary code using the digits 0 and 1 in order to construct information (Lavender 2010, 125). Digital is a process, not a unifying but a multifaceted process (Balbi & Ortoleva, 2014). "Digital" encompasses the ways of thinking and practices that are embodied within a particular technology and is not only about the effects and possibilities of a technology (Gere, 2009). Digital culture in its existing precise form is a historically dependent phenomenon, recognizable solely in the milieu of recent technological developments (ibid) which is historically and culturally constructed and not superimposed (Balbi & Ortoleva, 2014). More than a mere technological advancement, digitization is highly cultural in its applications, making information accessibility much quicker and easier to adapt and handle (Lavender 2010, 126). The inescapable and enticing characteristic of digital technologies can result in extensive dependence, making humans ever reliant on them to assist one's physically deadened and fractured self (Lambert et.al, 2023).

Internet dependency may also be conditioned by users' personality as Kuss (2017, 142) wrote that extroverts use internet for social enhancement while for the introverts it is a tool for social compensation. She also found that social media engagement cause lesser participation in real-life relationships. In their study among the fraternity of University of Tehran, Rahmani & Lavasani (2011) found that internet users who are open to new experiences are more susceptible to internet dependency and that extraversion envisages internet dependency. Chen et.al (2004, 50) opined that as internet dependency and its related issues have been primarily studied in the discipline of psychology, attention is mostly paid to the detrimental effects but unrestraint internet use may not necessarily imply internet dependency or addiction. Dirin et. al (2019) asserted that smartphone dependency can result in behavioural changes as development trends denote that digital dependency will be increasing remarkably and individual digital dependency is not confined only to use of smart devices as a kind of personal aid. The feature of accessibility facilitates in users becoming more reliant or dependent on the internet, making dependents eventually increased their usage as they became more acquainted with the internet (Hilts 2008). In reality, dependency is becoming the key to technological acceptance or adoption where the adept users play an important role in encouraging those who are less skilled to have an encounter with technology (Duque & Otaegui 2023, 28). This study will also keep in mind to look into whether digital culture

generates internet dependency as the Mizos slowly adapt the internet (or digital) culture and incorporate into their own.

1.13.5 Digital divide – a subset of digital culture

The term digital divide came to be widely used to refer to the gap between households that have access to the internet and those that do not since the mid-1990s (Pierce, 2018) or latter part of the 1990s (Van Dijk, 2006). Paul & Indu (2022, 1391) defined digital divide as the disparity between those who have access to the contemporary ICT facilities and the rest who are left out of this access. As Henry Jenkins, director of comparative media studies at the Massachusetts Institute of Technology, argues, "The rhetoric of the digital divide holds open this division between civilized tool-users and uncivilized nonusers," (Warschauer, 2003). The concept of the 'digital divide' in a society where digital communication technologies are being increasingly absorbed into daily lives raises the problem of inequality of access within the culture of connectivity (Marlowe et.al, 2017) which is more complex than a mere binary of haves and have-nots (Coleman, 2010). The term can also be seen as either obsolete or irrelevant because those who want can easily afford in rich countries while there are also those who don't feel the need to have internet or ICT facilities (ibid). To dig deeper into the reasons for this lack of interest it seems appropriate to complete large-scale surveys with qualitative studies in local communities and cultural groups (Van Dijk, 2006). Pierce (2019) stated that there is cynicism among some scholars about mobile phones and tablets as a means of digital inclusion. Glitch between the skill in human resources and infrastructure are digital divides that remain regardless of the efforts to obtain more affordable devices. Digital divides can be multifaceted and is not just a binary concept. Nations that restrain their residents' digital connection make a divide which is not physical, intellectual, or economic but informational. Reed (2019) also wrote that digital native/digital immigrant distinction has an age dimension that is rapidly fading as digital communications raise a question like whether or not they are forming a new "generation gap" between the young and older, between members of the digital generation and the analog one. Moreover, he is of the opinion that digital immigrants also possess some knowledge which digital natives do not as they are in the transition period to see some things about digital culture that are not as apparent to submerged natives.

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In a rural developing area, digital divide engagement is often entwined with the need to pay attention to the needs of an individual along with material provision (Venkatesh & Sykes, 2013). Lalrinhlua (2014) suggested that there is a great need to study the matter of digital divide and that researchers need to emphasize on factors such as location and socio-economic conditions. Development often connotes quantitative growth, be it technological or in any area, the cultural and societal aspect is often neglected probably because they cannot be

quantified to see the change. Therefore, this study looks at the matter of digital divide not only in terms of number of access but also how the gap can be removed or reduced. The opinions of the participants will also be asked regarding this issue as the least developed state in India is embracing the wave of the internet without prior knowledge about it, not to mention its advantages and disadvantages.