CHAPTER 3

This chapter depicts the overall nature of the research blueprint – design, method(s), philosophical worldview, tools and techniques, universe and sampling, pilot study report, fieldwork strategy, participants involved as well as the systematic application of methodology based on the research objectives. The profile of the study areas are also highlighted. The Diurnal Internet Dependency Scale (DIDS) is developed specifically for this study to look into the level of internet dependency based on several theories and concepts using a 5-point Likert Scale.

3.1 Research Design

Research design is the speculative layout where organization and planning of the requisite for collection as well as analysis of data is presented in order to meet the purpose of research (Kothari & Garg 2019, 29). **Convergent or Concurrent Parallel Mixed-methods research design** is employed in this study in which according to (Cresswell 2014, 219) both quantitive and qualitative data are collected approximately at the same time (simultaneously), are analysed separately and then integrate the interpretation of the general findings or results in order to look at whether they confirm or disconfirm each other. This type of methods are used when the researcher intended to merge or compare the quantitative and qualitative sets of data (Klassen et.al 2012, 379). This method is also known as the third methodological development and there has been an ongoing debate about the appropriateness of combining multiple methods and there is not much work yet on Information Systems research that employed mixed methods (Venkatesh, Brown and Bala 2013, 24). The main supposition of this design is that both qualitative data and quantitative data brings various kinds of information – qualitatively about the participants' view are and also the quantitative scores of the respondents on instruments/tools used for data collection (Creswell 2013, 614). Using both qualitative and quantitative research, mixed-method research design may involve one or more components such as research objectives, type of data, type of analysis and type of inference (Leech & Onwuegbuzie, 2009). This study also employed mixed-method in order to fulfil the requirement hinted by the research objectives. The research objectives and research questions become the main deriving force that determines the research method of this study.

Concurrent mixed method designs enable researchers to blend qualitative and quantitative perception simultaneously to look at certain phenomena with a deeper insight and the main advantage of a mixed methods is the use of multiple methods that can lead to a richer and more complete understanding. Drawing from the strengths of both quantitative and qualitative techniques,

mixed-method researchers are less interested in the compatibility of the two philosophy but are more interested in what works best for examining the research question (Wimmer & Dominick, 2011) Hesse-Biber & Leavy (2011) asserted that the merging of methods has the potential to build a symbiotic research where one method enhances, exemplify or clarify the other (Lukenchuk 2017, 73). When the collected data are not very consistent combination of both quantitative and qualitative is needed more (Taylor & Raykov 2020, 134). For studies that sequentially or concurrently employ both qualitative and quantitative approaches, sampling strategy can be more complex (Collins, Onwuegbuzie & Jiao 2006, 85).

In contemporary media and communication research, quantitative approaches become essential component of methodological toolkit as they reduce certain data into measurable quantities (Ørmen, 2021). Meanwhile, qualitative studies also help in exploring the transitions as well as transformation of communication as they have multiple resources at their disposal, such resources can become the prerequisites for research in digital media (Jensen, 2021). Complexity is the core of qualitative research while quantitative approaches laid emphasis on simplicity (Ørmen, 2021). The main advantage of concurrent mixed-method is that the researcher does not have to wait for any of the method(s) to be completed but has the liberty to collect his/her own pace along with the convenience of the participants/respondents. The survey questionnaires (Internet Dependency Scale) were distributed to the respondents while Focus Group Discussions and Interviews were conducted with the available participants at the same time. Convergent or Concurrent Parallel Mixed-method research design helps in looking at the Mizos' internet dependency in both qualitative as well as quantitative aspects.

3.2 Philosophical Worldview (Paradigm)

The twentieth century witnessed the inception of research in the field of media and communication which was also at the junction of various disciplines and faculties (Jensen, 2021). Positivism, post positivism, social constructivism, transformative and pragmatism are the five commonly agreed philosophical worldviews in research and among these the transformative and pragmatic worldviews are only considered as suitable for mixed-methods users (Hall 2013, 2). Hence this research leans towards **pragmatic philosophical worldview.** The "what" and "how" to research is looked upon by pragmatic researchers to get into where they intended to go with it (Cresswell 2014, 84). Citing Rossman & Wilson (1985) he mentioned that researchers focus more on research problems instead of methods as they use all the available approaches to address such problem. Pragmatic scholars agree that social science or empirical inquiry can be done with multiple method,

they believe that objective reality and human experience are not the same and that reality is socially constructed based on human beliefs where meaning cannot be separated from human experience in various context (Kaushik & Walsh 2019, 4). It takes up both qualitative and quantitative extremes offering flexibility to researchers, preferring empirical more than rationalistic approaches where methodology is adopted in order to answer the proposed research questions (ibid). Pragmatism is a comprehensive paradigm upholding a diversity of qualitative, quantitative, and mixed-methods task, it also often identified as the philosophical ally of mixed-methods research (Lukenchuk 2017, 67). Pragmatist researchers believe in complementarity of shared meaning and methodology where their advantages and disadvantages of multiple approaches complement each other under a joint action (Moseholm & Fetters 2017, 2). Greene et.al (2001) associated pragmatic worldview with parallel-tracks analysis (Hatta et. al 2020, 85). The significance of pragmatism in research design is in striking the balance between objectivity and subjectivity by paying more attention to research problem than research method as it gives researchers the liberty to apply all the available methods and techniques to while looking into research questions (Boruah 2019, 25). Allowing the researcher to have the liberty of selecting the techniques and methods that best supplement the aim of the study, pragmatism aided in having a more inclusive perception of research problems studied (Das 2020, 86). Hence, this study will look at worldview as a reality or phenomenon that cannot be defined as an absolute truth but can vary from person to person irrespective of the dominant worldview and the perception in communication behaviour is also a subjective enough which is difficult to quantify. Meanwhile, trying find the level of internet dependency will be tough with qualitative technique. Therefore, this study will try to strike balance by converging both methods while using pragmatism as a research paradigm.

3.3 Sampling technique

According to Wimmer & Dominick (2011) *"A sample is a subset of the population that is representative of the entire population.*" Sampling is to precisely determine who the chosen respondent is/are (Hansen et. al 1998, 243); a distinct plan for drawing a sample for a population which refers to a technique or systematic process adopted by a researcher before the desired date are collected (Kothari & Garg 2019, 52). It is a crucial research process step that helps in determining the quality of inferences drawn by researchers from the finding of the study (Collins, Onwuegbuzie & Jiao 2006, 83). It is related with the estimation and selection of representatives from a given universe that determines the characteristics of the entire population (Singh and Masuku 2014, 3). In social science and experimental research, sampling methods are critical as they involve the process,

act, or technique of choosing a representative sample of such population that is to be observed and analyzed using specialized sampling process (Rahman et. al, 2022). In order to come to a very good conclusion, we must make sure that we choose the right sample for our study as the right choice of elements can lead to selection of better representatives from the population. Purposive Sampling technique is employed in this study to collect the desired data.

3.3.1 Purposive Sampling

Purposive sampling is the intentional selection of participant(s) based on the purpose of study as per the standard of the participants that can meet the expectation or desire of the researcher to provide unique and rich information where the size of the sample is often directed by data saturation and not statistical parameters (Etikan, Musa and Alkassim 2016, 4). This type of sampling is frequently used in mass media research as the researcher deliberately selected the sample for particular characteristics or qualities for certain type of media while eliminating those who fail to meet the given criteria (Wimmer & Dominick 2011, 96). Also considered as judgmental, selective or subjective sampling, it depends on the researcher's judgement or experience when it comes to selecting the sample for study (Rai and Thapa 2015, 6). According to the purpose of the research, sampling units are selected (Singh and Masuku 2014, 3) and the knowledge of the researcher about the population may also help in defining the distribution or selection of the sample in order to make the sample representative, probably depending on a subjective opinion (Guarte & Barrios, 2006).

It aims to focus on certain aspect of a population that can help in answering the research questions and even if the sample is not representative enough, it is not considered weakness for qualitative or mixed – method researchers (ibid). On the other hand, Sharma (2017, 751) also wrote that purposive sampling can make generalization difficult as this type of sampling is susceptible to researcher's bias. When samples are selected purposively, researchers may use both both qualitative and quantitative methods with variety of techniques while collecting data (Tongco 2007, 152) following the researcher's arbitrary ideas seeking for a representative sample (Vehovar, Toepoel and Steinmetz 2016, 330) in order to gather the best information or available data to achieve the objectives of the study (Etikan and Bala 2017, 215). Therefore, in this research the population is divided into two broad categories viz. digital natives and digital immigrants (these terms are conceptualized based on Mizoram context in Chapter 2). As these two groups simply classify those who are born before the internet and those born after the internet, a large portion of the population still has the chance to be a part of the study sample, except for those who have never used the internet in their lives and those who are below the age of 13.

3.4 Universe of the study

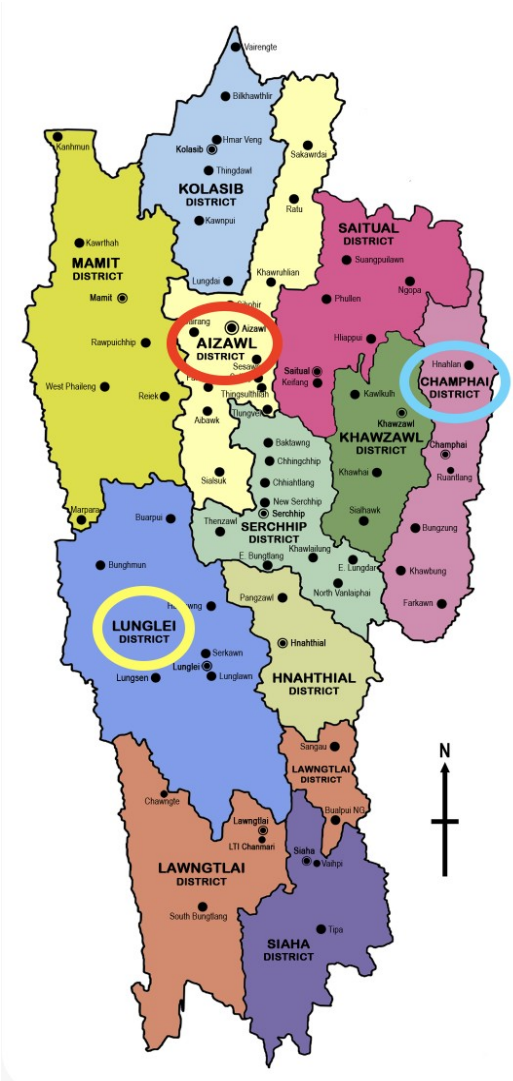


Fig. 3.4 Map of Mizoram

Source: Mizoram Rural Bank (https://www.mizoramruralbank.in/about-us/branch-map.html)

The study areas of this study are highlighted in the given map (Fig. 3.4) using circles – Red for Aizawl, Yellow for Lunglei and Blue for Champhai. Mizoram used to have 8 districts – Aizawl, Lunglei, Champhai, Siaha, Kolasib, Serchhip, Lawngtlai and Mamit until 2019. As a consequence of an ongoing and increasing demand for districthood in three villages, on 3rd June 2019 the Government of Mizoram finally issued an order to create the three new districts and the offices of the Deputy Commissioners Offices were set up at Hnahthial, Khawzawl and Saitual. Before the creation of the three new districts, the selected districts were the top big three districts in terms of population, economy as well as education and yet remain the same even though some of their geographical boundaries have become smaller.

The universe of this study comprises of Aizawl, Lunglei and Champhai districts which are the top most populated districts in Mizoram with a sample size of 600. The respondents comprise of digital natives and digital immigrants selected from three districts of Mizoram, Aizawl, Lunglei and Champhai which have high population and mobile internet connection using Purposive Sampling technique. Pilot study was conducted in Serchhip district.

The group of people restricted to a certain geographical region such as city, state, country etc., or some institutions like hospitals, schools, colleges, offices etc, that have at least one common character is considered to be a population of research (Martínez-Mesa et.al, 2014). The total population of the three districts is 687,482 of which Aizawl is 400,309, Lunglei – 161, 428 and Champhai is 125,745. The sum total of the population of these three districts comprises of 62% of the entire Mizoram population (10,97,206) (Mizoram Statistical Abstract 2021, 11). The mobile internet connection in these three districts constitute 72% of the total **mobile internet connection** in the entire state where mobile internet connection in Aizawl is 729,524, Lunglei has 232,422 and Champhai also has 109,244 mobile connection and their total is 1,071,190 out of the total number of Mobile Connections in all Mizoram 1,483,213 (ibid 100). Online and offline version of Internet Dependency Scale (questionnaire) were distributed to residents of Aizawl, Lunglei and Champhai districts, 200 sample in each district that totalled 600. Sample size is an essential attribute of any empirical study in order to have a proper representative from a selected population. Based the determinants of sample size prepared by Krejcie and Morgan in 1970, the sample size of this this study is considered. Ahmad & Halim (2017, 21) reckoned this 'determining sample size formula' to provide identical sample size in all cases which is given below:

Table 3.4 Determination of Sample Size from a Given Population by Krejcie and Morgan (1970)

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302

25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367

130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

3.4.1 Aizawl

The capital district of Mizoram, Aizawl not only has the highest population but also internet penetration rate. Located in the north-eastern part of the state on the hill top, having steep slopes and little valleys, Aizawl has five Rural Development Blocks (Lalrohlua 2020, 35). According to 2011 census, population of Aizawl is 400,309 with total area of 3,576 Sq. Km and 97.89% literacy rate, the sex ratio is also 1009 (Mizoram Statistical Abstract 2021, 11). The geographical co-ordinates of Aizawl is 23° 18′ 43.164" N to 24° 24′ 49.464" N latitude and 92° 37′ 24.492" E to 93° 11′ 26.628" E Longitude (Biswas, Ghosh and Sailo 2023, 80). The location map of Aizawl district is shown in Fig.3.4.1.

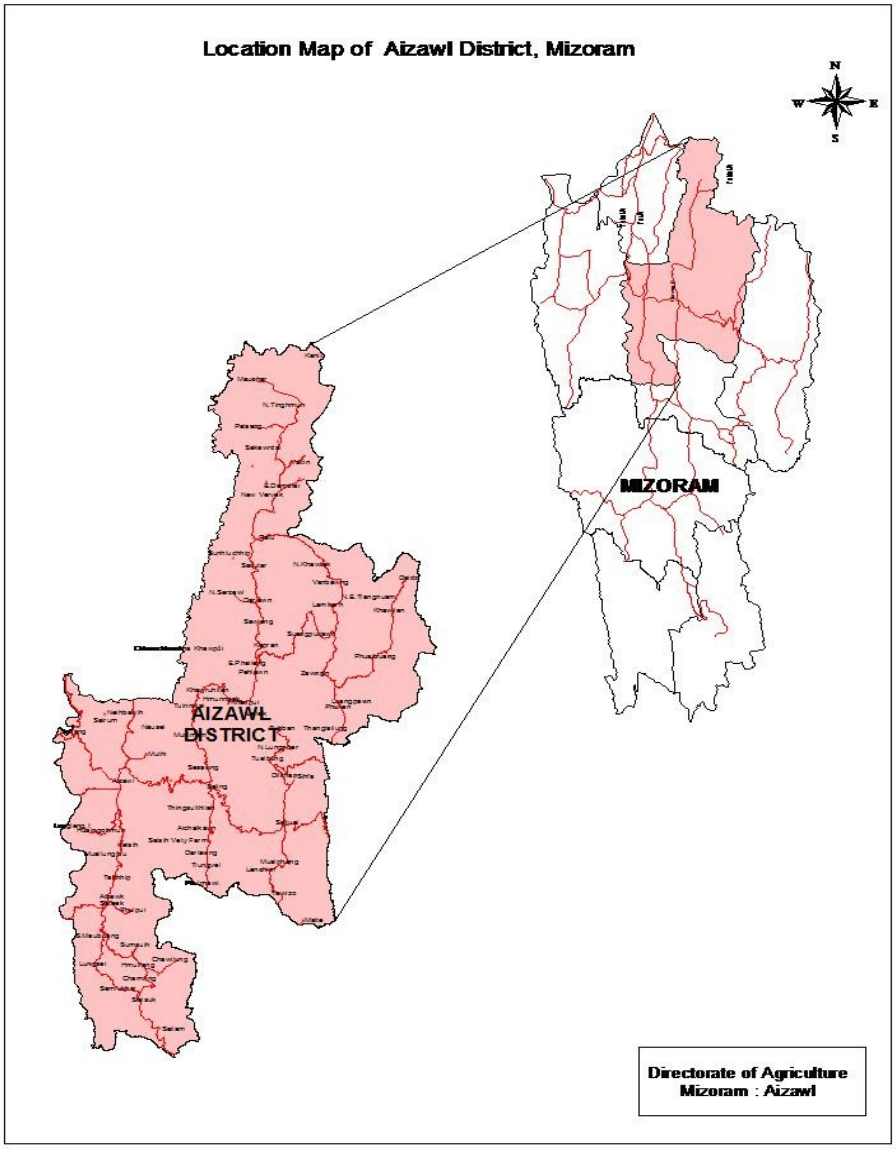


Figure 3.4.1: Aizawl district map (Source: Directorate of Agriculture, Mizoram)

3.4.2 Lunglei

Covering 21,081 sq.km Lunglei district is located in the southern region of Mizoram sharing international boundaries in the east with Myanmar as well as Bangladesh in the west lying between 21°58' 24°35' North latitude and 92°15' and 93°26' East longitude (Lalmuanpuii, Rosangkima and Lamin 2013, 25). It is the largest district (in terms of area) in Mizoram covering 4536 sq. km and the total population (Census 2011) is 1,61,428 where 82,891 are males and 78,537 are females having 977 sex ratio and 97.91% literacy rate (Directorate of Economics and Statistics Mizoram 2020, 2). Lunglei district location in Mizoram map can be seen in Fig. 3.4.2.

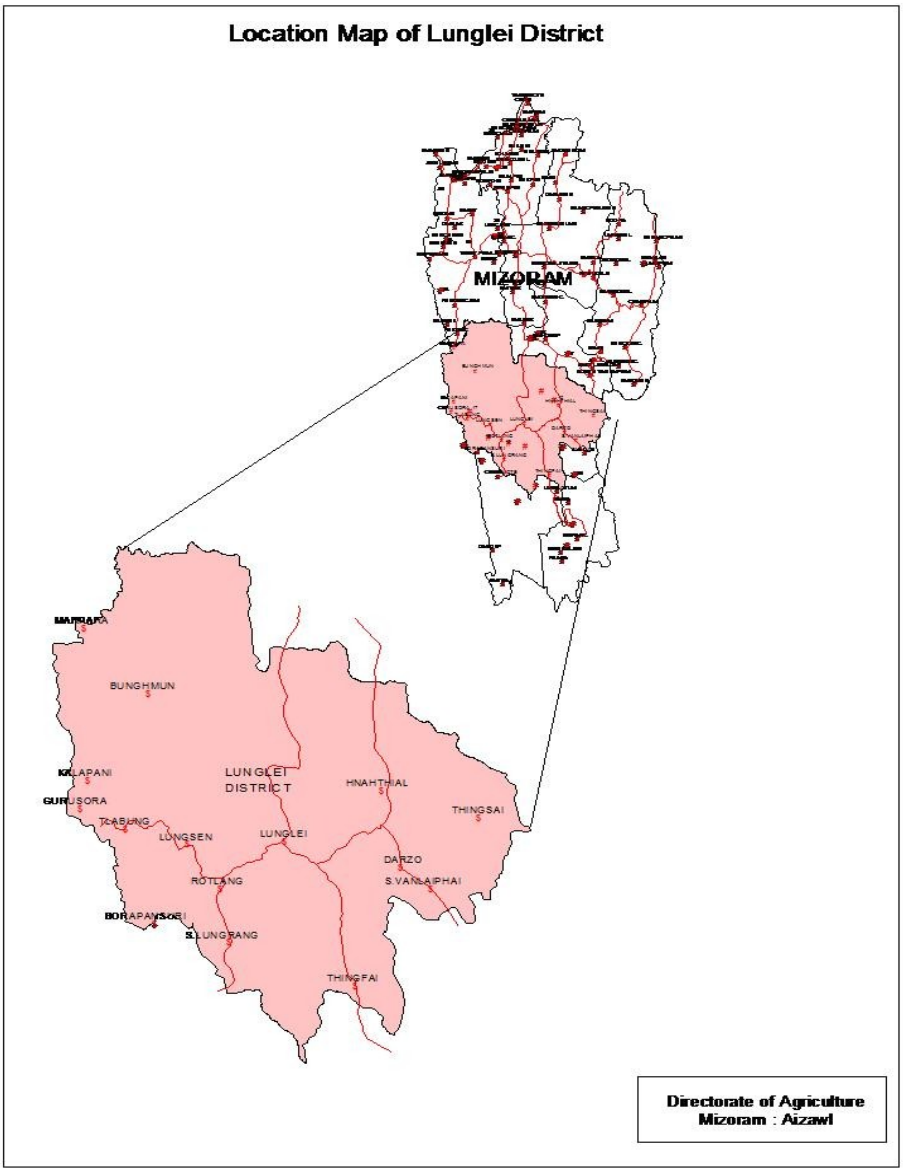


Figure 3.4.2: Lunglei district map. (Source: Directorate of Agriculture, Mizoram)

3.4.3 Champhai

Located in the eastern part of Mizoram, Champhai district has an area of about 3185.83 sq. km is surrounded by Churachandpur district of Manipur at the north, Aizawl and Serchhip districts at the west and Myanmar on the south and east (Thong, Pebam & Sahoo 2018, 1714) as it spreads across 24˚ 05’ 03.99” & 23˚ 00’ 03.25” North latitudes and 93˚ 00’ 31.29” and 93˚ 26’ 17.66” East longitudes (Lallianthanga and Sailo 2013, 2). The population of Champhai is 1,25,745 of which 63,388 are males and 62,357 are female (Mizoram Statistical Abstract 2021, 11). The sex ratio of Champhai is 984 with literacy rate of 95.91%. Champhai district map is highlighted in Fig. 3.4.3.

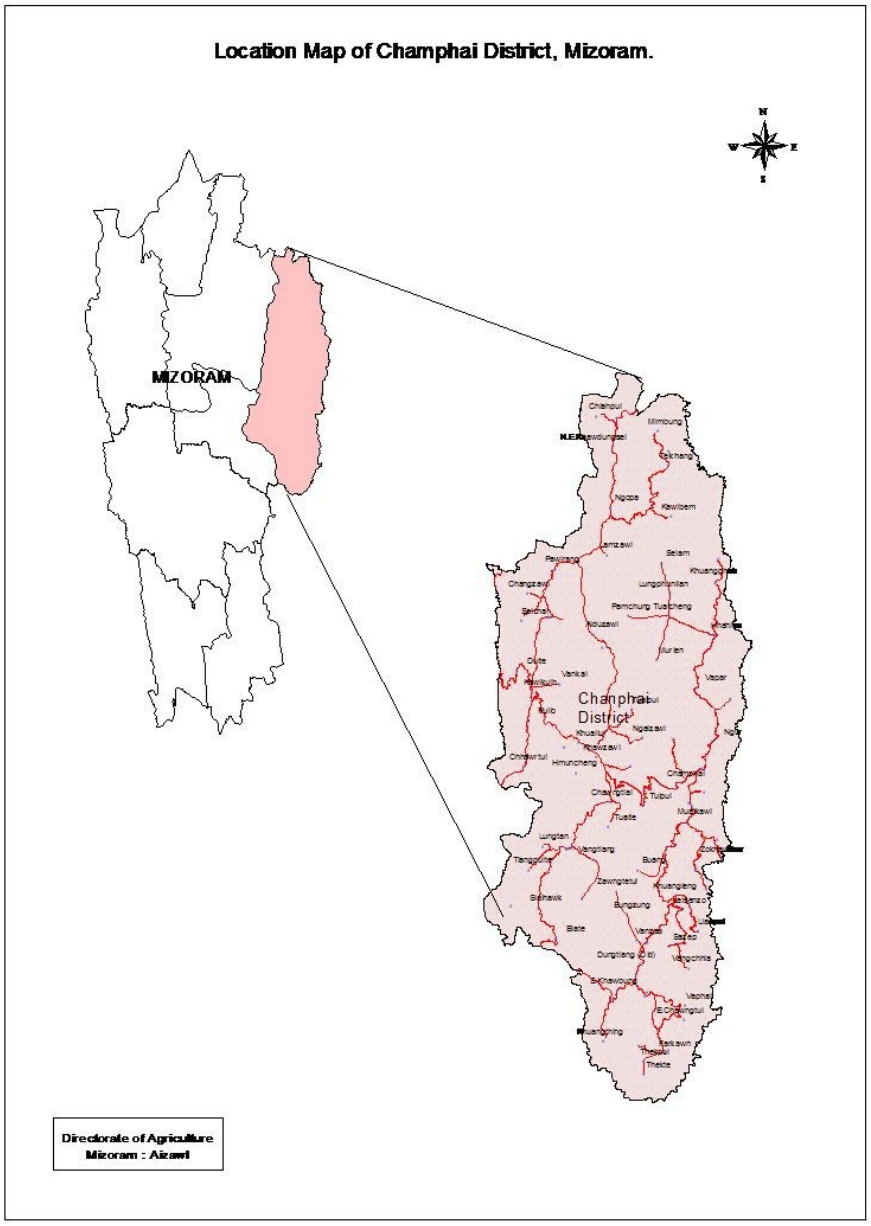


Figure 3.4.3 Champhai district map. (Source: Directorate of Agriculture, Mizoram

3.5 Pilot Study

Pilot study was conducted in July 2022 at Serchhip district, which has the highest literacy rate and is in the central region where 100 samples of Internet Dependency Scale were distributed and 95 were returned. With this 95 sample size, the Cronbach Alpha reliability test result of this questionnaire in SPSS is 0.827 which according to Hinton et.al (2004) comes under high reliability, details as under:

Best Reliability – 0.90 above

High Reliability **– 0.70 – 0.90**

` Medium Reliability – 0.50 – 0.70

Low-level Reliability – 0.50 and below

Sample Interviews were conducted with 10 residents (Digital Immigrants) from Serchhip district.

3.6 Pilot study outcome

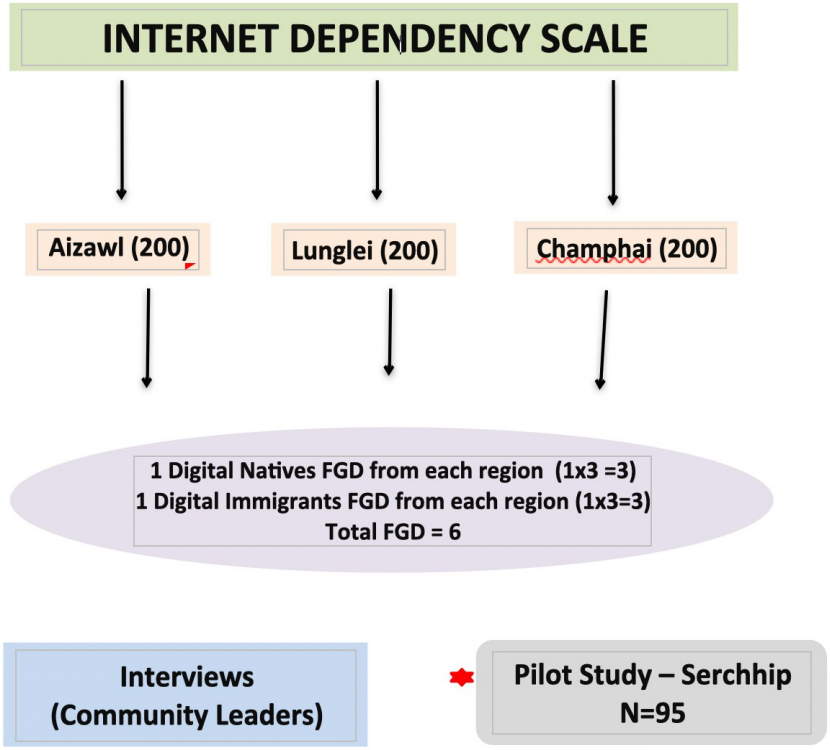
Out of the total 95 respondents, 42 (44.2%) are male and 53 (55.8%) are female. The youngest respondent is 13 years old and the oldest is 63 years old where the mean of age is 28.88. 12 of the respondents are 20 years old having the highest frequency, 7 are 19 years old and 5 are 23 years old. The Internet Dependency Scale (IDS) for the Pilot Study has 25 questions of 5 point Likert scale, a multiple choice question consisting of options for factors of internet use and 3 open ended questions asking the respondents' reasons for using the internet, problems faced due to engagement with the internet and how the internet changes the way they think. The maximum score is 125 and the minimum score is 25 where below 40 are not internet dependent, between 40 – 80 are internet dependent and above 80 are highly dependent on the internet. Out of this, 26 (27.37%) respondents score above 80 which are highly dependent on the internet while a majority (66 (69.5%) of them are moderately dependent on the internet and only 3 (3.2%) of them are not internet dependent. The highest score is 108 while the lowest score is 36.

Few sentences from the Internet Dependency Scale (IDS) were reframed as the respondents have difficulty in understanding some statements and five more points were added to be included in the main fieldwork material. This pilot study interviews also found that the proposed study would be quite feasible but the intended case study which was planned to be done on those scoring really high on the internet dependency scale was cancelled because of ethical issues, difficulty in identifying cases as well as the uncomfortability of the expected participants.

3.7 Fieldwork

The main fieldwork was conducted in the selected three regions – Aizawl, Lunglei and Champhai where 200 samples each of the Diurnal Internet Dependency Scale (DIDS) were collected, and two focus group discussion (FGD) each, totalling six were conducted. Village Council Office Bearers and NGO leaders were also interviewed using semi-structured interview. The strategy of this study's fieldwork is presented in Fig. 3.7.

Figure 3.7 Fieldwork Strategy



Wax and Wax (1980, 29) defines fieldwork as a process of social research where the resear.cher makes effort to get into the universe of meanings and take part in the host community's moral system that incorporates intricated social and psychological understanding by both the researcher and the participants. Fieldwork – an insatiable method (Kleinman, Stenross & McMahon 1994, 40) is often connected with research methods such as interviews, focus group discussion, observation, document analysis as well as spending time with people or place so that how people live and their view the world can be presented appropriately (Brayboy 2003, 13) which may also include taking notes, recording audio, taking photographs and videos (Dunajeva 2021, 109) with heavily value-laden data collection (Abbott 2016, 55). It calls for accepting academic responsibilities, mindfulness to high conduct high quality research and genuine findings and also to protect the dignity of participants (Stevens 2001, 71) as the researcher's frame of mind is an important aspect that have an effect on research findings (Dunajeva 2021, 108). Researchers often have very little control over those who are studied as participants have the liberty to accept or decline the interaction (Cassell 1980, 30). In this research, survey, focus group discussions and interviews are conducted to collect the desired data from the mentioned universe (in 3.4).

3.8 Research Tools and Techniques

3.8.1 Diurnal Internet Dependency Scale

This study employed mixed-methods yet qualitative method is more dominant in this research regardless of the sample size as certain phenomena cannot be studied quantitatively. Survey questionnaire, Semi-structured interviews and Focus Group Discussion (FGD) are employed in this study. There have been various scales on internet related studies such as Internet Addiction Test (IAT) by Dr. Kimberly Young (1998) which (Widyanto & McMurran (2004) believed to have high face validity but not yet subjected to systematic psychometric testing, with adequate internal consistency and concurrent validity, it is the most reliable scale. Chen's Internet Addiction Scale (CIAS), a 4 point Likert scale with 26 items which according to (Alizamar et.a l, 2018) seems to show consistency of answers and excellent quality response. IAT and CIAS are the most widely used scale among researchers from various discipline across the globe regarding internet addiction studies. Bushan (2022) also developed a Social Media Development Scale, focusing on users dependency on social media for information, self-expression, entertainment and neglect of social life and work and lack of control. This scale is solely designed for Social Media. Griffiths et.al (2014) also mentioned various scales like Facebook Addiction Symptoms Scale (FASS), Bergen Facebook Addiction Scale (BFAS) by Andraessen et. al (2012), Internet-Related Problem Scale by Armstrong et. al (2000), Pathological Internet Use Scale by Morahan–Martin and Schumacher (2000), Charlton and Danforth's (2007) online gaming addiction scale, Mitchell and Beard's (2010) Internet Dependency Scale (IDS) and so on which have their own specificity and relevance.

Since most of the available scales do not meet the requirement of the present study, a new Internet Dependency Scale (IDS) is developed. But since there is already an IDS by Mitchell and Beard (2010), it is slightly modified to Diurnal Internet Dependency Scale (DIDS). Diurnal simply means daily, day-to-day or everyday, hence, it will look at (or measure) the daily or every day internet use of the respondents. This scale uses a 5 point Likert Scale, where

1 = Never

2 = Rarely

3 = Occasionally

4 = Frequently

5 = Always

to find out the level of internet dependency based on theories and concepts like Media Dependency Theory, Technological Determinism, Social Shaping of Technology and Media as extension of Self. 30 questions are framed and are categorized into five groups bearing parameters like Practice, Enhancement, Socialization, Constraints and Dependency. Two multiple choice questions were added to find the factors affecting internet use and the device(s) or gadget(s) used by the respondents to access internet. Three open-ended questions are also asked at the end to look into how the internet changes or shapes their worldview, the problems they face while using the internet and the changes it brought to Mizo culture and Society. The Diurnal Internet Dependency Scale is developed using a 5-point Likert scale, the Cronbach Alpha reliability test result of which is 0.827. A total of 600 samples were collected for analysis in the selected regions of Mizoram. This scale is backed by theories and concepts such as Media Dependency Theory by Sandra-Ball Rockeach and Melvin Defleur in 1976, Media as an Extension of Self by Marshall McLuhan (1964), and Technological Determinism vs. Social Determinism. The 30 options are further classified into six groups: such as Practice, Enhancement, Familiarity, Socialization, Constraints and Dependency. Oneway Analysis of Variance (ANOVA) test was conducted to look at the variations on these groups – classification of internet use patterns, and an independent samples *t*-test was also done to look at if there is a difference between the total score of digital natives and digital immigrants.

In order to measure the level of internet dependency, an instrument is required to determine the result, a typical questionnaire may not suffice, therefore, a Diurnal Internet Dependency Scale is develop to look at the daily internet dependency level of Mizo internet users. Initially intended to be simply Internet Dependency Scale, but since there is a scale previously developed with the same name, it is later updated to Diurnal Internet Dependency Scale. It has a high Internal Consistency i.e., 0.835 of Cronbach Alpha Reliability. According to Hinton et.al (2004),

Best Reliability – 0.90 above

High Reliability **– 0.70 – 0.90**

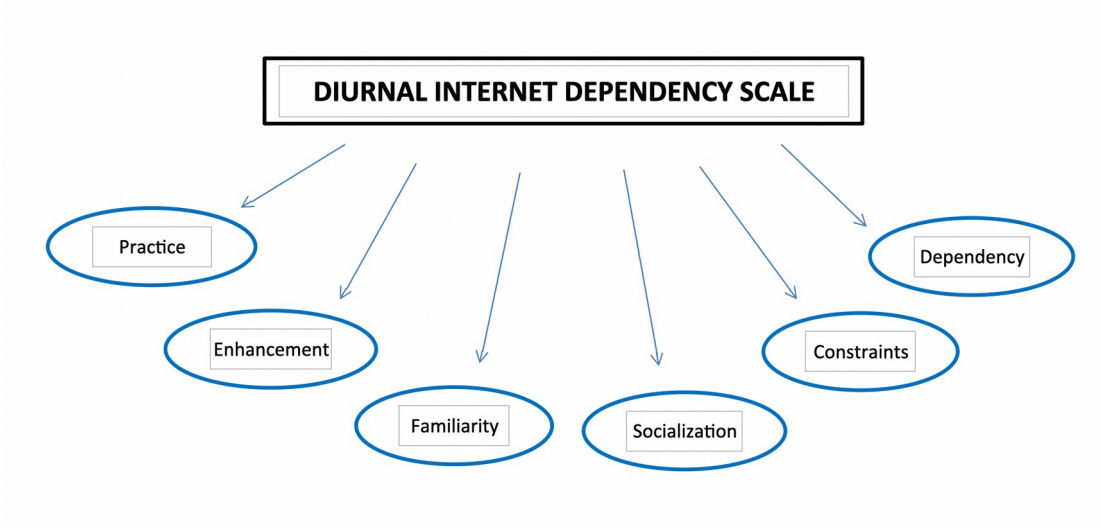
` Medium Reliability – 0.50 – 0.70

Low-level Reliability – 0.50 and below.

Cronbach's Alpha reliability measures the "internal consistency" and is the most widely used reliability test in the social and organizational sciences (Bonett & Wright, 2015). Table 3.8.1 shows that the internal consistency reliability is high.

Table 3.8.1 Reliability Statistics	
Cronbach's Alpha	N of Items
.835	32

Fig. 3.8.1 Diurnal Internet Dependency Scale Classification



The 30 items in this scale is classified into six groups and each group consists of 5 items where *Practice* is about the daily usage of internet, *Enhancement* sees how the internet helps or enables the users to function more efficiently, *Familiarity* looks at how well-acquainted a user is with the internet, *Socialization* looks at the societal and cultural relevance of internet, *Constraints* focus on the problems or difficulties caused by the internet and *Dependency* has more of theoretical component to look at individual's dependency on the internet. Fig. 3.8.1 shows the classification of Diurnal Internet Dependency Scale (DIDS). The survey questionnaire (DIDS) is distributed to the residents of the three districts mentioned, a total of 600 (200 from each region) is collected for analysis. The data analysis is done using SPSS version 20.

3.8.2 Focus Group Discussion

Focus Group Discussion (FGD) is conducted with three groups of digital natives and another three digital immigrants – six in total. Focus Group Discussion, also group interviewing based on structured, semi-structured or unstructured interviews (Boateng 2012, 54). Focus group discussion in media research is often used in conjunction with other types of data collection such as survey questionnaires as it is a catalyst for expression of individuals' latent opinion and formation of group consensus (Hansen et.al,1998) which can reveal various interpretations of a given topic from

complex personal experiences through an interaction moderated by the researcher. Participants of FGD are selected purposely though not necessarily representative and the researcher plays the role of moderator or facilitator which is peripheral in nature as he/she set the scene for the participants about the topic to be discussed (Rabiee, 2004). She also added that the ideal number of group member(s) for FGD participants could vary and mentioned Krueger (1994) who suggested three or four members for a simple research question but also six to eight by Krueger & Casey (2000) while she summarized the manageable number to be six to ten participants. Boateng (2012) also opined the disadvantage of this method to be its susceptibility towards an individual participant's response becoming the outcome of a study. The number focus groups in a study may depend on the aims and objectives of the research, where in an exploratory study, as little as two or three may be sufficient, but if FGD is a substantial method of a study, fewer than six groups would be difficult to justify (Hansen et. al 1998, 284).

From each of the selected districts, two groups are purposely selected for FGD, one group consisting of digital natives and one group of digital immigrants. The same procedure is followed in the other two districts accordingly. 12 FGDs were aimed initially, but since there are not much difference in the information shared by the participants, it was finalized to six as adding more groups could only mean getting more redundant or repetitive data. So, there are six FGDs in total – three digital natives and three digital immigrants. The participants are also asked to do self-evaluation or categorization on their stage(s) of adoption regarding the internet as in Diffusion of Innovation Theory.

3.8.2.1 Aizawl District

Aizawl district, the northern region of Mizoram was reached on 20th November 2022. Ms. Malsawmtluangi and Ms. Lalthakimi assisted the fieldwork in this district. The first FGD was held on 4th December 2022 at 6 p.m. with digital natives of Aizawl district – five residents of Dingdi Private Hostel located at Republic Hmar Veng. All the participants were students, one male and four female. The discussion lasted for 57 minutes 43 seconds. The participants commented that they learned many things from the discussion. Two of them consider themselves to be early majority and another three are late majority when it comes to internet adoption. The last FGD was held with digital immigrants of Aizawl and for better convenience, it was conducted online with students of Aizawl Theological College (ATC) Durtlang Aizawl, Mizoram on 16th December 2022 at 11:00 p.m. for 1 hour 37 minutes and 18 seconds. This was the longest duration as the participants were

quite well-prepared and have interesting opinions and arguments. Four participants showed up even though nine students have agreed to join. Among the four participants, three are early adopters and one belongs late majority.

3.8.2.2 Champhai District

Champhai district, the eastern region was entered on 6th December 2022. Mrs. Elizabeth V.L.Hruaitluangi took the role of a Research Assistant in this district. The second FGD was conducted that night at 7:00 p.m at Mr. F. Rokhuma's residence, Champhai Zotlang. for a duration of 1 hour 3 minutes and 8 seconds with digital immigrants from Champhai district who were alumni of Jawahar Navodaya Vidyalaya (JNV), Thenzawl Campus. All the six participants were 40 years and above, 3 males and 3 females, they reunited for this purpose after 20 years. From their self-evaluation 2 of them are early adopters, 3 are early majority and 1 belong to late majority in terms of internet adoption. The third FGD was held the next day, i.e 7th December 2022 with students of Govt. Champhai College at Computer Science Department lab. Five of the participants are 3rd Semester students from BCA, 4 from 1st Semester B.Com. All of them consider themselves to fall under the category of late majority regarding internet adoption.

3.8.2.3 Lunglei District

Lunglei district, the southern part was lastly visited on 10th January 2023. The research work was assisted by Ms. Lalremkimi in this region. The third FGD, with the digital natives of Lunglei Bazar Veng Youth was conducted on 11th January 2023 at 4:30 p.m at Mr. H.P Lalthlengliana's residence, Bazar Veng. The duration of the discussion was 45 minutes and 15 seconds. The five participants, mostly teenagers were 1st year UG and Class 12 students, four male ands 1 female. Most of them started using internet during the 2019 pandemic and can be considered as late majority among their peers. The fourth FGD with the digital immigrants of Lunglei was also held on 12th January 2024 at 12:00 p.m at Adventist English School, Bazar Veng. The discussion lasted for 47 minutes and 16 seconds. All the participants are teachers of this school – three males and four females. The oldest participant is 74 years old. Two of the participants are early majority adopters while another three are late majorities.

3.9 Semi-structured interviews

Semi-structured interviews are verbal exchange of information where a researcher or interviewer seeks information from another person by asking preset questions (Longhurst 2003, 103) and are

conducted in a conversational manner while focusing on specific themes (Raworth et. al, 2012) where participants have the liberty to bring up issues relevant to the topic. This type of interview allows the researcher to collect richer and even more sensitive data on the dynamics of the participants (Hansen et.al, 1998). While giving liberty to the informants as in unstructured format, the interviewer generally has a written list of questions (Berger 2018, 280) keeping the focus 'on track' as it prevents the accumulation of ambiguous data which is possible in unstructured interviews. The researcher usually begins the conversation with a few general questions while making room for additional questions that seek for clarification or more details about the participant's response (Naz, Gulab & Aslam, 2022). Semi-structured interviews were conducted with local and village level leaders such as Village Council Office bearers of the three districts and non-government organizations (NGO) leader at their headquarters offices in Aizawl. Concerned department or offices relevant to this study such as Telecommunication Department, ICT Department, Tribal Research Institute and Cyber Crime Department were visited where representatives were interviewed. Apart from these, government non-government (private) Internet Service Providers and Software Developers were also interviewed in order to write the history of internet in Mizoram (as seen in Chapter 1).

3.10 Research Objectives

In this study, the five research objectives are studied using the following methods:

1) **To find out the factors affecting internet dependency while examining the prevalence and severity of internet obsession in Mizoram.**

Diurnal Internet Dependency Scale (DIDS) is employed to look at the level of internet dependency among Mizo internet users.

2) **To identify problems/constraints caused by internet dependency among Mizo Digital Natives.**

This phenomenon is looked at using open ended questions at the end of the IDS SCALE and also with Focus Group Discussion among the Digital Natives.

3) **To map the difference in perceived communication behaviour before and after the existence of internet among Mizo Digital Immigrants.**

This objective is looked at using semi-structured interviews and Focus group Discussion among the Digital Immigrants.

4) **To study how digital technology as an extension of self has shaped the worldview of Mizo internet users.**

This concept is studied using the DIDS scale as well as open ended questions at the end and also semi-structured interviews and FGD among both Digital Natives and Digital Immigrants separately.

5) **To examine the influence of digital culture on Mizo society.**

Open-ended questions at the end of DIDS, interviews among NGO as well as government representatives and local community leaders along with FGD among both Digital Natives and Immigrants are used to look at this objective.

3.11 Hypothesis

Hypothesis is an intellectual supposition about what a researcher wants to find (Berger 2018, 404). In social science research, hypothesis can be defined as conjectural statements about certain phenomena or social facts, suggesting a relationship between two or more variables that are obtained from the research questions (Bezerra, Jalloh & Stevenson, 1998). Hypothesis formulation is a cognitive process involving the creation and handling of problem representation that contributes to the early and later stages of research (Carlson & Ward 1988, 32). In certain cases, the collected data may not confirm the given hypothesis, yet, they are still relevant for the concerned study (ibid). Hypothesis formulation is an important initial stage in research that helps the researcher in defining what the study intends to find and what kind of gaps exist in the literature (Hansen et. al 1889, 227). Based on an existing theory or data, the researcher frames one or more priori hypotheses and put them to test with a new set of data (Hartwick & Barki, 1994).

The population of the study is broadly divided into two categories viz. digital natives and digital immigrants, the determining factor as Question 14 and 15 (at Chapter 5, Table 5.1.6 xiv – xvii). The modification of the definition of digital natives and digital immigrants in Mizo is also mentioned in Chapter 2 (section 2.1.5). Therefore, the following null hypothesis is proposed:

> $\mathbf{H_0}$: There is no significant difference in the internet usage between the digital natives and digital immigrants.

However, based on the literature review – the previous study found, the following alternative hypothesis can also be considered:

> $\mathbf{H_A}$: There is a significant difference in the internet usage between the digital natives and digital immigrants.

Considering the six categories of the 30 items in the (DIDS) scale, we have the following null hypothesis:

H_1: There is no significant difference between the categories of the internet dependency scale.

Therefore, the diversity of the components of the six categories can also bring another assumption, giving us an alternative hypothesis, such as:

H_A: There is a significant difference between the categories of the internet dependency scale.

3.12 Target Group of the Study

The study population is broadly divided into digital natives and digital immigrants and as mentioned in Chapter 2, a modification is made in the original definition to be suitable for Mizoram context. Besides that, the internet dependency scale Q. 14 and 15 have options (a) and (b) which serve as the determining factors of digital natives and immigrants. As stated earlier, people born on or after 2000 are considered to be digital natives and the rest as digital immigrants. Since many of the participants and respondents are not aware of the exact time or year the internet came to Mizoram, their self-categorization may also be questionable.