ISSN 2395-731X

Mizoram Educational Journal

(A National Refereed Journal)

Vol. IX, Issue 2, June, 2023

ISSN 2395-731X

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Vol. IX, Issue 2, June, 2023

Annual Subscription

	Within India
Individuals	₹ 500
Institutions	₹ 500

Annual Subscription commences with January and ends with December every year.

Advertisement Tariff (For one issue)

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Published by Prof. Lalbiakdiki Hnamte on behalf of the Mizoram Educational Foundation. Postal Add: B-46, Muka Section, Mission Veng, Aizawl, Mizoram 796 001. Contact No. 9862344458; Email: diki233@gmail.com

Printed at:

Lois Bet
Print & Publication
Chanmari, Aizawl
Ph : 2349250 / 2349970

CONTENTS

From the Desk of the Chief Editor

The Editorial Board of Mizoram Educational Journal is happy to bring out the second issue of volume IX of its journal. This issue presents selected articles covering diverse issues of education.

The study conducted by Lalramdini Sailo and Nithiya Amirtham S explores the experiences of women in STEM research in Mizoram. It was conducted on a sample of 32 women pursuing doctoral research from various STEM disciplines in the state of Mizoram, India. The study reveals that the experiences of women in STEM research in Mizoram were quite positive. Family and society were contributing positively in women's entry into STEM disciplines at different levels of higher education among women in Mizoram. Traces of patriarchy influencing performances and experiences of female researchers were nevertheless visible. Women experience burden in STEM research due to responsibilities in household chores and taking care of the family members.

Lynda Zohmingliani, R. Zothanliana, C. Lalremmawii and Lalnuntluanga Colney studied science teachers of higher secondary schools in Mizoram by preparing demographic profiles covering gender, professional status, educational qualifications, age group and teaching experience. Data were collected from primary sources. The study reveals that government and private higher secondary schools in majority of the districts had higher percentage of male science teachers. Government schools had cent per cent trained science teachers while majority of private science teachers in higher secondary school were untrained. Unqualified teachers were still teaching in higher secondary schools of Mizoram. In terms of teaching experience, different districts exhibited the existence of science teachers with varying lengths of experience.

In their study on perceptions of students on access to higher education in Mizoram, Laldinsangi Renthlei and Nithiya Amirtham S focused on choice of educational institutions, methods of teaching, grievance services, infrastructural facilities, transportation facilities, student union and the difficulties faced in receiving scholarships. Their findings reveal that students mostly chose their educational institutions based on the distance between their homes and those institutions, whether or not they had friends there, and whether or not it satisfied their parents' wishes. Projectors were hardly used in teaching in the colleges and that all teachers employed the lecture technique as their main style of instruction. The students were unfamiliar with the idea of bridge courses. Grievance services, infrastructural facilities, and transportation facilities were not upto the mark. Student unions of some colleges exhibited equity in the representation of different socio-economic categories.

In their research article on study habits of higher secondary school students in Aizawl city, Ruby Remruatsanga and Vanlalruatfela Hlondo compared study habits of the students

in relation to gender, type of school, stream of study and parental occupation. It was found that there existed significant difference between students of government and private higher secondary schools in relation to their study habit. The difference was in favour of students of private higher secondary schools. However, no significant difference was found in the study habits of higher secondary school students with regards to gender, stream of study and parental occupation.

Job satisfaction among secondary school teachers of Aizawl, Mizoram was explored and studied by Lalsiamkima Hnamte, Shradha Bhandari and Lalruattluangi Chhakchhuak who employed a descriptive survey method for analysing the data from 100 secondary school teachers consisting of 55 female respondents and 45 male respondents. The findings of the study highlighted that there was no significant difference in job satisfaction among secondary school teachers with reference to gender. Factors that typically contribute to job satisfaction, such as sense of purpose, work-life balance, and professional growth opportunities, appeared to impact both genders equally in this context. The finding also indicated that there was no significant difference in job satisfaction among secondary school teachers with reference to the types of management. This finding is particularly interesting as it suggests that the management approach does not significantly shape or alter the satisfaction teachers derive from their jobs. It appears that other aspects, such as the inherent rewards of teaching, relationships with students, or personal motivation, may play a more substantial role in influencing job satisfaction.

The study undertaken by Lalramnghaki, Vanlaldinpuia and R. Lalhmingsangi on Dynamics of Parental Involvement: A Focus on High School Students in Aizawl reveal that majority of parents had average involvement in the education of their children studying in high schools. No significant differences were found in the parental involvement with regard to their gender and parent's educational qualification. The paper provides suggestions for enhancing parental involvement in their children's education.

Vanlalruati and Lalhmasai Chuaungo in their paper investigated on the accessibility of colleges' ICT resources for college students in Mizoram and personal ICT resources possessed by the students in terms of stream of studies. They found that most of the ICT resources available in the colleges were accessible to the students. The percentages of students reporting the accessibility of various ICT resources were highest among science students, followed by arts students and then by commerce students. While majority of college students in Mizoram had cell phone as personal ICT resource, majority of them did not have important personal ICT resources such as desktop computer, laptop computer, and printer. The percentages of students reporting their possession of personal ICT resources was highest among science students.

The paper on "Environmental Education on Deforestation" contributed by Lalrinmawia, Lalzarmawii and Lalmuanzuali examined the environmental degradation caused by deforestation in Mizoram through a review of various reports, while also proposing mitigation measures. The extent of forest fires and the area affected by fire in Mizoram were explored through the study. According to the paper, implementing educational campaigns is of

paramount importance in combating deforestation through raising awareness among the public. The paper stresses the importance of environmental education to prevent the exploitation of natural resources. Teachers play a vital role in educating and training students on the importance of environmental protection and conservation, instilling environmental awareness and a sense of responsibility.

The Editorial Board of Mizoram Educational Journal wishes that the articles published in this journal would bring benefits to the readers in one way or the other.

Lalhmasai Chuaungo
Chief Editor

Experiences of Women in STEM Research in Mizoram, India

Lalramdini Sailo*
Nithiya Amirtham S**

Abstract

The aim of the present study is to explore the experiences of women in STEM research in Mizoram. It aims to study the influence of socio-economic, cultural and familial factors among women in Mizoram pursuing STEM research. The empirical research includes a sample of 32 doctoral research women from various STEM disciplines in the state of Mizoram, India. The study reveals that the experiences of women in STEM research in Mizoram were indeed positive. The influence of family and society were contributing positively in women's entry into STEM disciplines at different levels of higher education among women in Mizoram. However, traces of patriarchy influencing performances and experiences of female researchers were nevertheless visible. The results show that women experience burden in STEM research due to responsibilities in household chores and taking care of the family members.

Keywords: *Higher Education, Mizoram, STEM, and Women*.

Introduction

The contribution of Science, Technology, Engineering and Mathematics (STEM) education is well recognised in global, national and regional development. Recent past has seen tremendous growth in enrolment in higher education across the countries and there is improvement in representations of different former underrepresented groups including women. However, STEM fields is still challenging for women. In Indian context every citizen has the right to education constitutionally. However, there are still certain cases where the existence of patrifocal influence in the decision of women's education is found (Subrahmanyan, 1995). The traditional societal gender roles continue to influence women's participation in information technology and engineering and neither contributes to the enhancement of political and socio-economic status of women, nor to the equal participation in the information technology sector (Patel & Parmentier, 2005). Changes in the socio-cultural and economic context of the society

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bring about changes in the relationship between gender and technology (Gupta, 2020). The present study attempts to understand women in STEM higher education in Mizoram.

Women in STEM Higher Education in India

In terms of enrollment, according to All India Survey on Higher Education (MHRD, 2020-2021), female enrollment exceeded male enrollment in science since 2018-2019while male enrollment is much higher in engineering and technology with above 70% in the last five years.The Enrolment in STEM (at U.G., P.G., M.Phil. and Ph.D. levels) is 94,69,022 out of which 53,74,237 (56.8%) are males and 40,94,785 (43.2%) females. A total of 55,48,809 students were enrolled in Science at UG, PG, M. Phil, Ph.D., in which females (53.1%) outnumber males. A total of 39,20,213 students were enrolled in Engineering and Technology at UG, PG, M. Phil and Ph.D., in which males (71%) outnumber females. In the field of Engineering and Technology, improvements in women enrollment were found in computer engineering, information technology and electronics engineering while male enrollment outnumbers female enrollment in mechanical engineering, Civil engineering and electrical engineering (Amirtham & Kumar, 2021). The enrolment of women in Science and Technology courses and occupations are increasing but not yet satisfactorily. The gendered norms and social stereotypes show impact on students in doctoral research in science and engineering (Gupta, 2007) and also economic conditions and influences of family are linked with gender related issues in India (Vindhya, 2007). The influence of socio-economic, cultural and familial factors of the society largely contributes to the gender gap and differences in experiences in STEM disciplines. Reasons for women falling out of STEM courses include familial decisions, economic factors, gender stereotyping, society, lack of role models and male dominated situations (Gupta, 2019). Isolation in the working environment due to lack of informal communication; conflict of gender role stereotyping between being feminine to being a scientist are often posing as career threats adding to the stress of women scientists. Dual role, which is the ability to manage and balance both their families and career is often required for women scientists to be considered successful, resulting in stress and exhaustion, where the same role is not expected from their male colleagues (Gupta and Sharma, 2002). Family structure, lack of mentoring and line experiences is the barriers for Indian professional women in their career advancement (Buddhapriya, 2009). Opposing to findings that a modest increase in the number of minorities will result in improved conditions, the minorities themselves must attain power in order to overcome resistance, which is the key to change (Etzkowitz et al, 1994).Improvements in women enrollment in science can be seen over the years in India while improvements in enrollment of women in the field of engineering and technology is still to be achieved. Economic conditions of the family, societal norms, educational environment, dual role of women, school teachings and mentoring can have strong impact on the choice of discipline for higher education.

STEM Higher Education in Mizoram and Representation of Women

Mizoram, meaning Land of the Mizo's is one among the 28 states in India, located on the north eastern part of the country. Mizo society has been patriarchal in nature since the

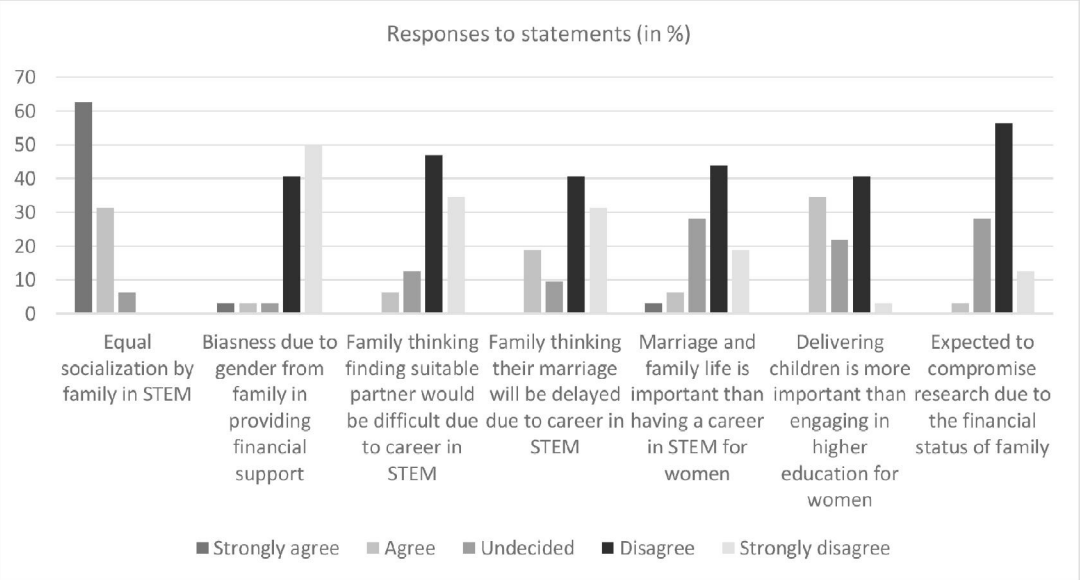
pre-colonial period and which continued after colonialisation; the introduction of Christianity brought in with it only some changes in its form and nature of patriarchy (Lalsangkimi,2016). Education in Mizoram was initiated by the British missionaries in 1894. The introduction of secondary education in 1945 was the beginning of science education in Mizoram. Science education began to gain its proper form since then, beginning with the divisions of science to life sciences and physical sciences. Science, Technology, Engineering and Mathematics (STEM) is an umbrella term used to group together different disciplines of science, technology, engineering and mathematics. Public higher educational institutions are more prevalent in the state of Mizoram. Undergraduate course for science educationwas first opened in 1973 at Pachhunga University College.Various central and state government institutions offer STEM higher education courses in Mizoram. There are presently six colleges offering science education at undergraduate level and two institutions offering undergraduate courses in Engineering in Mizoram. Postgraduate courses in STEM is currently offered at Mizoram University and National Institute of Technology, Mizoram. Doctor of philosophy courses in STEM are offered by Mizoram University and National Institute of Technology, Mizoram (MZU annual report, 2012-2022 & NIT portal).

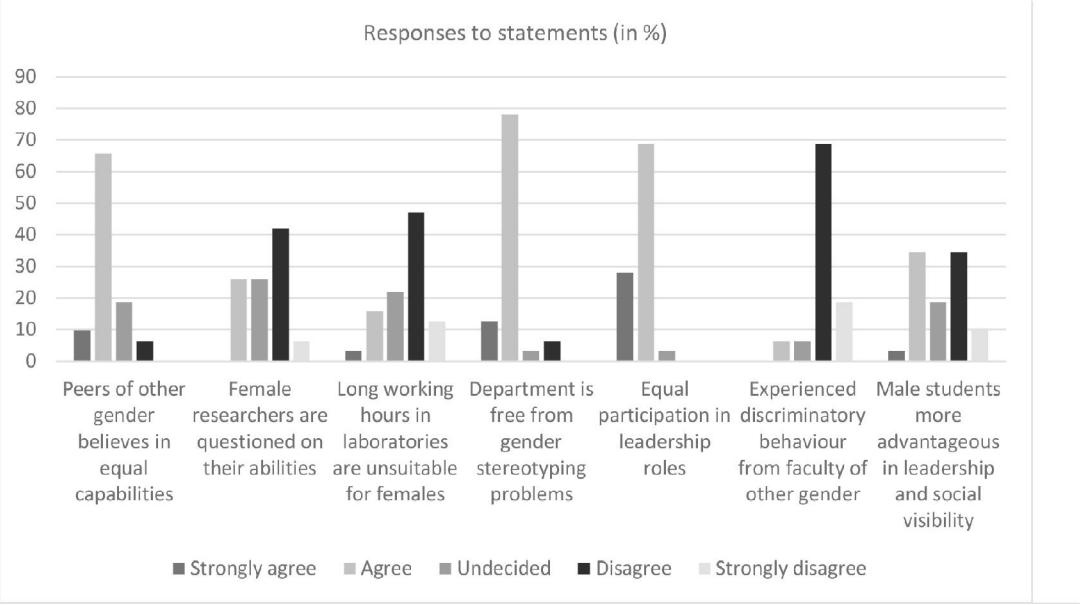
94.43% of population in Mizoram is under the scheduled tribe category of India (Ministry of Home Affairs, 2011).By 2011, Mizoram stood third in literacy ranking of states and union territories with a total literacy rate of 91.33% (Male- 93.35%; Female- 89.27%) (Directorate of economics and statistics, Government of Mizoram, 2022). With high percentage of literacy rate, all genders in Mizoram are encouraged to pursue education. Participation of all genders in higher education are also encouraged in all disciplines, still the differences persist especially in STEM disciplines. In a study conducted by the authors, enrollment of male postgraduate and doctoral research scholars outnumber female in STEM disciplines in Mizoram, while improvements were seen in female Ph.D. enrollment in life sciences between the years 2014-2019. Engineering and Technology was found to be more male dominated throughout in both postgraduate and Ph.D. courses. Hence, objective of the study is to explore the experiences of women in STEM research and also the influence of socio-economic, cultural and familial factors among women in STEM in Mizoram.

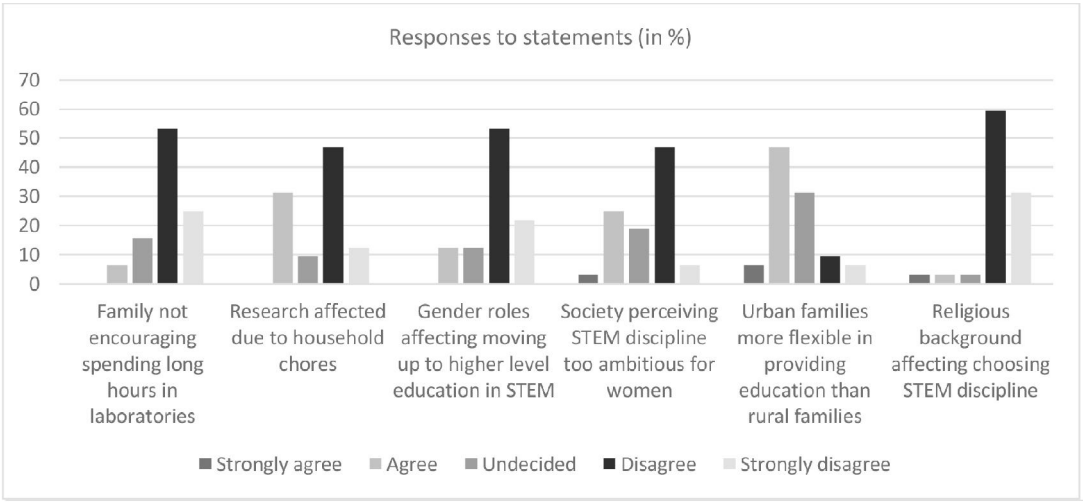
Methodology

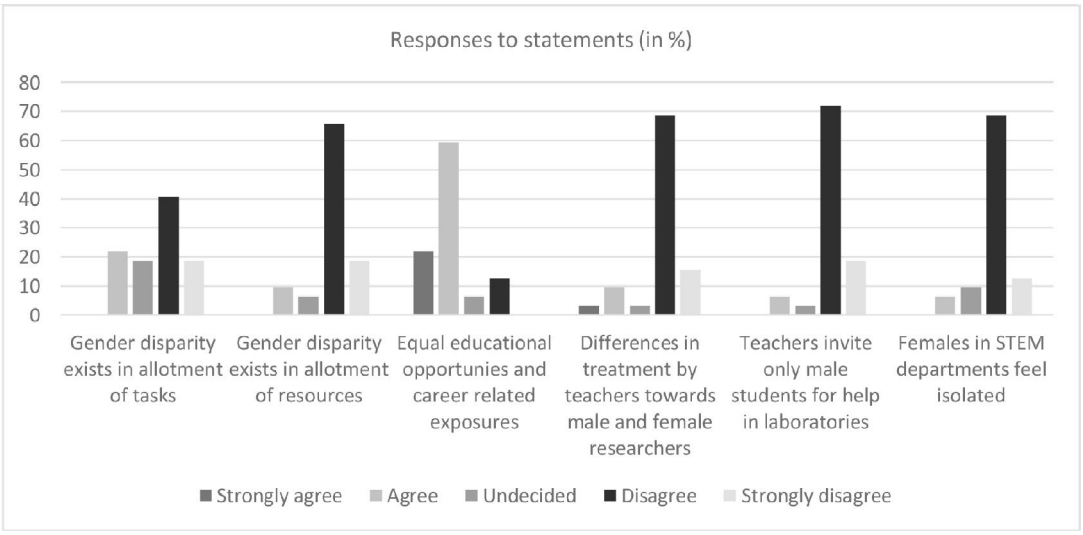
The empirical research includes a sample of 32 female doctoral researchers from various STEM disciplines from Mizoram University. Purposive sampling is used to select participants for the study. Respondents were selected from school of physical sciences, life sciences, earth science and natural resources management, and engineering and technology. Questionnaire prepared by the researcher is used for collecting the data. The Cronbach's alpha reliability of the questionnaire is 0.844 and the validity is 0.918. Five-point Likert scale ranging from strongly agree to strongly disagree was used to measure the response towards the given statements where strongly agree was scored as 5, agree as 4, undecided as 3, disagree as 2 and strongly disagree as 1. The questionnaire consists of 66 statements on three dimensions such as gender-role socialization, societal perception towards gender and socio-economic, cultural and familial factors.

Findings


Responses to statements (in %)
70
60
50
40
30
20
10
0
Equal socialization by family in STEM
Biasness due to gender from family in providing financial support
Family thinking finding suitable partner would be difficult due to career in STEM
Family thinking their marriage will be delayed due to career in STEM
Marriage and family life is important than having a career in STEM for women
Delivering children is more important than engaging in higher education for women
Expected to compromise research due to the financial status of family
Strongly agree
Agree
Undecided
Disagree
Strongly disagree


Responses to statements (in %)
90
80
70
60
50
40
30
20
10
0
Peers of other gender believes in equal capabilities
Female researchers are questioned on their abilities
Long working hours in laboratories are unsuitable for females
Department is free from gender stereotyping problems
Equal participation in leadership roles
Experienced discriminatory behaviour from faculty of other gender
Male students more advantageous in leadership and social visibility
Strongly agree
Agree
Undecided
Disagree
Strongly disagree





Influence of Socio-Economic, Cultural and Familial Factors

In terms of being equally socialize with male siblings for STEM discipline, 62.5% of the respondents 'strongly agree' and 31.3% 'agree' on being equally socialize with male siblings for STEM discipline by their family. 78.1% of the respondents agree and strongly agree to a statement, **"**Male children were given toys trucks and cars and females were given dolls and kitchen sets during my childhood for play" while 6.3% 'disagree' with 15.6% respond to 'undecided'. When respondents were asked whether they experience any biasness from their family in financial support of male and female children in studying STEM higher education, a striking 90.6% responds to experiencing no bias treatment from their family while pursuing higher level STEM courses.

Majority of the respondent's fathers completed their undergraduation while only 12.5% of the respondent's mothers were undergraduate. 84.4% of the mothers and 62.5% of the fathers have no background in tertiary level STEM education. Among the 29 unmarried respondents, 81.3% respond that their families do not think getting a suitable life partner would be difficult for the researcher if they choose a career in STEM. When asked whether their families think their marriage will be delayed if they choose a career in STEM, 71.9% respond that their family did not think that way. In response to the statement "Marriage and family life is important than having a career in STEM for women in my society", 62.6% respond to 'disagree' and 'strongly disagree', 28.1% respond to 'undecided' while 9.4% agrees and strongly agreed to the statement.34.4% of the respondents agreed that in their society, the ability of women to deliver children is considered a greater contribution than engaging in higher education in STEM while 43.7% disagrees to the statement.

The monthly income of the families of 59.4% of the respondents was found to be more than Rs.50,000. It was found that 68.8% of the subjects were not expected to compromise their research due to the financial status of their family. Only two respondent's family have a problem with them staying long hours in the laboratory. 31.3% agree that their performance in research is affected due to their household chores while 59.4% respondents are not affected by their household chores. Among the respondents, 53.1% do not think that moving on to higher level in education would be difficult due to gender roles in the society.

28 respondents hail from Mizoram, while 4 respondents were from other north-eastern states of Indiapursuing research in Mizoram. 28.1% of the respondents agree and strongly agree to the fact that their society perceives higher education and career in STEM disciplines too ambitious for women. Another 53.2% disagree to the statement. 53.2% respondents agree that families living in urban areas are much flexible in providing educational opportunities for their children in STEM disciplines than rural areas irrespective of gender. A strong 90.6% respond that the religious backgrounds of their families do not pose as hurdles for them to choose STEM discipline in higher education due to their gender.

Experiences in Educational Institution

With regard to equal allotment of tasks in the Department, 59.4% of the respondents agree to having equal tasks with male researchers. In response to equal allotment of resources, 84.4% respondents agree to having equal allotment of resources with the male researchers. In the equal provision of higher educational and career related exposures and opportunities inside and outside the campus to male and female researchers, 81.3% respond to agreeing to equal provisions. Questions were also raised as to whether professors provide equal treatment to both male and female researchers and whether there was gender discrimination from the professors in asking for assistance in the laboratory. The findings reveal only 12.5% of the respondents agreeing to unequal treatment of male and female researchers by the professors and a small 6.3% respondents agreeing to the existence of gender discrimination from the professors in asking for assistance in the laboratory.

A small percentage of 9.4 respondents respond to feeling isolated due to their gender in the department while 68.8% 'disagrees' and 12.5% 'strongly disagrees' to female researchers being isolated in the department. In response to a statement, "My peers of other gender believe that men and women have equal capabilities in STEM research", 75% respondents agree and strongly agree to the statement. While majority were found to not being questioned due to their gender on their abilities in STEM research, one fourth of the respondents admit to their abilities being questioned due to their gender. No female researchers thought that working long hours in the laboratory is unsuitable for females. 78.1% responded that their department is free from gender stereotyping problems and all respondents agree that they can equally participate in leadership roles along with male researchers. 87.6% have not experienced discriminatory behavior due to gender from faculty of other gender in the department. But when respondents were asked to rate their departments in terms of gender sensitivity approach, 12.5 % gave a 'satisfactory' rating, 59.4% gave a 'less than satisfactory' rating and 21.8% gave a 'poor' rating. In the opinion relating to male researchers being more advantageous in STEM in terms of leadership and social visibility, responses quite differ. 37.6% agrees to male researchers being more advantageous, 43.3 disagree while 18.8% responded 'undecided'.

Discussion

With regards to receiving financial assistance and support from their family, women in STEM research do not experience biasness between male and female children. The finding in this regard is quite notable considering the trend of male child preference in India as a whole. Majority of the respondent's parents were educated though their levels of degrees differed. However, only a few of them have background in STEM disciplines. In spite of parents having less experience in STEM disciplines, it was found that male and female children in their families are equally encouraged to select STEM disciplines in higher education. In line to this, the findings also suggest that female researchers socialize equally for STEM discipline with their male siblings. It was found that while the female researchers perceive themselves as being equally socialized in their family, they were victims of gender stereotyping in their childhood plays in the form of playsets made available to them.

In a tribal Mizo society, women are easily referred to as 'Nula senior' (Nula-lady, Senior-old) if they remain unmarried after 30 years of age. If a woman desires to complete her Ph.D. course before getting married, she has a good chance of being referred to as 'Nula senior' which is kind of an insulting reference. The study however found that 71.9% of the respondent's families do not think their marriage will be delayed due to a career in STEM. 81.3% of the respondent's families also do not consider getting a suitable life partner for the female researcher would be difficult due to a career in STEM. The dual responsibilities, i.e., family life and career responsibilities, often pose a dilemma among women in higher studies. The studies found that majority of female researchers who have entered higher studies do not consider marriage and family life more important than having a career in STEM.

Female STEM researchers in Mizoram are not expected to compromise their research due to the financial status of their family. Though semester fees in each department vary, it

can be taken as an average of Rs.7,000 per semester. Majority of female STEM researchers were also found to have received fellowships which vary from Rs 8,000- Rs 37,000 per month from the university or other central agencies. With regard to spending late hours in the laboratories, it was found that most parents of women researchers in Mizoram do not have a problem with their child staying long hours in the laboratory. Mizos have been known to be a patriarchal society since the earliest times. Before the age of education and technology, men were responsible for earning the livelihood of their family while women were in charge of household chores. This practice is still found to be prevalent in modern Mizo society. Women are expected to take care of all the household chores whether or not they contribute in earning to their family's livelihood.

The study reveals that the responsibility of female researchers in their household chores was found to take a toll on the research performance of 31.3% respondents. But female researchers are rather challenged by gender roles in the society and do not believe that moving on to higher level in education would be difficult for women due to ascribed gender roles. Mizo society has always perceived STEM discipline as a more dominant subject when compared to other disciplines such as arts and humanities. As a result, the authors hypothesized that the society of the respondents would consider research and career in STEM discipline to be too ambitious for women. The results however show that 53% of the respondents do not feel that their society considered it to be too ambitious for women. Findings also reveal that majority of the respondents do not feel that the expectation of the society for women to deliver children is considered a greater contribution than engaging in higher education in STEM. However, the existence of such beliefs was still seen to exist in certain areas of the society.

It is also to be noted that while majority of respondents were from Mizoram, few of them were from other north eastern states of India. While private institutions attract more students at school level in Mizoram, public institutions are more prevalent at higher studies. The availability and quality of educational institutions in Mizoram between rural and urban areas quite differ. This is relevant particularly to STEM higher education. Educational institutions offering STEM courses at U.G, P.G, and Ph.D. level are only found in Aizawl city and four other towns of Mizoram. The study found that families living in urban areas are believed to be more flexible in providing educational opportunities for their children in STEM disciplines than rural areas irrespective of gender. Religion wise, 90.6% of the respondents follow Christianity, 3.1% follow Hinduism and 6.3% responds under 'Others'. Findings reveal that the religious background of vast majority of female STEM researchers are not posing treats or hurdle to their choice of engaging in STEM research.

Male and female STEM researchers in Mizoram are given equal educational and career related exposures and opportunities inside and outside of the campus based on the findings. The findings also suggest that there is equal allotment of tasks and resources in the department among the male and female STEM researchers in Mizoram. According to a study conducted by Gupta and Sharma (2003), some teachers show favor to male students while they discriminate against women students. As opposed to this finding, the authors found that

majority of the female STEM researchers agree to the provision of equal treatment to male and female by professors and being called for assistance by their professors in the laboratory irrespective of their gender. Existence of discriminatory behaviour due to gender from faculty of other gender was also not found among women researchers in Mizoram. While many Indian researches reveal that women feel isolated in their working environment, 81.3% disagree to women in STEM feeling isolated in the departments, indicating a healthy informal environment among research scholars in STEM departments in Mizoram.

It was also found that women researchers in Mizoram were feeling rather safe when working long hours in the science laboratories. Majority of the respondent's other gender peers believe that men and women have equal capabilities indicating an equal treatment by male peers in their research related works. Most women in STEM research in Mizoram also believe that their department is free of gender stereotyping problems and that female researchers can equally participate in leadership roles with male researchers. While females in STEM research are not being degraded and ridiculed in their departments, the problem of female researchers being questioned on their abilities due to their gender was found to exist among some departments. While majority of the respondents agree to male and female researchers having equal educational and career related exposures, it was found that quite a number of female researchers perceive male peers as being more advantageous in leadership and social visibility. While most of the questions in terms of gender equality in various spheres were given positive responses, the result took a turn when respondents rate their departments in terms of gender sensitivity approach. It was found that more than half of the respondents were not satisfied with their departments in terms of gender sensitivity approach.

Conclusion

Studies on women in STEM were conducted only since the 1970s in India. A study on women scientists in Mizoram has recently emerged as a result of increasing awareness and interest in women participation in higher education. The study reveals that the experiences of women in STEM research in Mizoram were indeed positive. However, traces of patriarchy influencing performances and experiences of female researchers were nevertheless visible. It was found that there still exist women who are experiencing burden in their research due to responsibilities in household chores and taking care of the family members. While the nature of problems faced by women in the informal environment of doctoral level science education is more or less similar to the problems faced by women in the West, the specific type of discrimination is shaped by one's culture (Gupta 2007). Compared to the other gender studies conducted on STEM field in India, the experiences of women researchers in Mizoram were found to be more satisfactory and unbiased. The author concludes that based on the findings, there is still need for more policy initiatives in providing supportive environment to women in higher education and changing the perceptions of the society towards women to bring gender equity in STEM higher education.

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Science Teachers of Higher Secondary Schools in Mizoram: Demographic Profiles

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Abstract

Science plays a significant role in our everyday life. It has massive impacts and makes our daily lives easier and manageable. Therefore, it deserves to have a special place in our general education. Since formal education necessitates the service of teachers, it is also important to have good human resource in this field. Especially at the higher secondary school level, a good supply of science teachers is a must in order to prevent the structure of science education from collapsing. The present study aims to have a profile of science teachers of higher secondary schools in Mizoram in terms of gender, professional status, educational qualifications, age group and teaching experience. Data was collected from primary sources and findings have been analysed carefully in a qualitative manner.In terms of gender, majority of districts had higher percentage of male science teachers in both government and private higher secondary schools level of Mizoram. Government school had cent per cent trained science teachers while majority of private science teachers in higher secondary school were untrained. Regarding the educational qualifications of science teachers, unqualified teachers are still teaching in higher secondary schools of Mizoram. In terms of their age group, government schools teachers had higher percentage in lower age group while private school teachers had higher percentage in higher age group. In terms of teaching experience, different districts exhibited the existence of science teachers with varying lengths of experience.

Keywords: *Science, Teachers, Higher secondary schools, Mizoram, Biology, Chemistry, Physics, Mathematics.*

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Introduction

Science gives knowledge and promotes problem solving skills. It boosts the critical thinking ability of a person and also cultivates a passion for learning to those who are learning. Science education uplifts many disciplines in various fields and individual lives. It also holds the key to the success or failure for the future. No one can deny the importance of science education nowadays whether we like it or not.

In Mizoram, science education at higher secondary level is divided into Biology, Physics, Chemistry and Mathematics. Therefore any profile study should encompass all these subjects.

Rationale of the study

Science plays a vital role in our lives. Since the inception of the world, the importance of the activities and utility of science subject also began. No one can downgrade the importance of science education in the schools and our everyday lives. Teachers and students need to know the importance of science subject in our lives. Even parents need to know the impact of science education in the world. We need to encourage students to develop interest in science subject for their future. If we have too manystudentsfrom backgroundsother than Science, development could be chaotic. A study of the profile of science teachers at secondary school level is important because it will enable us to understand the present status of human resourcesavailable. It will also enable us to predict to a certain extent the situation of human resources in the near future.

Objectives of the study

1. To examine the district wise profile of science teachers at higher secondary schools in Mizoram in terms of Gender.
2. To assess the district wise profile of science teachers at higher secondary schools in Mizoram in terms of professional training.
3. To study the district wise profile of science teachers at higher secondary schools in Mizoram in terms of educational qualification.
4. To evaluate the district wise profile of science teachers at higher secondary schools in Mizoram in terms of age group.
5. To measure the district wise profile of science teachers at higher secondary schools in Mizoram in terms of teaching experience.

Population and Sample

The population consists of 219 science teachers teaching in eight districts of Mizoram. No sampling was done and the whole population was studied for a most reliable data.

Statistical treatment of data

For analysis of the collected data, descriptive statistics like percentages are used.

Analysis and interpretation of data

For identifying the profiles of science teachers at higher secondary level, data collection was done fromeightdistricts of Mizoram.

Data tabulated and arranged using percentage were qualitatively analysed to give a clear meaning to each area of people studied.

Analysis and Interpretation of data

Different data collected from various districts in Mizoram for science teachers profile in secondary schools were analysed and interpreted so that each objective would be met in the following ways:-

1. To examine the district wise profile of science teachers at higher secondary schools in Mizoram in terms of Gender.

Table-1

Profile of HSS Science Teachers in terms of Gender

DISTRICTS	GOVERNMENT				TOTAL	PRIVATE				TOTAL	GRAND TOTAL
	MALE		FEMALE			MALE		FEMALE			
	No.	%	No.	%		No.	%	No.	%		
Aizawl	27	57.45%	20	42.55%	**47**	57	75%	19	25%	**76**	**123**
Champhai	5	62.50%	3	37.50%	**8**	2	66.67%	1	33.33%	**3**	**11**
Kolasib	0		0		**0**	5	38.46%	8	61.54%	**13**	**13**
Lawngtlai	2	40%	3	60%	**5**	3	75%	1	25%	**4**	**9**
Lunglei	4	50%	4	50%	**8**	19	70.37%	8	29.63%	**27**	**35**
Mamit	3	60%	2	40%	**5**	0	0.00%	0	0.00%	**0**	**5**
Siaha	3	50%	3	50%	**6**	2	66.67%	1	33.33%	**3**	**9**
Serchhip	4	66.67%	2	33.33%	**6**	8	100%	0	0.00%	**8**	**14**
TOTAL	48	56.48%	37	43.52%	**85**	96	71.64%	38	28.36%	**134**	**219**

Source : Field Survey

As seen in table-1, Aizawl district had 57.45% male and 42.55% female science teachers in government secondary schools whereas there were 75% male and 25% female science teachers in private higher secondary schools. 62.50% male and 37.50% female in government and 66.67% male and 33.33% female science teachers in Champhai district. Kolasib district

had science teachers in private schools that is 38.46% male and 61.54% female teachers. Lawngtlai district had 40% male and 60% female in government and 75% male and 25% female science teachers in higher secondary schools. Lunglei district had both 50% male and female science teachers in government and 70.37% male and 29.63% female science teachers in private higher secondary schools. 60% male and 40% female in government schools are only found from Mamit district. Siaha district had both 50% in terms of gender in government schools and 66.67% male and 33.33% female science teachers in private higher secondary schools. Serchhip district also had 66.67% male and 33.33% female science teachers in government and 100% male teachers in private higher secondary schools.

2. To assess the district wise profile of science teachers at higher secondary schools in Mizoram in terms of professional training.

Table-2

Profile of HSS Science Teachers in terms of Professional Training

DISTRICTS	GOVERNMENT				TOTAL	PRIVATE				TOTAL	GRAND TOTAL
	Trained		Untrained			Trained		Untrained			
	No.	%	No.	%		No.	%	No.	%		
Aizawl	47	100%	0	0	**47**	19	25%	57	75%	**76**	**123**
Champhai	8	100%	0	0	**8**	0	0	3	100%	**3**	**11**
Kolasib	0	0.00%	0	0	**0**	13	100%	0	0	**13**	**13**
Lawngtlai	5	100%	0	0	**5**	1	25%	3	75%	**4**	**9**
Lunglei	8	100%	0	0	**8**	20	74.07%	7	25.93%	**27**	**35**
Mamit	5	100%	0	0	**5**	0	0	0	0	**0**	**5**
Siaha	6	100%	0	0	**6**	2	66.67%	1	33.33%	**3**	**9**
Serchhip	6	100%	0	0	**6**	8	100%	0	0	**8**	**14**
TOTAL	85	100%	0	0	**85**	63	47.01%	71	52.99%	**134**	**219**

Source : Field Survey

Table-2 explains the profile of science teachers in higher secondary schools of Mizoram in terms of professional trainingand in district wise manner. Aizawl district had 100% trained teachers in government schools while it had 25% trained and 75% untrained science teachers in private schools at higher secondary level. Champhai district had 100% trained science teachers in government schools and 100% untrained teachers in private schools. Kolasib district had only private science teachersi.e 100% trained science teachers in the private schools. 100% trained teachers in government schools whereas 25% trained in government

schools and 75% untrained science teachers inprivate higher secondary schools of Mizoram. Also 100% trained in government and 74.07% trained and 25.93% untrained science teachers in private higher secondary schools. Only government higher secondary school was found in Mamit district and they had 100% trained teachers in science subject. 100% trained teachers in government and 66.67% trained and 33.33% untrained science teachers in higher secondary schools of Siaha district. Serchhip district also had 100% trained teachers in government and private schools at higher secondary level.

3. To study the district wise profile of science teachers at higher secondary schools in Mizoram in terms of educational qualification.

Table-3

Profile of HSS Science Teachers in terms of Educational Qualifications

Ednl. Qlfcts.	Aizawl		Champhai		Kolasib		Lawngtlai		Lunglei		Mamit		Siaha		Serchhip		Total	
	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P
M.Sc Physics	11 (55%)	17 (51.52%	2 (10%)	1 (3.03%)	0	3 (9.09%)	1 (5%)	1 (3.03%)	2 (10%)	8 (24.24%	1 (5%)	0	2 (10%)	1 (3.03%)	1 (5%)	2 (6.06%)	20 (100%)	33 (100%)
M.Sc Chemistr	9 (45%)	18 (64.29%	2 (10%)	1 (3.57%)	0	3 (10.72%	1 (5%)	1 (3.57%)	3 (15%)	3 (10.71%	1 (5%)	0	2 (10%)	1 (3.57%)	2 (10%)	1 (3.57%)	20 (100%)	28 (100%)
M.Sc Maths	13 (61.90%	19 (63.33%	2 (9.53%)	0	0	3 (10%)	1 (4.76%)	1z (3.34%)	2 (9.52%)	5 (16.66%	1 (4.76%)	0	0	0	2 (9.53%)	2 (6.67%)	21 (100%)	30 (100%)
M.Sc Biochem	2 (100%)	4 (100%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
M.Sc Botany	7 (58.34%	10 (66.67%	1 (8.34%)	1 (6.67%)	0	2 (13.33%	1 (8.33%)	0	0	2 (13.33%	1 (8.33%)	0	1 (8.33%)	0	1 (8.33%)	0	12 (100%)	15 (100%)
M.Sc Zoology	4 (57.15%	5 (41.66%	1 (14.29%	0	0	2 (16.66%			0	3 (25%)	1 (14.28%	0	1 (14.28%	1 (8.34%)	0	1 (8.34%)	7 (100%)	12 (100%)
M.Sc-Ph.D	1 (100%)	1 (50%)													0	1 (50%)	1 (100%)	2 (100%)
M.Sc-Ph.D	0	2 (100%)															0	2 (100%)
M.Sc Geology									1 (100%)	1 (100%)							1 (100%)	1 (100%)
M.Sc EVS									0	1 (100%)							0	1 (100%)
M.Sc-Ph.D															0	1 (100%)	0	1 (100%)

TOTAL	B.Sc General	B.Sc Chemistr	B.Sc Maths	M.Sc Genetics	M.Sc Biotechn
47 (55.30%					
76 (56.71%					
8 (9.41%)					
3 (2.23%)					
0					
13 (9.70%)					
5 (5.88%)				0	1 (100%)
4 (2.98%)				1 (100%)	0
8 (9.41%)	0	0	0		
27 (20.14%	1 (100%)	1 (100%)	2 (100%)		
5 (5.88%)					
0					
6 (7.06%)					
3 (2.23%)					
6 (7.06%)					
8 (5.97%)					
85 (100%)	0	0	0	0	1 (100%)
134 (100%)	1 (100%)	1 (100%)	2 (100%)	1 (100%)	0

Source : Field Survey

As mentioned in table-3, Aizawl district had the highest numbers of science teachers who had degrees in M.Sc (Physics) at both government and private higher secondary schools while no M.Sc (Physics) teachers were found in Kolasib government and Mamit private schools. Aizawl district had M.Sc (Biochemistry) degree holder teachers in both government and private higher secondary schools. M.Sc (botany) degree holder teachers were not found from private secondary schools in Lawngtlai, Mamit, Siaha and Serchhip districts meanwhile private science teachers in Aizawl district had the highest percentages of teachers with this degree. Aizawl district also had the highest percentages of science teachers who held degrees in M.Sc (Zoology) at government schools and no twacher held this degree in Lawngtlai district, Lunglei government school, Mamit private school, Serchhip government school, Champhai private school and Kolasib government school. Science teachers who had degree in M.Sc (Botany, Ph.D) in government was only found in Aizawl district (i.e. 100%) and both 50% teachers were found from Aizawl private and Serchhip private higher secondary schools. Only 1 each M.Sc (Geology) holder teachers were only found from Lunglei district in both government and private higher secondary schools. Lunglei private secondary schools had only 1 M.Sc (Environmental Studies) holder teacher among all 6 districts of Mizoram. Serchhip private secondary school had only 1 teacher who had a degree in M.Sc (Chemistry, Ph.D) at higher secondary level. Science teachers who had degrees in M.Sc (Biochemistry) was only found from government school in Lawngtlai district. Science teacher who had degree in M.Sc (Genetics) was found only from private school in Lawngtlai district. B.Sc (mathematics), B.Sc (Chemistry) and B.Sc (General) degree holder science teachers were only found from private schools in Lunglei district within Mizoram.

4. To evaluate the district wise profile of science teachers at higher secondary schools in Mizoram in terms of age group.

Table-4

Profile of HSS Science Teachers in terms of Age Group

Age Group	Aizawl		Champhai		Kolasib		Lawngtlai		Lunglei		Mamit		Siaha		Serchhip		Total	
	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P
20-24	0	0	0	0	0	0	0	0	0	1 (100%)	1 (100%)	0	0	0	0	0	1 (100%)	1 (100%)
25-29	3 (33.33%)	6 (25%)	1 (11.11%)	3 (12.50%)	0	3 (12.50%)	2 (22.23%)	4 (16.66%)	0	7 (29.17%)	3 (33.33%)	0	0	1 (4.17%)	0	0	9 (100%)	24 (100%)
30-34	11 (57.89%)	28 (84.85%)	0	0	0	2 (6.06%)	2 (10.53%)	0	3 (15.78%)	3 (9.09%)	1 (5.27%)	0	0	0	2 (10.53%)	0	19 (100%)	33 (100%)
35-39	9 (56.25%)	18 (72%)	2 (12.50%)	0	0	1 (4%)	1 (6.25%)	0	1 (6.25%)	4 (16%)			1 (6.25%)	2 (8%)	2 (12.50%)	0	16 (100%)	25 (100%)
40-44	15 (65.22%)	9 (50%)	3 (13.05%)	0	0	3 (16.66%)			2 (8.69%)	4 (22.23%)			2 (8.69%)	0	1 (4.35%)	2 (11.11%)	23 (100%)	18 (100%)
45-49	8 (61.54%)	11 (55%)	2 (15.39%)	0	0	1 (5%)			1 (7.69%)	7 (35%)			1 (7.69%)	0	1 (7.69%)	1 (5%)	13 (100%)	20 (100%)
50-54	1 (25%)	2 (25%)			0	1 (12.50%)			1 (25%)	1 (12.50%)			2 (50%)	0	0	4 (50%)	4 (100%)	8 (100%)
55-59	0	2 (40%)			0	2 (40%)									0	1 (20%)	0	5 (100%)
Total	47 (55.30%)	76 (56.72%)	8 (9.42%)	3 (2.24%)	0	13 (9.70%)	5 (5.88%)	4 (2.98%)	8 (9.42%)	27 (20.14%)	5 (5.88%)	0	6 (7.05%)	3 (2.24%)	6 (7.05%)	8 (5.98%)	85 (100%)	134 (100%)

Source : Field Survey

Table-4 mentions the profile of science teachers in the higher secondary schools of Mizoram against their age groupsin district wise manner. In the age group of 20-24 years Lunglei private schools and Mamit government schools only had science teachers at higher secondary levels. In the 25-29 years age group, government schools in Aizawl and Mamit districts had the highest percentages while zero percentage was found from government schools in Kolasib, Lunglei, Siaha and Serchhip districts; zero percentage was also found from private schools in Mamit and Serchhip districts at higher secondary school levels. Highest percentage was found from private schools in Aizawl district and lowest percentage was found from

Champhai district in both government and private schools, government Kolasib district, private Lawngtlai district, private Mamit district, Siaha district both government and private schools and private Serchhip district in the age group of 30-34 years of age at higher secondary school level in science teachers of Mizoram. Aizawl private schools had the highest percentage in the 35-39 years age group, while zero percentage was found from Champhai private school, governmentschoolKolasib, private schoolLawngtlai, Mamit district and private school in Serchhip district at higher secondary levels in Mizoram. In the 40-44 years age group government schools in Aizawl district had the highest percentage and the lowest percentage was found from private school Champhai, government schoolKolasib, Lawngtlai district both government and private school, Mamit district both private and government schools and private school in Siaha district science teachers in higher secondary level of Mizoram. Government school in Aizawl district had the highest percentage of science teachers in 45-49 age group while no science teachers were found from Champhai private schools, Kolasib government school, Lawngtlai district, Mamit district both private and government schools and Siaha private school at higher secondary level. Within the age group of 50-54 years science teachers who had the highest percentage were found from government Siaha and private Serchhip districts while zero percentage was found from Champhai district both private and government schools, Lawngtlai district both private and government schools, Mamit district both private and government schools and private Siaha school and government Serchhip school in higher secondary schools of Mizoram. Science teachers are mostly between the age group of 55-59 years was 40% in private schools at Aizawl and Kolasib districts while 20% was found from Serchhip private secondary school and the rest of the schools/districts had no teachers in higher secondary schools of Mizoram.

5. To measure the district wise profile of science teachers at higher secondary schools in Mizoram in terms of teaching experience.

Table-5

Profile of HSS Science Teachers in terms of Teaching Experience

Teaching Experience	Aizawl		Champhai		Kolasib		Lawngtlai		Lunglei		Mamit		Siaha		Serchhip		Total	
	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P
1-5	12 (52.18%)	23 (54.77%)	1 (4.35%)	3 (7.15%)	0	4 (9.52%)	5 (21.74%)	2 (4.76%)	0	9 (21.42%)	5 (21.73%)	0	0	1 (2.38%)	0	0	23 (100%)	42 (100%)
6-10	11 (64.70%)	28 (73.68%)	0	0	0	3 (7.89%)	0	2 (5.27%)	3 (17.64%)	4 (10.52%)			1 (5.89%)	1 (2.64%)	2 (11.77%)	0	17 (100%)	38 (100%)
11-15	8 (47.06%)	12 (60%)	4 (23.53%)	0	0	2 (10%)			2 (11.76%)	5 (25%)			0	0	3 (17.65%)	1 (5%)	17 (100%)	20 (100%)

16-20	13 (61.90%)	4 (44.45%)	3 (14.28%)	0	0	1 (11.11%)			3 (14.29%)	2 (22.22%)			2 (9.53%)	1 (11.11%)	0	1 (11.11%)	21 (100%)	9 (100%)
21-25	3 (50%)	7 (36.84%)			0	1 (5.26%)			0	6 (31.58%)			2 (33.34%)	0	1 (16.66%)	5 (26.32%)	6 (100%)	19 (100%)
26-30	0	2 (33.33%)			0	2 (33.33%)			0	1 (16.67%)			1 (100%)	0	0	1 (16.67%)	1 (100%)	6 (100%)
Total	47 (55.30%)	76 (56.72%)	8 (9.41%)	3 (2.24%)	0	13 (9.70%)	5 (5.88%)	4 (2.99%)	8 (9.41%)	27 (20.15%)	5 (5.88%)	0	6 (7.06%)	3 2.23%)	6 (7.06%)	8 (5.97%)	85 (100%)	134 (100%)

Source : Field Survey

Table-5 analyses the profile of science teachers in higher secondary schools of Mizoram in terms of teaching experience in district wise manner. Private school Aizawl district had the highest percentage in 1-5 years of teaching experience and zero percentage was found from government Kolasib school, government Lunglei school, private Mamit school, government Siaha school and Serchhip district at higher secondary schools of Mizoram. Between 6-10 years of teaching experience, Aizawl district private school had highest percentage while lowest percentage (i.e. 0.00%) were found from Champhai district, government Kolasib district, government Lawngtlai district, Mamit district and private school in Serchhip district. Private schools in Aizawl district had highest percentage in 11-15 years of teaching experience and no one was found from Champhai district in private school, Kolasib district in government school, Lawngtlai district, Mamit district and Siaha district. Government schools in Aizawl district had highest percentage between 16-20 years of teaching experience and lowest percentage was found in Champhai district private school, Kolasib district government school, Lawngtlai district, Mamit district and government school in Serchhip district at higher secondary school of Mizoram. Government school in Aizawl district had highest percentage of science teachers who had teaching experience between 21-25 years of age and lowest percentage was found from Champhai district, Lawngtlai district, Mamit district, government school in Kolasib district, government school in Lunglei district and private school in Siaha district. Government school in Siaha district had highest percentage in teaching experience between 26-30 years of age and zero percentage was found from Champhai district, Lawngtlai district, Mamit district, government school in Aizawl district, Kolasib district, Lunglei district and Serchhip district while private school in Siaha district also had zero percentage.

Discussion

To conclude, it may be said that disparities in terms of various variables do still exist among different districts in Mizoram when it comes to science teachers teaching at the higher secondary level of education. There were more male science teachers in government and

private higher secondary schools at the time the study was done. Government had 100% trained teachers while private schools had only 47.10% trained science teachers. In terms of educational qualifications, both kinds of secondary schools showed that they still had unqualified science teachers in their schools. Age group of science teachers showed that more teachers were found in lower age group for private schools than government schools; strangely, only private schools had teachers in the highest age group. Not only that surprisingly, private secondary schools had more science teachers in lower and higher teaching experiences. The higher percentage of younger group of teachers in private higher secondary schools could be because these teachers may have just passed out and are employed in these schools while waiting for better positions. The study also found a higher number of higher secondary schools offering science subject. While this may not look bad at first glance, a deeper speculation brings to mind that while more privately managed higher secondary schools may be offering science at a higher secondary schools level, they may not necessarily have the right kind of equipment that are considered to be an important part of science education. Therefore a deeper study regarding the various aspects of science education besides the profile of the teachers needs to be done in order to have a clearer picture of science education at this level of education.

Conclusion

Science education is an important and truly relevant subject which has an impact in our everyday lives regardless of our educational pursuits. Therefore more and more science graduates and post graduates need to be produced in order to ensure a confined and stable provision of human resource in this area. Since the advancement of scientific knowledge is one major goal of National Education Policy (NEP, 2020), it is high time that the state government looks into the profile of science teachers at this level and make amendment where it needs to be made. If this is done, science education will flourish and the nation will certainly become a global knowledge super power in the not far away future.

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Perceptions of Students on Access to Higher Education in Mizoram

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Abstract

The study attempts to understand the perceptions of students regarding access to higher education in Mizoram. The present study is qualitative in nature and employs purposive sampling technique. A sample of thirty students from three institutions participated in the study. In-depth interviews were conducted with a semi-structured interview schedule. Interviews are transcribed and themes are derived from the transcripts. Varied perceptions of students regarding choice of educational institution, method of teaching, grievance services, infrastructural facilities, transportation facilities, student union and the difficulties faced in receiving scholarships are discussed in this paper.

Keywords: *Access, Higher Education, Mizoram, Perception.*

Introduction

For a nation to experience social mobility and economic prosperity, higher education is essential.With a long history of social hierarchy and patriarchal society, India still has issues with access to education which significantly slows down the rate of progress of the country. According to Chanana (2013), access to higher education is the opportunity to enroll in and successfully complete higher education, regardless of one's socio-economic background, gender, religion, caste, or any other marker of social identity. Walker(2018) says that access to university is the ability to enroll and participate in university education without facing barriers of any kind, be it financial, academic, social, or cultural. Access in the proposed study refers to the ability of the people to have equal opportunity to take part in higher education irrespective of socio-economic status, geographical conditions, gender, ethnic & religious minority status and differently-abled conditions. There are numerous studies

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regarding access to education. Yet, in the context of Mizoram, research on access to higher education especially from the perspectives of stakeholders remains an uncharted territory.

Access and Higher Education in India

India is a diversified country with a population of over 1.2 million (Census India, 2011) and is the home of many religions, ethnicity, languages and social classes. At present, there are 42,343 colleges in India (AISHE, 2019-20). In India, many disadvantaged groups are still facing challenges in accessing higher education and according to Chanana (2013), women, minorities, Scheduled Castes, and Scheduled Tribes are among the disadvantaged groups facing barriers like socioeconomic factors, poor educational preparation, gender and caste discrimination, and cultural norms to accessing higher education in India. National Education Policy (2020) also aims to increase the gross enrolment ratio (GER) in higher education from 26.3% in 2018 to 50% by 2035. In a study by Zoie and Rashid (2018) to highlight inclusive education and challenges with equality in the Indian higher education system, it was discovered that scheduled tribes (ST) and girls had lower GER than other varied groups.Challenges of access to higher education persist despite having numerous programmes and policies to improve and strengthen the sector.

Access and Higher Education in Mizoram

Mizoram is one of the states of India located in the north-eastern region. According to the Census of India 2011 (the latest), the literacy rate of Mizoram is 91.33%, which is the third-highest among the states and union territories of India (Census India, 2011), with a diverse population.At present there is one central university offering higher educationin Mizoram i.e., Mizoram University. One constituent collegeand 40 colleges affiliated withMizoram University are functioning in the state as per the office records(College Development Council,2022).

Due to numerous factors, many social groups have challenges in enrolling themselves in higher education institutions. Access to higher education institutions is influenced by privilege, it is important to pay attention to how underprivileged groups are rendered invisible in the struggle for access, leading to inequality. The issues and challenges faced by various groups based on geography, socio-economic status, ethnicity, gender, and religion require thorough analysis in order to understand participation in higher education. The present study is undertaken to study the perceptions of students on access to higher education in Mizoram.

Methodology

The study is qualitative in nature. Purposive sampling technique is adopted for the present study. The total sample includes 30 undergraduate studentsfrom three colleges in Aizawl, the capital city of Mizoram. The distribution of the sample is as follows: Institution-1 (7 female and 8 male), Institution-2 (5 female and 5 male) and Institution-3 (2 female and 3 male). In-depth interview is conducted using the semi-structured interview schedule prepared

by the researchers.Semi-structured interview schedule is used to gather detailed information about a person's assumptions, beliefs, and problems (Cohen, Manion, & Morrison, 2007, p. 97).Interviews are transcribed, themes are derived and findings are interpreted.

Findings

Themes derived from the analysis arebased on perceptions of students on choice of educational institution, courses offered in the institution, method of teaching, bridge courses, career guidance and counselling services, transportation facilities, grievance services, hostel facility, classroom condition, toilet condition, quality and quantity of water, student unionandscholarships.

Choice of educational institution

Numerous factors can influence one's choice of an educational institution. Varied perceptions are seen in the excerpts of transcripts given below.

A male respondent pursuing a bachelor's degree in Education says,

'I did my admission to my institution because it was the nearest college to my house.'

A female student pursuing a bachelor's degree in Education shares,

'My friend and I wanted to go to the same college, we tried in another college too, but my friend did not qualify and we were able to receive admission here without any problem taking the same core.'

A female student pursuing a bachelor's degree in Education from Aizawl also reveals,

'I was not planning to attend college. But my father wanted me to attend college. So, I just did my admission in my current institution and the admission process was easy.'

The choice of educational institutions is mainly based on the distance between their home and educational institutions, having friends in the institutions and fulfilling parents' wishes. Transcripts of the interview show that there are multiple reasons in choices of selecting a higher education institution.

Courses offered in the institution

Courses taken in college often determine one's career scope. It shapes the individual's aspiration towards his/her profession. The interview with the students in respect to this is transcribed as follows:

A male student pursuing a bachelor's degree in Mizo living in Aizawl says,

'Yes, I think I am quite satisfied with the current courses offered in my institution, we have political science, sociology, education, Mizo and English.'

A male student pursuing a bachelor's degree living in Aizawl also shares,

'I wish it was more diverse, we only have education, history, English, Mizo, political science and economics. Especially for competitive exams I wish they offer sociology, geography, and public administration.'

All the students interviewed are satisfied with the current courses offered by their institution. Diverse courses offered by the institutions are believed to be helpful in appearing for competitive examinations.

Method of teaching

The methods of teaching play a vital role in students' learning. With the advancement in science and technology, teaching can be easily facilitated using various technologies. The interview with the students in respect to this is transcribed as follows: -

A male student pursuing a bachelor's degree in history says,

'We have projectors and laptops but teachers mainly use lecture methods but they use charts and maps a lot.'

A female student pursuing a bachelor's degree in education living in Aizawl shares,

'Our teachers have hardly used projectors since we started offline mode. They use lecture methods but the explanation is not bad. The problem with constantly using lecture methods is that it can be quite boring sometimes.'

It is observed that all the teachers use the lecture method as a primary transaction mode and projectors are hardly used in teaching in the colleges even when they are available andprojectors are also not available in some colleges.

Bridge courses

Bridge courses connect one course of study to another and also one level to another level of study. It helps students to transition smoothly from school to college as it imparts basic knowledge about the future courses which the student will take in college. The interview with the students in respect to this is transcribed as follows: -

A male student pursuing a bachelor's degree in education says,

'We need bridge courses. It will be good for us.'

A female student pursuing a bachelor's degree in Education shares,

'I think that bridge courses will be beneficial for education students because we have statistics and understanding of basic mathematics will go a long way.'

'The concept of bridge courses is new to the students and after understanding the meaning of it, students felt that it will be greatly helpful in education'.

Career guidance and counselling services

Career guidance and counselling services help students in selecting courses and jobs. The interview with the students in respect to this is transcribed as follows: -

A female student pursuing a bachelor's degree in Education living in Aizawl shares,

'We never get any such type of career guidance and counselling services in our schools.'

A male student pursuing a bachelor's degree in commerce says,

> 'Our teachers used to just tell us to go to college without any detailed information, and if they could have given us quality career guidance during our school days, it would have been really helpful for us.'

Many students informed that there is a lack of guidance and counselling services provided at the school level in opting for courses in higher education.

Transportation facilities

The transportation facilities provided by educational institutions facilitate students' access to education. The interview with the students in respect to this is transcribed as follows: -

A female student pursuing a bachelor's degree in Education reveals,

> 'Yes, I face many problems in travelling every day to the college. I travel by college bus. It's always full, we hardly get seats, and the bus stand is very far from my home. If a class is going to start at 10 a.m., I have to be at the bus stand at 8:30 a.m. If a class is going to start at 11 a.m., I have to come by city bus …. And sometimes I went home using the city bus.'

A male student pursuing a bachelor's degree in Political Science Living in Aizawl shares,

'My institution does not have any transportation facilities; we come by foot, taxi, and bus.'

Transportation facilities are badly needed for many students. It is observed that the institutions that provide bus facilities are very much congested and have problems with people living in the lower part of the city.

Grievance services

Grievance services make higher education institutions more students centric. The interview with the students in respect to this is transcribed as follows: -

A male student pursuing a bachelor's degree in Mizo Living in Aizawl says,

'I don't think that we have anything like that. We just tell our problems to our teachers and they solve it, that's it.'

A female student pursuing a bachelor's degree in History shares,

'We never make use of grievances complaint services online and offline. When we have issues, we just talk about it among ourselves and that's it.'

A male student pursuing a bachelor's degree in History says,

> 'In the teachers' office one grievance box is available and the location is very visible. We just share our problems with our head of the department and the teachers and staff in charge usually solve our problems.'

A male student pursuing a bachelor's degree in Commerce says,

'Our grievances that we submit both through online and offline mode are reviewed weekly and our teachers try to deal with our grievances as soon as possible.'

Complaints and grievances services are not offered in some institutions and students from some institutions reported that they can directly talk to the teachers, heads and student unions. One institution offers an online mode of grievance service for the students and said that once every week the complaints/grievances are dealt with.

Hostel facility

Hostel facilities are one of the factors that determine students' access to education. Students from various parts of the state enrol in higher education every year. The interview with the students in respect to this is transcribed as follows: -

A male student pursuing a bachelor's degree in Commerce who is also an office bearer of the Student Union says,

'Yes, we have hostel facilities but we haven't run it yet. It will function from next semester. But the problem is that finances for running the hostel are still not stable and apart from that the interior equipment and facilities are still not ready so that's why we haven't opened our hostels.'

'No hostel facility in our institution, before it used to be there but now it's not,' says a male student pursuing a bachelor's degree in history living in Aizawl.

It is observed that the institutions covered in the study do not currently provide hostel facilities due to various reasons. Students from one institution reported that the hostel facilities are to begin from next semester.

Classroom condition

Classroom conditions are important for the teaching-learning process. The interview with the students in respect to this is transcribed as follows: -

'Class Representative makes sweeping duty charts, so; our classroom is clean but it's dry. And dusty since the parking place is the field, dust accumulates in the student's shoe so it's usually dusty,'says a female student pursuing a bachelor's degree in education.'

A male student pursuing a bachelor's degree in history reveals,

'The classrooms are good but a bit congested too many students in one room. We have sweeping duties. Class representative makes the duty chart and fines those students who skip their duty.'

The transcripts show that the classrooms are not clean and that they are congested too.

Toilet condition

The interview with the students in respect to this is transcribed as follows: -

'Yes, separate toilet facilities for males and females are available,'report student respondents pursuing a bachelor's degree in education.

A male student pursuing a bachelor's degree in commerce says,

'Our college has a lot of separate toilet facilities for males and females.'

It is observed from the transcripts that separate quality toilet facilities are available for males and females in all the institutions.

Quality and quantity of water

The interview with the students in respect to this is transcribed as follows: -

A male student pursuing a bachelor's degree in commerce shares,

'For general use like just to wash our hands, water is not adequate.'

A male student pursuing a bachelor's degree in education shares,

'We have one cooler that is always functioning, and never runs out of water, but we have only one, water is always there, but the main problem is it is too far from our department.'

A male student pursuing a bachelor's degree in History reveals,

'Our college has four floors.In every floor, there is a separate toilet for males and females. And water is also adequate.'

Drinking water facilities in the institutions are satisfactory as reported by the participants but water scarcity is reported for toilets and other general use purposes. All the institutions provide purified water for drinking.

Students Union

The interviews with the students in respect to this are transcribed as follows: -

A male student pursuing a bachelor's degree in commerce living in Aizawl shares,

'Yes, the Student Union is active. According to the student union constitution, a student must be at least a 3rd semester in order to be a candidate for election and in order to be

a member of the student union, and regardinghead posts like Vice president and General secretary in order to be a candidate for election a student must be at least from the 5th semester. But no reservation for females is given. We have female members in our student union also. And we are going to amend our constitution in order to makereservationsfor females after our current internal examination and this has been advised to us by our principal.'

'Yes, members are from all parts of Mizoram and from different cores, every student who does not have any back paper can be a candidate, no reservation for females but now we have 2 female Student Union members out of 13 members,'says a male student pursuing a bachelor's degree in History living in Aizawl.

The elected student union is functioning in all the institutions. Only students in 3rd semester and above are eligible to contest in the election for member posts without back papers. Candidates from the 5th semester onwards can contest in general secretary and vice-president posts without back papers. Only one or two members are females in the council and this is felt to be very less considering the total number of members. There is no reservation for female candidates so far in these institutions and in one institution, reservation for female candidates is expected to be provided in the next election based on the advice of a female principal as part of implementing gender equity in higher education. Except for gender equity, equity in terms of representation of various socio-economic groups is seen in the student unions.

Scholarships

The interview with the students in respect to this is transcribed as follows: -

'People in the library used to take care of scholarships, we submit necessary documents to them and they take care of everything. And we have not faced any problem regarding spelling mistakes and all till now,'a female student pursuing a bachelor's degree in Education living in Aizawl, the capital of Mizoram.

Another male student pursuing a bachelor's degree in History living in Aizawl shares,

'Our college has one teacher who is in charge of scholarships, we submit our document to our teacher and he deals with the rest, we are not confident to do it by ourselves.'

A Female student pursuing a bachelor's degree in Education living in Aizawl, the capital of Mizoram shares,

'I applied for a scholarship, which I came to know about from my friends, and there are special people to deal with it. I didn't do it by myself. I cannot do it by myself and spent around 3 weeks in the application process. This was during my first semester. Till now I haven't received anything and I spent a lot of money making an affidavit and all since just the affidavit itself costs Rs.1000/-.'

A male student pursuing a bachelor's degree in Commerce living in Aizawl, reveals,

'Yes, regarding that one, many students who are coming from outside Aizawl, usually face many problems regarding document submission. They have to go to DC to acquire income, tribal and residential certificates. And in order to get those certificates they need to submit forms which include documents from the local level authorities from their home town and villages. So, the process is sometimes very hectic and stressful for some students and their families. And sometimes they have to search for people they know for attesting their documents and all. It's very problematic. And the time for receiving the certificates after submission of forms is irregular as well.'

Most of the students were paying Rs 100/- to Rs 200/- in their institution for scholarship applications and said that they did not know how to do it by themselves. One female student says that she spent more than Rs 1000/- and three weeks applying for a scholarship in her 1st semester which she hasn't received till today. Many students except from Aizawl say that getting the documents for submitting the scholarship application is very stressful for them. Many students reported that they are not confident in submitting their online application on their own despite having good internet facilities.

Discussion

In light of the findings obtained students mostly choose their educational institutions based on the distance between their homes and those institutions, whether or not they have friends there, and whether or not it satisfies their parents' wishes. It is possible that underlying socio-cultural elements could play a role in it. Some of the students expressed satisfaction with the courses offered by their institutions. However, many felt that if the institutions could provide a wider range of courses, it would be beneficial for students who wanted to take competitive exams. The institutions in the current study typically offer two streams with a restricted number of courses. Therefore, the failure of Mizo students to pass the UPSC examinations may be attributed to this system. Projectors are hardly ever used in teaching in the colleges where they are available, and it is noticed that all teachers employ the lecture technique as their main style of instruction. This has been attributed to the teachers' disinterest in instructing and learning.The students are unfamiliar with the idea of bridge courses, but after learning about it, they came to the conclusion that it would be very beneficial to their academic progress. This could decrease dropout rates, boost learning, and enhance student performance. There is a lack of guidance and counselling services offered at the school level when choosing courses in higher education. Since the majority of students enrol in higher education courses heedlessly, this may be related to the rise of educated youth unemployment. For many students, access to transport amenities is crucial. It has been noted that the institutions that provide bus services are extremely crowded and encounter issues with residents of the lower portion of the city. All of these issues may make learners feel stressed and demotivated, which may impair their academic performance.Some colleges lack complaints and grievance methods, however, students from other institutions claim they can speak with professors, administrators, and student unions directly. One institution provides students with an online grievance service, and it claims that complaints and grievances are handled once a week.

Students must be made aware of the value of grievance services, and efforts should be made to make them accessible in all institutions of higher learning. Since the colleges covered in this research study, currently do not offer hostel accommodations for a variety of reasons. Students from remote areas may find this challenging. Students from one college claimed that hostel amenities will be provided in the next semester. Participants noted that classrooms are messy and crowded but high-quality lavatory facilities are provided in each institution for males and females separately. Though the drinking water facilities of the institutions are adequate, there is a water shortage for toilets and other general-use items. Every institution offers drinking water that has been filtered. In every institution, a democratically elected student union is functioning. Only students who are in their third semester or higher are eligible to contest for member roles. Candidates are not permitted to have back papers while contesting for vice-president or general secretary positions after the fifth semester. In the student council, there are just one or two female members, considered a relatively small proportion given the overall number of members.These institutions have not yet made reservations about the representation of female candidates, one institution however, is planning to do so in the upcoming election on the recommendation of a female principal as part of efforts to advance gender equity in higher education. Apart from this, the student unions exhibit equity in the representation of different socio-economic categories. For many students, excluding those from Aizawl, obtaining the necessary paperwork to submit a scholarship application is an extremely stressful experience. Despite having internet access, several students claimed that they lack confidence in their ability to submit their online applications on their own.

In conclusion,there is a need for broad reforms to improve the learning environment and guarantee a fair opportunity for all students pursuing higher education.

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Study Habits of Higher Secondary School Students in Aizawl City

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Abstract

Good study habits can enhance the academic performance of students. This study aimed to find out the study habits of higher secondary school students in Aizawl city. Comparison of study habits was done in relation to gender, type of school, stream of study and parental occupation. It was found that majority of the students had above average level of study habits. Significant difference was found between government and private higher secondary school students in relation to their study habits. No significant difference was found with regards to gender, type of schools, stream of study and parental occupation.

Keywords: *Study habits, Students, Higher secondary school*

Introduction

Study habit is a process from which an individual gets proper input to feed his hunger and to quench his thirst for knowledge. According to Lyle, T. (1962), "Psychologically study habits are automatically learned behaviour pattern that enables the students to handle specific type of situation easily." Study habits can also be viewed as the different individual behavior in relation to studying and is a combination of study method and skill. In other words, study habits include behaviors and skills that can increase motivation and convert the study into an effective process with high returns, which ultimately increase the learning. The student who has acquired good study habit has actually developed a behavior pattern which enables him to sit down and begin working on his assignments with a minimum of fuss and maximum concentration.

Lack of effective study habits is a common educational problem among secondary school students. It has been realized that students who possess adequate mental abilities sometimes do not perform well in their academic work either because they do not know how to study effectively or they do not use the most effective method of studying.According to Patel (1976) study habits include: - i) Home environment and planning of work; ii) Reading

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and note taking habits; iii) Planning of subjects; iv) Habits of concentration; v) Preparation for examination; vi)General habits and attitudes; and vii)School environment.

"Poor habits of study not only retard school progress, but develop frustration, destroy initiative and confidence and make prominent the feeling of worthlessness towards himself and the subject of study whereas effective methods ensure success, happiness and sense of accomplishment," (Smith, Samuel, and Field, 1948).

Rationale of the Study

Good study habits can increase confidence, competence and self-esteem of the students. They can reduce anxiety about tests and deadlines. It can improve one's ability to learn and retain knowledge. Proper study habit is also likely to deliver positive result in student's academic performance and in shaping students career. In this study, an attempt was made to find out the study habits of higher secondary school students in Aizawl city. Comparison of study habits based on gender, type of schools, stream of study and parental occupation was also done.

Objectives of the Study

1. to find out the level of study habits among higher secondary school students in Aizawl city.
2. To compare the study habits of higher secondary school students in relation to their gender.
3. To compare the study habits of government and private higher secondary school students in Aizawl city.
4. To compare the study habits of arts and science higher secondary school students in Aizawl city.
5. To find out whether there is any difference in study habits of students based on their parental occupation.

Hypotheses

1. There is no significant difference between Male and Female with regards to their Study habits.
2. There is no significant difference between Government and Private Higher Secondary Schools students in relation to their Study habits.
3. There is no significant difference between Arts and Science Higher Secondary School students in relation to their Study habits.
4. There is no significant difference in the Study habits of students based on their Parental Occupation.

Method of study

In the present study, the investigator attempts to find out the Study habits among the Higher Secondary School students within Aizawl City which requires test finding and survey so the investigator adopted descriptive survey method.

Population of the Study

The population of the present study consists of all Higher Secondary Schools offering Arts and Science stream within Aizawl City.

Sample of the study

The sample of the present study consisted of 195 Higher Secondary School students. Out of which, 66 are male and 129 are female. Simple random sampling technique was employed by the investigator for sample selection.

Tools used for data collection

Study habits Inventory (SHI-WLCNPA) developed by Dr.Lajwanti, Prof. N.P.S Chandel and Mr.AshishPaliwal was used to collect information. This scale contains 40 items divided into seven dimensions- I Comprehension, II- Concentration, III-Task orientation and sets, IV-Interaction, V- Drilling, VI- Writing and Recording, VII- Supports.

Mode of Data Collection

The investigator personally visited the schools selected for the study and took permission in advance from the Head of Institution. After receiving approval from the concerned authority, the investigator distributed the questionnaire and explained clearly the questions to the students. After the students completed answering, the investigator collected the questionnaire for data analysis and interpretation.

Analysis and interpretation of data

The collected data were classified, tabulated and analysed using appropriate statistics. Objective wise analysis and interpretation are given as follows:

Objective 1. To find out the level of Study habits among Higher Secondary School students in Aizawl City.

Table 1

Level of Study habits of Higher Secondary School students in Aizawl City

Level of Study Habits	No. of Students	Percentage
Extremely High	6	3.00%
High	45	23.00%
Above Average	74	37.94%
Average/Moderate	63	32.30%
Below Average	7	3.58%
Low	0	0
Extremely Low	0	0

As shown in Table no.1 out of 195 students, 6 (3.0%) students had Extremely High level of Study habits, 45 (23.0%) had High level of Study habits, 74 (37.94%) students had Above Average level of Study habits, 63 (32.30%) students of them had Average level of Study habits and lastly 7 (3.58%) students had Below Average level of Study habits. There were no students which fell under Low and Extremely Low level of Study habits. So, from the study we can conclude that most of the students had Above Average level of Study habits.

Objective 2. To compare the Study habits of Higher Secondary School students in relation to their gender.

Hypothesis No-1: There is no significant difference between Male and Female with regards to their Study habits.

Table No. 2

Comparison of the Study habits of students

Gender	No. of Students	Mean	SD	t-value	Significance level
Male	66	132.19	13.89	1.09	NS
Female	129	134.58	15.65		

Table No. 2 shows that the Mean and SD of Male and Female students are 132.19, 134.58 and 13.89, 15.65 respectively. The't' value is 1.09 which is smaller than the critical value at the required level of significance which indicates that the null hypothesis i.e. *'There is no significant difference between male and female with regards to their study habits'* is accepted.

Objective 3. To compare the Study habits of Government and Private Higher Secondary School students in Aizawl City.

Hypothesis No-2: There is no significant difference between Government and Private Higher Secondary School students in relation to their Study habits.

Table No. 3

Comparison of the Study habits between Government and Private Higher Secondary School students

Type of School	No. of Students	Mean	SD	t-value	Significance level
Government	96	127.85	14.65	5.8	0.01
Private	99	139.51	13.23		

Table No. 3 revealed that the Mean and SD of Government and Private Higher Secondary School students' study habits are 127.85, 139.51 and 14.64, 13.23 respectively. The calculated 't' value is 5.8 which is more than the critical value of 't' at 0.01 level which indicates that the null hypothesis i.e. *'There is no significant difference between Government and Private Higher Secondary School students in relation to their Study habits'* is rejected. Therefore, there exists significant difference between Government and Private Higher Secondary School in relation to their Study habit. The difference is in favour of Private Higher Secondary school.

Objective 4. To compare the Study Habits of Arts and Science Higher Secondary School students in Aizawl City.

Hypothesis No-3: There is no significant difference between Arts and Science Higher Secondary School students in relation to their Study habits.

Table No. 4

Comparison of the Study habits between Arts and Science Higher Secondary School students

Stream	No. of Students	Mean	SD	t-value	Significance level
Arts	99	130.49	14.37	0.002	NS
Science	96	137.15	15.13		

As shown in table No. 4 the Mean and SD of Arts and Science stream on study habits are 130.49, 137.15 and 14.37, 15.13 respectively. The calculated 't' value is 0.002 which is smaller than the critical value of 't' at the required level of significance which indicates that the null hypothesis i.e. *'There is no significant difference between Arts and Science Higher Secondary School students in relation to their Study habits'* is accepted. So, it is evident that there is no significant difference between Arts and Science stream in relation to their Study habits.

Objective 5. To compare the Study habits of Higher Secondary School students based on their Parental Occupation.

Hypothesis No- 4:*There is no significant difference between the Study habits of Higher Secondary School students based on their Parental Occupation.*

Table No. 5

Comparison of the Study habits of Higher Secondary School students based on their parental Occupation

Parental Occupation	No. of Students	Mean	SD	t-value	Significance level
Government Servant	79	134.79	14.13	0.8	NS
Private Business	116	133.07	15.72		

The above table no. 5 revealed that the Mean and SD of Higher Secondary School students based on their Parental Occupation are 134.79, 133.07 and 14.13, 15.72 respectively. The 't' value is 0.8 which is smaller than the critical value at the required level of significance which indicates the null hypothesis i.e. *'There is no significant difference between the Study habits of Higher Secondary School students based on their Parental Occupation'* is accepted. So we can know that there is no difference in their Study habits based on their Parental Occupation.

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A Study of Job Satisfaction among Secondary School Teachers in Aizawl

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Abstract

Job satisfaction is an integral factor among secondary school teachers as it has substantial impacts on their productivity, performance, and ultimately, the quality of education provided to students (Shen, Leslie, Spybrook, & Ma, 2012). The purpose of the study is to investigate job satisfaction among secondary school teachers of Aizawl, Mizoram. The current study employs a descriptive survey method for analysing the data from 100 secondary school teachers. From the selected samples, there were 55 female respondents and 45 male respondents. The samples were collected using the random sampling method. The Job Satisfaction Scale developed by Dr.Meera Dixit was used as a tool to collect the desired data. The findings of the study highlighted that there was no significant difference in job satisfaction among secondary school teachers with reference to gender. The findings also indicated that there was no significant difference in job satisfaction among secondary school teachers with reference to the types of management.

Keywords: *Job satisfaction, Teachers, Secondary schools*

Introduction

The character of a nation is inherently a reflection of the calibre of its citizens, and, in turn, the citizens' quality is profoundly influenced by the standard of their education (Biesta, 2009). At the heart of this education system lays the quality of its teachers, who act as living paragons of knowledge and are instrumental guides to students' growth, preparing them to become the esteemed citizens of tomorrow (Darling-Hammond, 2000). Teachers serve as the keystone of any educational system, moulding humanity and crafting the societal structure. When an individual enters the workforce, they are allocated specific duties, in both the public

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and private sectors, commensurate with their job specifications, regulated by a distinct set ofrules (Ingersoll, 2001). Education, in this context, is a mission of paramount national significance.

The role and responsibility of teachers surpass those in many other professions. They are viewed as crucial sources of knowledge, the torchbearers of value creation, and the altruistic builders of the nation (Goodson & Hargreaves, 1996). Hence, the degree of accountability placed on a teacher is arguably higher than on any other public servant. Elevating the standard of education requires a concerted focus on enhancing the recruitment and training of teachers, boosting their societal stature, and improving their working conditions (OECD, 2019). Teachers require adequate knowledge and skills, desirable personal traits, promising professional prospects, and motivation to meet the lofty expectations placed upon them.

A teacher's job satisfaction plays a pivotal role in societal upliftment. A contented teacher can contribute significantly to the well-being of students, whereas an unsatisfied teacher might foster a tense environment, negatively impacting the learning process and thereby the students' academic growth (Sharma &Jyoti, 2009). The crux of improving education lies in ensuring teacher satisfaction. Despite vast resources expended on opening new schools, developing better curricula, and devising improved methods of student assessment, these efforts will fall short if schools are not staffed with satisfied teachers. After all, teachers shape the future generation's skills and character (Hargreaves &Fullan, 2012).

Review of related literature

A thorough exploration of relevant academic literature is pivotal in establishing connections between current investigations and past research. It lays out the work that has already been done on the topic, exhibiting ideas and concepts generated by previous researchers. This crucial background not only furnishes the necessary context to examine the research at hand but also provides perspective. The present chapter delves into the research on job satisfaction among secondary school teachers. The findings of these studies aid in comprehending the existing knowledge within this area and delineate the course for future inquiries.

Nyamubi (2017) investigated the factors influencing job satisfaction among secondary school teachers in Tanzania. The study found that job satisfaction among these teachers was primarily driven by positive relationships with colleagues, students, and parents, as well as respect and acknowledgment for their contributions to education within the community. Teachers derived satisfaction from seeing their students succeed academically. However, poor workplace conditions in many schools proved to be demoralizing. Substantial opportunities existed for enhancing both the quality of life for teachers and their teaching environments. The lack of teaching materials and laboratory equipment contributed to frustration, and job dissatisfaction often prompted teachers to seek alternative sources of income, such as private tutoring or engaging in nonteaching activities.

Singh and Bamba (2017) studied job satisfaction among government college teachers in Gurugram and found that four factors – compensation and security, career advancement,cooperation, and job interest – had a significant influence on job satisfaction. Their study also showed that teachers had high levels of satisfaction with salary, communication, and morale. However, the teachers reported a lack of training and development programs and were dissatisfied with the salary increments and allowances provided under the 7th pay commission.

Babu (2014) examined job satisfaction among teacher educators in the Telangana region of Andhra Pradesh. The study revealed that the majority (87%) of teacher educators reported a very low degree of job satisfaction, followed by 10% with a low degree. A mere 2.75% reported an average degree of job satisfaction, and surprisingly, none of the respondents fell under the "good" category. The study also found no significant differences in job satisfaction based on gender, age, marital status, experience, or management.

Ayele (2014) examined teachers' job satisfaction and commitment in general secondary schools within Hadiya Zone, located in the Southern Nations, Nationalities, and Peoples' Regional State, Ethiopia. The study discovered a significant and positive correlation between job satisfaction and commitment among teachers. Higher levels of job satisfaction corresponded with increased commitment in the studied region. The findings concerning external and internal factors affecting teachers' job satisfaction revealed that both factors played a role in influencing job satisfaction in the general secondary schools of Hadiya Zone. However, external factors had a relatively greater impact compared to internal factors on teachers' job satisfaction in the area.

Immaculate and Grace (2014) observed that despite the rapid expansion in the number of private secondary schools, there appeared to be a lack of job satisfaction among teachers employed in these institutions.

Naik and Yadav (2013) conducted a study on job satisfaction among tribal area teachers and discovered that there was a significant difference in job satisfaction between government and private secondary level teachers in tribal areas. However, no significant difference in job satisfaction was found between male and female private secondary level teachers in tribal areas.

Prajapati and Mohalik (2013) reported a significant difference in job satisfaction among teacher educators concerning gender, revealing that female teacher educators were more satisfied with their jobs than their male counterparts.

Raji, et al. (2013) conducted a study investigating job satisfaction among elementary school female teachers in relation to their teaching attitudes and family structures. The researchers found no significant difference in job satisfaction for these teachers concerning their teaching

attitudes. Additionally, there was no observed difference in job satisfaction in relation to their family types, nor was there any interaction between job satisfaction, teaching attitudes, and family types of elementary school female teachers.

Sarswati (2013) found in her study that lecturers of government colleges in Delhi were most satisfied than the Lecturers of Private Colleges in Delhi in relation of their general working conditions.

Afshan (2013) discovered in her research that no significant difference existed in job satisfaction and work motivation between male and female teacher educators employed in publicly funded
institutions.

Singh and Kumar (2012) conducted a study on job satisfaction and stress among teachers from different faculties in JawaharNavodayaVidyalayas in India. Their findings indicated that these teachers experienced high levels of stress and low levels of job satisfaction, with differences in satisfaction among teachers from various faculties.

Manzoor, et al. (2011) conducted a study examining job stress and job satisfaction among university faculty in Lahore, Pakistan. The researchers used various variables, including professionalism, satisfaction with organizational management, the job's respectable nature, satisfaction with facilities and benefits, relationships with colleagues, job demands (both physical and mental), performance evaluation by the employer, job assignments, pressure from comparing with colleagues' performance, and inadequate salary. The study found that most faculty members were generally satisfied with their work, although there were some who experienced significant job-related stress. Most participants reported average satisfaction across all variables assessed in the survey. Furthermore, the study revealed a common association between job satisfaction and job stress.

Ayan and Kocacik (2010) conducted a study to examine the relationship between high school teachers' job satisfaction levels and their personality types, as well as to assess the differences in job satisfaction levels based on personality traits among teachers working in state schools in the central and suburban provinces of Sicas. The findings revealed that teachers' job satisfaction was close to an intermediate level, and more than half of the teachers exhibited extroverted personalities. A comparison of the teachers' scores on the job satisfaction scale, which was used to evaluate their personality characteristics, indicated significant differences in job satisfaction related to traits such as liking competences, social and occupational ambition, quickness to anger, and concealing emotions.

Wong and Heng (2009) conducted a study investigating factors that influence job satisfaction among faculty members in two Malaysian universities. The findings revealed that all motivator aspects were associated with job dissatisfaction, while some hygiene factors actually

contributed to job satisfaction. The motivators, including recognition, growth, achievement, responsibility, and the work itself, received low scores among Malaysian faculty members, indicating a tendency toward job dissatisfaction. Conversely, two hygiene factors—organizational policies and administration, as well as salary—were ranked low in Herzberg's model but scored high among Malaysian faculty members, suggesting a trend toward job satisfaction. The study also indicated that cultural differences may influence employees' responses to job satisfaction, as the pattern of job attitudes among Malaysian faculty members did not align with Herzberg's job satisfaction model. In conclusion, this research helped identify factors that determine job satisfaction among Malaysian university faculty members.

Objectives of the study

1. To find out the level of job satisfaction among secondary school teachers of Aizawl.
2. To compare the job satisfaction among secondary school teachers of Aizawl with reference to gender.
3. To compare the job satisfaction among secondary school teachers of Aizawl with reference to the type of management.

Hypotheses

1. There is no significant difference in job satisfaction among secondary school teachers of Aizawl with reference to gender.
2. There is no significant difference in job satisfaction among secondary school teachers of Aizawl with reference to type of management.

Method of study

The current research study employs a descriptive survey method. The primary rationale behind this choice is that this research seeks to ascertain job satisfaction among secondary school teachers in Aizawl.

Population

The population under investigation in the current study encompasses all secondary school teachers employed in institutions aligned with the Mizoram Board of School Education (MBSE). According to the data acquired from the Directorate of School Education, Government of Mizoram (2020), there exists a total of 195 secondary schools within the Aizawl District. The collective count of teachers engaged in these educational institutions amounts to 1440, of which 865 are male and 575 are female.

Sample

Since the study involves finding out the level of job satisfaction among secondary school teachers in Aizawl, the sample was selected systematically. It comprises a random

selection of teachers of secondary school students from the Aizawl district. The sample selected comprises of 100 secondary school teachers. From the selected samples, there were 55 female respondents and 45 male respondents. The details of the samples are presented under table 3.1

TABLE - 1

Details of sample collected

Total No. of Secondary School Teachers in Aizawl	Respondents	Gender		Type of Management	
		Male	Female	Government	private
1440	100	45	55	54	46

Tool used for data collection: The tool used for the present study was Job Satisfaction Scale developed by Meera Dixit.

Job Satisfaction Scale: The research instrument for this study is a scale composed of 52 individual statements, with each providing five alternatives. The respondents are tasked with choosing the alternative that best encapsulates their honest reactions. Depending on the necessities of the study, this scale can be administered to teachers in either primary or secondary education, either as a whole or partially.

Data collection

For the purpose of collecting data, the investigator personally visited Government Schoolsand Private Secondary Schools within Aizawl City to meet the sample teachers. The Job Satisfaction Scale was administered personally by the investigator for each of teachers after establishing good rapport with them.

Mode of analyses

After scoring the job satisfaction scale responses, the data obtained from 100 secondary school teachers were scored as per the standard scoring method provided for each test. Each student was allotted a serial number according to the variables under the study. The test scores were then entered in the tabulation sheet and were subject to statistical treatment by employing the following statistical techniques for the analysis.

Descriptive statistical measures

Measures of Central Tendency and Percentiles were used to find out the nature of score distribution and the classification of respondents in different categories.

Test of significance for mean difference

The significant difference between the mean scores of secondary school teachers with reference to gender and type of management was tested by using the ‘t’ test.

Analysis and interpretation of data

This section meticulously explores and deciphers the data collected from the job satisfaction scale, specifically pertaining to secondary school teachers in Aizawl. The amassed responses were categorically structured, organized in tables, and scrutinized in accordance with an industry-standard scoring protocol. To effectuate the analysis, suitable statistical methodologies were applied with due diligence. The interpretation of the results was then carried out in a substantive way, ensuring alignment with the well-defined objectives and hypotheses of this research. The ensuing sections present these findings in a comprehensive and articulate manner.

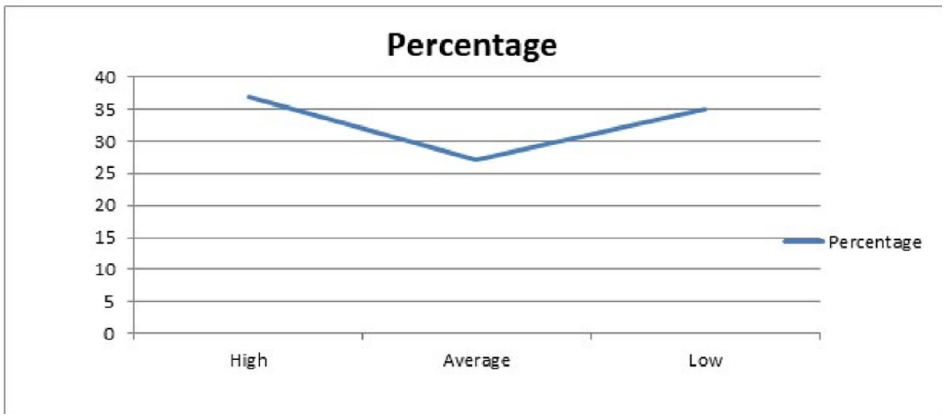
Objective No.1:To find out the level of job satisfaction among secondary school teachers of Mizoram.

The responses derived from the 'Job Satisfaction Scale' for secondary school teachers were diligently scored and tabulated. Based on these results, teachers' job satisfaction was segmented into three distinct tiers: 'High Job Satisfaction', 'Moderate Job Satisfaction', and 'Low Job Satisfaction', adhering to the prescribed norms of the scale. Scores exceeding the 66th percentile were denoted as high job satisfaction, while those sandwiched between the 33rd and 66th percentiles were labelled as moderate job satisfaction. Scores falling below the 33rd percentile were earmarked as low job satisfaction. The parameters for each category are as follows: High Job Satisfaction (a score of 191 or higher), Moderate Job Satisfaction (a score within the range of 181 - 190), and Low Job Satisfaction (a score of 180 or lower). The succeeding table vividly portrays the job satisfaction levels of secondary school teachers within the Aizawldistrict.

Table No. 2

Job Satisfaction among the teachers of Secondary School in Aizawl (N=100)

Range of Score	Number of teachers	Percentage	Level of satisfaction
191 and above	38	38	High
181- 190	27	27	Moderate
180 and below	35	35	Low



As depicted in the referenced Table No 1, of the 100 higher secondary school teachers surveyed in Aizawl, 38 teachers, equivalent to 38%, demonstrated high job satisfaction. Meanwhile, 27% of the teachers, equating to 27 individuals, were categorised under the bracket of moderate job satisfaction. On the contrary, low job satisfaction was observed among 35 teachers, constituting 35% of the total. The overarching observation from this study suggests a sizable portion of secondary school teachers in Aizawl to be highly content with their profession.

Objective No. 2: To compare the job satisfaction among secondary school teachers of Mizoram with reference to gender.

Table No 3

Job Satisfaction among Secondary School Teachers of Mizoram with reference to Gender

Gender	Mean	SD	t-value	df	Sig.level
Male	45	186.68	1.66	98	NS
Female	55	186.05			

***NS means not significant**

As shown in Table No. 3 the t-value for the significance difference between the mean scores of male and female secondary school teachers is 1.66, whereas the required t-value with df= 98, to declare the difference as significant is 1.98 at 0.05 level of confident. Since the calculated t-value was below the criterion t-value, there was no significant difference between these two groups with regard to their job satisfaction. Therefore, the null hypothesis No.1 that stated there is no significant difference in the level of job satisfaction with regard to gender was accepted..

Objective No. 3: To compare the job satisfaction among secondary school teachers of Mizoram with reference to type of management:

Table No.: 4

Job Satisfaction among Secondary School Teachers of Mizoram with reference to Type of Management

Management	Mean	SD	t-value	df	Sig.level
Government	55	14.74	1.66	98	NS
Private	45	16.82			

***NS means not significant**

As shown in Table No. 4.3 the t-value for the significance difference between the mean scores of government and private Secondary School teachers is 1.66 whereas the required t-value with df= 98, to declare the difference as significant is 1.98 at 0.05 level of confident. Since the calculated t-value was below the criterion t-value, there was no significant difference between these two groups with regard to their Job Satisfaction. Therefore, the null hypothesis No.2 that stated there is no significant difference in the level of Job Satisfaction with regard to Gender was accepted.

Findings and discussions

1. The findings indicated that there was no significant difference in job satisfaction amongsecondary school teachers with reference to gender.

Discussion: An intriguing observation from the study is that no significant difference was detected in job satisfaction among secondary school teachers in Aizawl in terms of gender. This suggests that both male and female teachers exhibit comparable levels of job satisfaction. Factors that typically contribute to job satisfaction, such as sense of purpose, work-life balance, and professional growth opportunities, appear to impact both genders equally in this context. Therefore, in Aizawl's secondary education system, gender does not seem to be a determinant factor in influencing teacher job satisfaction.

2. The findings indicated that there was no significant difference in job satisfaction amongsecondary school teachers with reference to types of management.

Discussion: The study also revealed that the type of management in secondary schools in Aizawl does not have a significant influence on job satisfaction among teachers. This implies that regardless of the management style—be it democratic, laissez-faire, or autocratic—teachers' job satisfaction levels remain relatively constant. This finding is particularly interesting as it suggests that in Aizawl's secondary school context, the management approach does not significantly shape or alter the satisfaction teachers derive from their jobs. It appears that other aspects, such as the inherent rewards of teaching, relationships with students, or personal motivation, may play a more substantial role in influencing job satisfaction.

Recommendations

Promoting job satisfaction among secondary school teachers is crucial not only for the teachers themselves but also for the overall educational outcomes of the students. Severalstrategies can be adopted to enhance job satisfaction:

1. Professional Development Opportunities: Regular opportunities for professional development can enhance teachers' skills, knowledge, and confidence. These opportunities can range from workshops and seminars to advanced degrees andcertifications.
2. Adequate Compensation: Ensuring fair and adequate compensation can significantly influence teachers' job satisfaction. Compensation should not only account for the workload but also the additional responsibilities and out-of-classroom time that teachers often contribute.
3. Positive Work Environment: A supportive and collaborative work environment can reduce stress and foster job satisfaction. Regular interaction and collaboration withcolleagues, support from management, and a positive school culture are all crucial.
4. Recognition and Appreciation: Recognizing and appreciating teachers for their hard work and contribution can greatly enhance job satisfaction. This recognition can beboth formal (such as awards) and informal (such as verbal praise or thank-you notes).
5. Reduced Workload: Excessive workload can lead to burnout, reducing job satisfaction. Schools should strive for manageable class sizes and realistic expectations regardingextra duties, allowing teachers to focus on quality instruction.
6. Autonomy: Giving teachers more autonomy in their classrooms can also enhance job satisfaction. When teachers feel trusted and empowered to make decisions, it can leadto greater job satisfaction and improved student outcomes.

Conclusion

In conclusion, this study presents a varied landscape of job satisfaction among secondary school teachers. Out of 100 participants, a notable proportion, 38%, reported high levels of job satisfaction, indicating positive aspects of their professional experience. Conversely, a concerning 35% reported low job satisfaction, highlighting areas that require urgent attention and intervention to enhance their work experience and potentially their effectiveness. The remaining 27% fell into the moderate category, pointing to the possibility of improvements in certain areas. These results underscore the necessity of further exploration and strategies to elevate the levels of job satisfaction among teachers, given the critical role they play in shaping future generations. Further research should be conducted to understand the specific factors leading to these varied levels of job satisfaction and to design interventions to improve overall satisfaction levels, particularly for those reporting low job satisfaction.

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Dynamics of Parental Involvement: A Focus on High School Students in Aizawl

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Abstract

The present study examines the dynamics of parental involvement among high school students in Aizawl. The study comprises of a random selection of 80 parents (32 male and 48 female) for the study. The 'Parental Involvement Scale' developed by Rita Chopra and Surabala Sahoo was used to measure the involvement of parents of high school students. Results highlight that majority of the parents had average involvement. No significant differences were found in the parental involvement with regard to their gender and parent's educational qualification.

Key Words: Parental involvement, High school students, Educational qualification

Introduction

Undoubtedly, among the numerous elements that shape a child's developmental pathway, the family structure holds an unassailable position as the most influential (Berk, 2009). From the dawn of life, parents and familial systems provide essential care to their offspring, catering to their needs and shielding them from diverse potential harms (Broderick & Blewitt, 2015). It is within the sanctuary of the family thatchildren forms their initial relationships. Parents and family members function as the child's foremost educators, acting as role models and influencing their experiential comprehension of life (Santrock, 2011).

Parental engagement is undeniably paramount, serving as a pivotal determinant in influencing both the formative and subsequent stages of an individual's life. Therefore, it is essential that any program designed to optimize the inherent potentialities of all children should position the dynamic interaction between parent and child at the forefront. Parents exhibit a foundational role in rearing their offspring, an endeavour that encompasses not merely the quantifiable commitment of time and fiscal resources, but also an array of nuanced elements that often go unnoticed.

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Parental involvement entails the active engagement and participation of parents or caregivers in their children's education and schooling. It encompasses a variety of actions, behaviors, and mindsets that parents employ to assist and enhance their children's academic, social, and emotional growth. Parental involvement involves the collaborative efforts of parents and schools to enhance children's educational experiences and academic achievements. Numerous studies have emphasized the significance of parental involvement in contributing to a child's academic success. Such involvement can manifest through post-school conversations, helping with homework, participating in extracurricular activities, monitoring academic progress, imparting parental values, attending school events, and volunteering in the classroom.

The significance of parental participation in a student's educational trajectory is indeed irrefutable. Parents wield an instrumental role in sculpting a child's academic performance, with their engagement serving as a determinant of the child's holistic success. Numerous studies affirm that enhanced parental involvement culminates in elevated academic accomplishment, a favourable disposition towards schooling, and amplified self-esteem and self-assuredness in students (Epstein, 2009; Greenwood & Hickman, 1991; Henderson &Berla, 1994; Rumberger et al., 1990; Swap, 1993; Whitaker & Fiore, 2001).

As such, it is of paramount importance to initiate and perpetuate resilient and positive linkages between domestic environments and educational institutions. This collaborative approach ensures that all students are adequately equipped with the requisite academic support, thereby paving the way for their academic triumph. This summary reaffirms the value of parental engagement and its direct correlation with academic achievement, underscoring the importance of fostering harmonious relationships between homes and schools.

Rationale of the Study

Parental engagement in education has consistently held the attention of those dedicated to optimizing the developmental trajectory and educational outcomes of high school students. Contemporary societal dynamics frequently necessitate dual parental employment, leading to diminished time for parental interaction, daily activity supervision, emotional support, and encouragement for their children. Such parental oversight deficits can prompt children to increasingly resort to television and social media, and potentially engage in unfavorable activities. It thus falls upon societal stakeholders and educational philosophers to comprehend students' educational and developmental needs, assuring appropriate supervision and guidance to secure their future prospects (Dearing, Kreider, Simpkins, & Weiss, 2006).

It is essential to discern the types of parental nurturing and support that significantly impact children's academic performance and self-perception. The educational journey of children doesn't commence with school entry but originates and persists within the home environment. Parents serve as the inaugural and lifelong educators, with their support being paramount in optimizing a student's potential for academic success (Desforges&Abouchaar, 2003). Amplifying parental engagement in education has emerged as a key issue in educational

policy and research discourse. Parental engagement and collaborations between families and schools are viewed as among the most successful educational strategies to assure student achievement (Epstein, 2001).

Research evidence has substantiated a positive correlation between parental engagement and academic success, particularly at the high school level (Fan & Chen, 2001). However, the character and extent of parental engagement in secondary education are inconsistently manifested and restricted in scope, with implications often left unclarified. Hence, exploration into the impact of parental engagement on their children's education is both essential and pertinent, given the substantial influence various forms of parental engagement exert on academic development.

Students' academic performance is primarily influenced by the presence or absence of parental engagement and the quality of parental involvement practices. The present study endeavors to augment understanding of parental engagement in their children's education at the high school stage and identify effective practices. The study will examine the individual roles of both mothers and fathers, alongside parents' educational qualifications. Comprehending students' expectations and the types of parental involvement activities closely associated with their academic performance and success is imperative for both parents and educational researchers (Sheldon & Epstein, 2005).

Research Questions

1. What is the level of parental involvement among high school students of Aizawl?
2. What is the level of parental involvement among high school students of Aizawl with reference to gender?
3. What is the level of parental involvement among high school students of Aizawl with reference to their educational qualification?

Statement of the problem

The problem has been stated as "*Dynamics of Parental Involvement: A Focus on High School Students in Aizawl.*"

Objectives of the study

Given the aforementioned research questions, the objectives for the current investigation have been articulated as follows:

1. To find out the level of parental involvement among high school students of Aizawl.
2. To compare the level of parental involvement among high school students of Aizawl with reference to gender.
3. To compare the level of parental involvement among high school students of Aizawl with reference to their educational qualification.
4. To provide suggestions for enhancing parental involvement in their children's education.

Hypotheses of the study

1. There is no significant difference in the level of parental involvement among high school students of Aizawl with reference to gender.
2. There is no significant difference in the level of parental involvement among high school students of Aizawl with reference to their educational qualification.

Methodology

The descriptive survey method has been chosen for this investigation, given that the study's primary objective is to ascertain the level of parental involvement in their children's education.

Population

In the present study, the targeted population includes all parents of high school students, where high school corresponds to class 9 and 10, attending schools affiliated with the Mizoram Board of School Education (MBSE). As per the records of the Directorate of School Education, Government of Mizoram, from the year 2023, there are 127high schools in Aizawl.

Sample

The sample selected comprises of 80 parents who have one or more children attending high school-going children. From the selected samples, there were 48 female respondents and 32 male respondents. The details of the sample are presented under table 1.

Table 1

Details of sample selected

Category		Out of 32 male respondents	Out of 48 female respondents	Total
	Matric	25	37	62
Qualification	**Graduate**	7	11	18

As indicated in Table 1, the researcher has chosen a total of 80 participants for this study. Among these, 32 are male and 48 are female respondents. When categorizing based on educational qualifications, 62 of the participants have completed matriculation, with a gender breakdown of 25 males and 37 females. The remaining 18 respondents, composed of 7 males and 11 females, hold graduate degrees.

Data Collection

The researchers meticulously conducted their investigation in an offline setting, which involved utilizing a questionnaire administered to parents. A total of 80 responses were collected from parents residing in Aizawl, consisting of 32 male and 48 female participants. These parents were requested to provide their reactions and freely select options concerning

their children's education. It is important to note that the responses were treated with utmost confidentiality and were solely used for research purposes.

Tool used for data collection

In this study, the selected tool for data collection was the Parent Involvement Scale (PIS), a tool formulated by Rita Chopra and SurabalaSahoo, under the patronage of the National Psychological Corporation, Agra.

Mode of Analysis

Descriptive statistical measures such as mean, median, standard deviation and inferential statistic like t test were used to analyse the data.

Analysis and Interpretation

The responses received from the participants were categorized, organized into tables, and analyzed using standard scoring procedures. The data analysis process involved employing suitable statistical techniques. In accordance with the objectives and hypotheses of the study, the findings were interpreted in a meaningful manner and presented as follows:

Objective No. 1: To find out the level of parental involvement in their children's education

The scores obtained from parents of high school students on the 'Parent Involvement Scale' were recorded and organized into a table. Based on their responses, parental involvement was categorized into three levels: 'High Parent Involvement,' 'Average Parent Involvement,' and 'Low Parent Involvement,' in accordance with the scale's established norms. Scores above the 66th percentile were classified as high parent involvement, scores between the 33rd and 66th percentiles were classified as average parent involvement, and scores below the 33rd percentile were classified as low parent involvement. Accordingly, respondents were identified as having High Parent Involvement (scores of 81 and above), Average Parent Involvement (scores between 49 and 80), or Low Parent Involvement (scores of 48 and below). The following table-2 presents the level of parent involvement in their children's education within the Aizawl district.

Table 2

Level of Parental Involvement in their Children's Education in Aizawl

Category	Range of score	No. of Parents	Percentage
High Parent Involvement	81 and above	25	31.25
Average Parent Involvement	49 - 80	54	67.5
Low Parent Involvement	48 and below	1	1.25
Total		80	100

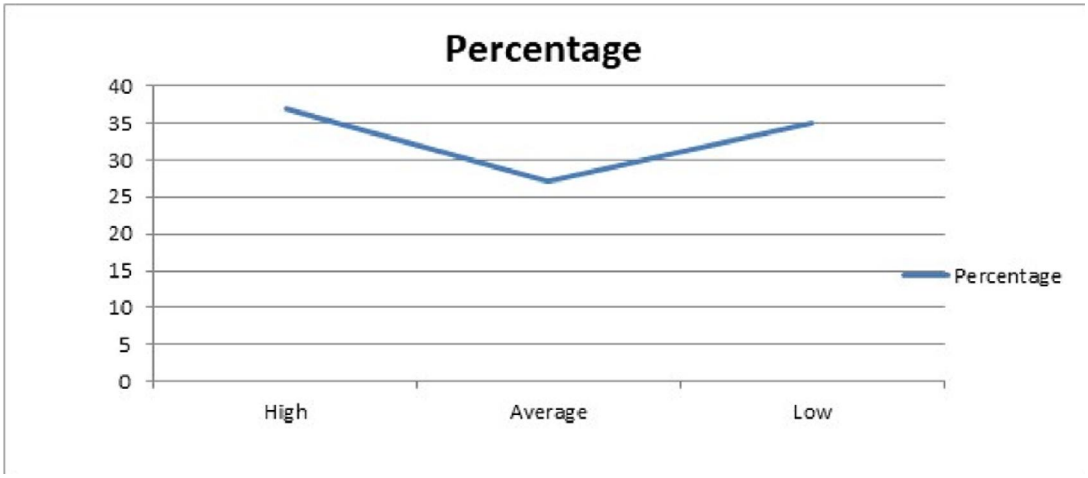

Fig. 1

The data presented in Table-1 and Fig. 1 reveals that out of the 80 parents of high school students in Aizawl, 25 parents (31.25%) exhibited high levels of parental involvement, while 54 parents (67.5%) were categorized as having average parental involvement. Only 1 parent (1.25%) demonstrated low levels of parent involvement. Consequently, the findings suggest that the majority of parents fell into the category of average parental involvement.

Objective No. 2: To compare parental involvement in their children's education with reference to gender.

Hypothesis No.1 states: "There is no significant difference in parental involvement with reference to gender." Table - 3 presents a comparison of parental involvement with reference to gender

Table 3

Comparison of Parent's Involvement with reference to Gender

Gender	Number	Mean	SD	t-value	Sig level
Male	32	77.218	10.709	0.848	NS
Female	48	75.125	10.881		

NS means not significant

According to the data presented in Table 3, the "t" value for evaluating the significance of the difference between the average scores of fathers and mothers is 0.848. As the calculated "t" value is lower than the critical "t" value, it indicates that there is no substantial difference in parental involvement based on gender. Consequently, the null hypothesis (No.1) which states that there is no significant difference in parental involvement based on gender is accepted .However, upon comparing the scores of parental involvement, it is evident that fathers had a

higher mean score than mothers, suggesting that fathers were more actively engaged in their children's education compared to mothers.

Objective No. 3: To compare parental involvement in their children's education with reference to educational qualification.

Hypothesis No.2 states: "There is no significant difference in parental involvement with reference to gender." Table - 4 presents a comparison of parental involvement with reference to educational qualification.

Table 4

Comparison of Parent's Involvement with reference to Education Qualification

Educational Qualification	Number	Mean	SD	t-value	Sig level
Matric	62	75.661	11.372	0.46	NS
Graduate	18	77	8.711		

NS means not significant

Based on the data presented in Table 4, the "t" value for assessing the significance of the distinction between the average scores of parents with a matriculation qualification and parents with a graduate qualification is 0.46. As the calculated "t" value is lower than the critical "t" value, it suggests that there is no significant difference observed between these two groups in terms of their involvement in their children's education. Therefore, the null hypothesis (No.2) which states that there is no significant difference in parental involvement based on educational qualification is accepted. However, upon comparing their mean scores, it was found that parents with a graduate degree exhibited higher levels of involvement in their children's education compared to those with a matriculation qualification

Objective No.4: To provide suggestions for enhancing parental involvement in their children's education

Enhancing the degree of parental involvement in children's education is of paramount importance given its consequential impact on academic outcomes, behavioural conduct, and the elevation of educational goals. Detailed below are suggestions, delineated with the intent of facilitating this crucial augmentation:

1. **Educational Workshops for Parents:** Schools can organize workshops and seminars to educate parents about the significance of their involvement in their child's academic journey. These sessions can include strategies to support their children's learning, understanding the school curriculum, and identifying the signs of learning difficulties.

2. **Regular Communication:** Schools should establish regular, open lines of communication with parents. This might involve periodic parent-teacher meetings, newsletters, emails, or an online portal where parents can monitor their child's progress. Encouraging twoway communication can also make parents feel more involved and valued.

3. **Flexible Participation Opportunities:** Recognizing that many parents may have work commitments or other responsibilities, schools can offer flexible options for involvement. This can include offering volunteer opportunities at different times, virtual meetings, and other ways parents can contribute remotely.

4. **Parental Involvement in Decision-Making:** Schools can invite parents to participate in decision-making processes, such as on school boards or committees. This can empower parents and reinforce the importance of their contributions to the school community.

5. **Home-Based Involvement:** Parents can be encouraged to engage in educational activities at home, such as reading together, assisting with homework, or discussing academic topics of interest. Schools can provide resources or guidelines to help facilitate these activities.

6. **Collaborative Projects:** Organizing events or projects where parents and children work together can enhance parental involvement. This can range from community service projects to school events or competitions.

7. **Training and Resources:** Parents may feel more confident in their ability to support their child's education if they have access to the necessary training and resources. This could include workshops on understanding contemporary teaching methods, resources on the latest educational technology, or strategies for supporting a child's emotional well-being.

8. **Promote a Positive School Climate:** A welcoming and inclusive school environment can make parents feel more comfortable and encouraged to participate in their child's education. Ensuring that parents feel respected and valued can significantly enhance their level of involvement.

By implementing these strategies, schools can promote a more active role for parents in their children's education, which can have far-reaching benefits for academic achievement and the overall school environment.

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Accessibility of Colleges' ICT Resources and Personal ICT Resources Possessed by College Students in Mizoram in terms of Stream of Studies

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Abstract

The present study aimed at exploring the accessibility of colleges' ICT resources for college students in Mizoram and personal ICT resources possessed by the students in terms of stream of studies. Initially, 18 colleges out of the 27 general colleges offering arts and/or science and/or commerce in the state of Mizoram were randomly selected. Students from arts, science and commerce streams were again randomly selected to represent different streams of studies. Thus, the sample consisted of 1085 students comprising of 525 arts, 285 science and 275 commerce students. Data were collected through questionnaire prepared for this study. The findings revealed that most of the ICT resources available in the colleges were accessible to the students. The percentages of students reporting the accessibility of various ICT resources were highest among science students, followed by arts students and then by commerce students. While majority of college students in Mizoram had cell phone as personal ICT resource, majority of them did not have important personal ICT resources such as desktop computer, laptop computer, and printer. The percentages of students reporting their possession of personal ICT resources was highest among science students.

Keywords: *ICT resources, Accessibility, College students, Stream of studies*

Introduction

The most striking invention in the field of education is the integration of ICT in education. The educational institutions should cope with the suddenly increasing demand for information and skills. The learner is not just dependent on the internet for formal interaction with the advent of information and communication technology. A learner living in anywhere can pay fees through online and can access any course of interest through internet. Education has benefitted from technology on many different levels and in different ways. Many educational institutions in the developed countries are offering courses through technologies. It is essential

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to integrate technological improvements in the Indian classroom in order to keep up with the technological revolution in the teaching-learning process of industrialised countries (Arulsamy, 2014). The advent of new technologies and expansion of knowledge has opened up new outlooks for teaching and learning (Mrunalini & Ramakrishna, 2016).

Students today are becoming digital migrants due to the rapid pace of learning and the availability of technologically based opportunities. If we teach today the same way we taught yesterday, we are not preparing students for today or tomorrow, as they have progressed from 'know what' learning to 'know how' and 'know where' learning (Bhatia, 2011).

National Education Policy 2020 a revolutionary and far reaching education policy in the country gives emphasis, among many others, on integration of ICT with education.

Review of Related Studies

Fanai (2014) investigated the use of ICT among IGNOU B.Ed students. She found that 92%-100% of them owned a mobile phone and a television, and the percentage of teachers who used a computer was also very high (80%-98%). Teachers who used ICT in the classroom percentage were extremely low. The main cause for not using computers in the classroom was due to lack of computer resources.

Lu, Tsai and Wu (2015) studied the role of ICT infrastructure and its application in Chinese middle and primary schools classrooms. They found that ICT infrastructure influenced schools in urban and rural areas. The role of ICT infrastructure in city schools was found 'utilisation of multi-media classrooms' and thus its role in city schools should be reinterpreted.

Sawant (2015) found that traditional approaches and methods of teaching - learning and evaluation have undergone transformation in the use of ICT tools (such as online smartboard, projector, laptop, android system, Pcs, online lecture, tablet, cellular phone, e-readers, web resources, software and hardware devices). There has been a significant increase in the use of ICT tools and resources.

Chuaungo (2017) investigated usage of ICT among B.Ed students and teachers of IASE in Mizoram. Findings are:

a. 50 per cent of B.Ed students reported that their teachers used power point presentations frequently in classroom, while only 40 per cent of teachers reported the same.
b. Twenty-seven per cent of students were uncomfortable with teachers' use of ICT.
c. Aside from the ICT teacher, no other teacher provided students with specific instruction preparation and use of power point presentation.
d. The students' ICT skills and confidence were only limited and minimally developed.
e. Majority of the students can demonstrate their ICT skills during practical.
f. Whatsapp messenger was the online communication tool of choice for the vast majority of teachers.
g. Inadequate facilities and equipment, irregular internet access, and insufficient number of ICT experts in the institution were barriers to ICT use by the teachers.

Siddiquah and Salim (2017) surveyed 'the ICT facilities, skills, usage, and the problems faced by the students of higher education' of Lahore, Pakistan. The findings show that the students have computers and internet facilities at home and universities. They are expert at simple software skills and spend more time on computers for recreational and other purposes than academic purpose. They believe that the use of ICT supports their learning. The problems faced by the majority of the students were:

a. Slow speed of computers
b. signal problem in Internet
c. virus threat
d. poor working condition of computers
e. load shedding
f. lack of access of Internet

The findings concluded that universities should pay more attention on infrastructure improvement addressing the ICT related problems of students.

Harrell and Bynum (2018) discussed technology as an integral part of our daily lives in their paper factors affecting technology integration in the classroom. Although many technological devices are available in classrooms, several external and internal factors like poor infrastructure, lack of network bandwidth and inadequacy of devices influence implementation of technology in classrooms. Teachers became discouraged and abandon in fully integrating technology.

Kumara and Kumar (2018) examined the digital divide between rural and urban students of 64 high schools. The findings are as follows:

a. 20.66 per cent of rural students used computers while 69.70 per cent of urban students used computers for academic purposes.
b. Students faced "frequent electric power failure" while using computers.
c. Most students depend largely on their teachers to learn computer.
d. Only 6.25% of rural schools had permanent computer teachers.
e. Majority of urban schools (96.87%) had computer teachers.

According to the studies mentioned above, only a few studies on ICT resources have been undertaken in various nations and this particular field has not been adequately explored, the current study was undertaken in an attempt to fill this research gap.

Rationale of the Study

Students today are becoming digital migrants due to the rapid pace of learning and the availability of technologically based opportunities. If we teach today the same way we taught yesterday, we are not preparing students for today or tomorrow, as they have progressed from "know what" learning to "know how" and "know where" learning (Bhatia, 2011).

Incorporating technology into education can help bring quality education to everyone and everywhere, which is a key goal of the education for all initiative. Future citizens must

be equipped with sufficient knowledge to keep up with technological advances and 21st-century demands. According to UNESCO, recognising innovative ICT in education practises can encourage and enhance even more educational innovations (UNESCO, 2009).

The history of the growth and evolution of educational technology, as well as the inventions and advances in the fields of printing technology, communication and information technology, as well as hardware and software technology linked with the history of technological progress and its impact in the field of education (Mangal&Mangal, 2009). Education has benefitted technology on many different levels and in different ways. Many educational institutions in the developed countries are offering courses through technologies. It is essential to integrate technological improvements in the Indian classroom in order to keep up with the technological revolution in the teaching-learning process of industrialised countries (Arulsamy, 2014). The advent of new technologies and expansion of knowledge have opened up new vistas for teaching and learning (Mrunalini& Ramakrishna, 2016).

Statement of the Problem

The problem of the present study is thus stated as "Accessibility of Colleges' ICT Resources and Personal ICT Resources Possessed by College Students in Mizoram in terms of Stream of Studies

Operational Definitions of Key Terms Used

The key terms used in the title of the present study are operationally defined as follow:

College: The term 'college' in the present study refers to a college offering general courses such as arts, science and commerce

ICT: In the present study, ICT stands for technological tools that provide the instruments of teaching-learning and refers to digital infrastructure employed in the form of application.

Accessibility: Accessibility in the present study concerned about the usability of ICT resources availability in the college

ICT Resources: ICT resources refer to ICT tools/devices that aid and support teaching and learning.

Objectives of the Study

1. To study the accessibility of colleges' ICT resources for students
2. To explore personal ICT resources possessed by college students

Delimitation of the Study

The present study was delimited to colleges in Mizoram offering general courses of study such as arts, science and commerce.

Methodology of the Study

Research approach: The present study adopted a descriptive method. For analysis of data collected for the present study, both qualitative and quantitative approaches were followed.

Population and Sample: All the general colleges in Mizoram offering arts, science and commerce subjects formed population of the present study. Out of the 27 colleges which formed the population, 18 general colleges in the state were selected as sample colleges through multi-stage sampling technique. Thus, a sample of 1085 students comprising of 525 arts, 285 science and 275 commerce students finally constituted the sample of students were selected by following simple random sampling method.

Tools used: Questionnaire for students constructed by the investigators for studying accessibility of college's ICT resources and personal ICT resources possessed used for the present study.

Statistical Treatment of Data: For quantitative analysis, simple statistical techniques such as frequencies and percentages were applied.

Analysis and Interpretation of data

Data collected through the tools mentioned above were analysed and interpreted as follow:

Table 1: Students' Accessibility of Colleges' ICT Resources

Sl.No	College's ICT Resources	No. of students who say 'Yes' N=1085	Arts N=525	Science N=285	Commerce N=275
1	Interactive Whiteboard/ Smart board	127(11.7)	64(12.2)	33(11.6)	30(10.9)
2	Projector (Multi media, Slide)	262(24.1)	123(23.4)	85(29.8)	54(19.6)
3	Televisions	310(28.6)	146(27.8)	85(29.8)	79(28.7)
4	Printer	346(31.9)	155(29.5)	106(37.2)	85(30.9)
5	Photocopier	789(72.7)	427(81.3)	174(61.1)	188(68.4)
6	Scanner	218(20.1)	78(14.9)	83(29.1)	57(20.7)
7	Laptop Computer	188(17.3)	68(13.0)	57(20.0)	63(22.9)
8	Desktop Computer	250(23.0)	119(22.7)	71(24.9)	60(21.8)
9	Microphone	371(34.2)	171(32.6)	102(35.8)	98(35.6)
10	Voice Amplifier	316(29.1)	174(33.1)	67(23.5)	75(27.3)
11	E-Resource centre	765(70.5)	395(75.2)	172(60.4)	198(72.0)
12	Computerised Library	633(58.3)	315(60.0)	179(62.8)	139(50.5)
13	ICT Classrooms/ E-classrooms	788(72.6)	402(76.6)	200(70.2)	186(67.6)
14	Wi-fi in the Campus	629(58.0)	322(61.3)	152(53.3)	156(56.4)

Figures in the parentheses indicate percentages

Table 1 reveals the extent to which colleges' ICT resources are accessible to the students.

a) Interactive white board/ smart board are accessible to only 11.7 per cent of college students in Mizoram. The percentage of students of different streams of study who say that smart boards are accessible to them is highest among arts students (12.2%), followed by science students (11.6%) and then by commerce students (10.9%).

b) While projectors are available in cent per cent of the colleges, 24.1 per cent of the students report that they can access projectors of their colleges. The percentage of the students reporting so is largest among science students (29.8%), second largest among arts students (23.4%) and least among commerce students (19.6%).

c) Televisions are accessible to students as reported by 28.6 per cent of the students.

d) Printer is accessible to many students (31.9%) of the colleges in Mizoram. Science students constitute the largest percentage (37.2) followed by commerce students (30.9) and then by arts students (29.5).

e) Large majority (72.7%) of the college students can get access to photocopier of their college. Among students of different streams of study, arts students constitute the largest percentage seconded by commerce students while science students constitute the least percentage.

f) As many as 20.1 per cent of students report the accessibility of college scanner to them for learning purpose.

g) Only 17.3 per cent of students report the accessibility of college laptop computer to them for learning purpose. Whereas 22.9 per cent of commerce and 20 per cent of science students report so, as many as 13 per cent of arts students do not say so.

h) As many as (23.0%) students can get access to their college desktop computers. While the percentage of students saying so is 29.1 per cent and 20.7 per cent in the case of science and commerce students respectively, it is only 13 per cent in the case of arts students.

i) Microphones are accessible to students as reported by 34.2 per cent of the students. Equal percentage of science and commerce students reporting in microphone, smallest among arts students.

j) Voice amplifier are claimed to be accessible by 32.6 per cent of the students.

k) E-resource centres are accessible to students as reported by 70.5 per cent of the students. The largest percentage of the students who report so is constituted by arts students (75.2%) followed by commerce students (72%) and then by science students (60.4%).

l) Computerized library is reported to be accessible by only 58.3 per cent of the students which may mean that many students do not visit and use the library. The percentage of the teachers reporting the accessibility is highest among science students, second highest among arts students and lowest among commerce students.

m) Large majority of the students (72.6%) report that they get access to ICT classrooms/ E-classrooms as rest of the students are from those colleges not having ICT classrooms. The largest percentage of students having access to ICT classrooms are constituted by arts students, second largest percentage by science students and smallest percentage by commerce students.

n) College students in Mizoram (58.0%) can access wi-fi provided in the campuses. Arts students constitute the largest percentage of the students reporting so followed by commerce students and then by science students.

Table 2: Personal ICT Resources Possessed by Students

Sl.No	Personal ICT Resources	Possession Total N=1085	Arts N=525	Science N=285	Commerce N=275
1	Desktop Computer	342(31.5)	140(26.7)	109(38.2)	93(33.8)
2	Laptop Computer	262(24.1)	123(23.4)	85(29.8)	54(19.6)
3	Tablet	323(29.8)	116(22.1)	113(39.6)	94(34.2)
4	Printer	296(27.3)	98(18.7)	111(38.9)	87(31.6)
5	Cell Phone	892(82.2)	426(81.1)	238(83.5)	228(82.9)
6	Scanner	547(50.4)	261(49.7)	141(49.5)	145(52.7)
7	Wifi/ Internet Access	388(35.8)	177(33.7)	122(42.8)	89(32.4)

Figures in the parentheses indicate percentages

Table 2 reveals that:

a) As low as college students in Mizoram (31.5%) possess desktop computer. Science students with 38.2 per cent having the facility are best in this regard followed by commerce students with 33.8 per cent of them having the facility. Only 23.4 per cent of arts students have personal desktop computer.

b) As low as 24.1 per cent of college students have personal laptop computer leaving as many as 75.9 per cent without the facility. The percentage of students having this facility is 29.8 among science students, 23.4 among arts students and as low as 19.6 among commerce students.

c) As many as 29.8 per cent of college students in Mizoram have their own tablet. Science students are best in this regard followed by arts and then by commerce students.

d) Many college students in Mizoram (27.3%) have their own printer. The percentage of students having printer is highest among science students (38.9%), second highest among arts students (22.1%) and lowest among commerce students (19.6%).

e) Large majority of college students in Mizoram (82.2%) have cell phone for themselves. Science students stand first with 83.5 per cent of them, seconded by commerce students with 82.9 per cent, followed by arts students with 81.1 per cent of them possessing this facility.

f) College students (50.4%) have their own scanner. Commerce students are best in this regard with 52.7 per cent of them possessing the facility followed by arts students with 49.7 per cent and then by science students with 49.5 per cent of them having scanner.

g) College students in Mizoram (35.8 %) have their ownwifi/ internet access. Science students (42.8 %) are best in this regard followed by arts and then by commerce students.

Major Findings and Conclusions

1. Most of the ICT resources available in the colleges were accessible to the students. The percentages of students reporting the accessibility of various ICT resources were highest among sciencestudents,followed by arts students and then by commerce students.
2. Majority of college students in Mizoram had personal ICT resources i.e. Cell phone.
3. Many college students have scanner this may be due to larger number of students have cell phones supported scanner of their own.
4. Majority of college students did not have personal ICT resources such as desktop computer, laptop computer, and printer. The percentages of students reporting personal ICT resources possessed is highest among science students.

Suggestions for Improvement of ICT Resources in Colleges of Mizoram

1. Colleges in Mizoram should be equipped with modern ICT facilities to strengthen and improve teaching-learning process as it is now almost impossible to have good and effective education without ICT resources in this age of technology.
2. Colleges should give more efforts to have interactive white board/ smart board, ICT enabled classrooms and other facilities to facilitate smart class.Not all houses have computers and Internet facilities to use daily. In this regard, the
3. Main challenge is to provide appropriate ICT tools to colleges in Mizoram.In future studies more focus should be given on management strategies and policies to address thebarriers faced by students in using ICT resources in learning.
4. More studies done with the gender could give more appropriate analysis whereby the gender perceptions could be analyzed.
5. Evaluation studies on ICT effectiveness among the students.
6. The colleges should invest more on improving the infrastructure to address the ICT related problems of students.

Conclusion

ICT may be used for different purposes like study assignments, seeking information for study materials, making friends, recreational activities and shopping in today's world. Students use the internet for communication, research, and entertainment. Colleges can create incentives

for uses of ICT resources in education, for making software and hardware more affordable and relevant for students. There are multiple issues and challenges confronting the integration of ICT in educational institutions. Rural areas usually face problems with respect to the availability of ICT related resources such as supporting infrastructure, uninterrupted electricity, projectors, scanners, smart boards, lack of internet and so on. Despite being an integral component of the ICT, internet is lacking in most rural areas. ICT will be the next instructor apart from the traditional classroom interaction. It will help in no small way in bringing knowledge to the doorstep of the learner and make us compete at the world level.

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Environmental Education on Deforestation

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Abstract

The escalating interest in environmental preservation among humanity has underscored the realization that indiscriminate and imprudent deforestation may precipitate a catastrophe with not only ecological ramifications, but also economic and social consequences. Deforestation has been molding global climatic conditions detrimentally and has emerged as a significant environmental threat at both global and regional levels. Despite advancements in education, information dissemination, and overall awareness regarding the significance of forests, deforestation rates have not diminished substantially. This is because communities and individuals continue to devastate forest lands for personal profit and subsistence agriculture, leading to profound alterations in the atmosphere and environment.This paper presents a summary of the causes of deforestation and an analysis of the frequency of fire occurrences and the areas affected by fire in Mizoram over a period of 20 years. The study employs descriptive statistics to elucidate these trends. In response to the pervasive global deforestation patterns, initiatives such as Environmental Education (EE) have been introduced to help alleviate these pressing issues.

Keywords: *Frequency of Forest fire, Area affected by fire, Descriptive statistics.*

Introduction

Forests serve a multitude of functions that can be broadly categorized into three primary groups: protective functions, productive functions, and accessory functions (Trivedi, 2004). Forests cater to the needs of local and indigenous populations, while also preventing rapid evaporation of water from the land and helping to maintain stable temperature levels. Most importantly, forests constitute a critical component of the natural environment. They provide habitats for the Earth's wildlife and contain a plethora of natural resources, including medicinal herbs and plants. Additionally, forests play a vital role in regulating life cycles on the planet

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(Poddar, Mukherjee, &Nandy, 2011). As population growth continues and demands for land increase, along with the expansion of development and the adoption of new technologies, deforestation has emerged as a global concern. Regardless of the underlying causes, deforestation has severe consequences upon the quality of life.

Trees contribute greatly to human existence by converting hazardous carbon dioxide into breathable oxygen. Not only does deforestation impact this natural process, but the burning of trees common in deforestation releases large amounts of carbon dioxide into the atmosphere, adding to the greenhouse gas effect and possibly impacting global warming.

Deforestation is considered to be one of the contributing factors to global climate change. The problem caused by deforestation is the impact on the global carbon cycle. Gas molecules that absorb thermal infrared radiation are called greenhouse gases. If greenhouse gases are in large enough quantity, they can force climate change. Amongst the GHGs, CO2 emissions from shifting cultivation contribute the maximum with 2620.27 Mg. The level of emission of other GHGs are comparatively low to that of CO2; however, they contribute to a major share in warming the atmosphere owing to their higher values of global warming potential (Sahoo, Singh and Prasad, 2018).

Objectives: The current study aims to examine the environmental degradation caused by deforestation in Mizoram through a review of various reports, while also proposing mitigation measures.

1. To assess the extent of forest fires and the area affected by fire in Mizoram.
2. To disseminate pertinent information regarding Environmental Education knowledge to young individuals and children.
3. To offer valuable insights to state governments, Environmental Education policymakers, non-governmental organizations (NGOs), and various stakeholders in addressing deforestation through the implementation of Environmental Education strategies.

Methodology

The current study relies entirely on secondary data obtained from various formats provided by the Government of Mizoram. Information on the number of fire occurrences and the total area affected by fire in square kilometers was gathered from the Principal Chief Conservator of Forests (PCCF), Government of Mizoram. Descriptive statistics were utilized for calculations.

Present situation in Mizoram

Among the States and Union Territories of India, Mizoram is highly incomparable with other States in the richness of its forest resources. It is endowed with a moderate climate and a good amount of rainfall has led to the speedy growth of vegetation which reduces the recycling period of the Jhum land. Moreover, it has a large coverage of forest from the total

geographical area (TGA) and often stands among the highest rank at the national level as assessed by the Forest Survey of India. But in the recent decade, Mizoram has lost its forest quality as well as quantity. Negative changes have been experienced up to the last assessment of 2021 since 2009. This can be due to different factors of anthropogenic activities and natural calamities (Vanlaltanpuia, Rao, &Lalrindika, (2022). Therefore, study on forest degradation, its causes and awareness among the mass of the people is a pre-requisite for combating forest degradation. According to the State of Forest Report 2009- 2021, the total loss of forest cover in Mizoram is 1420.49 sq. km. The largest forest cover loss was detected between the years 2015 and 2017 as 562 km2. The latest State of Forest Report (2021) reveals that 186 sq. km of forest cover was decreased from the previous assessment in the year 2019.

Forest fires are a prevalent phenomenon in Mizoram, typically occurring during the dry season between February and April. The majority of these fires result from traditional cultivation methods for agricultural purposes. On average, 164 instances of fire occurred in the state, and 44 square kilometers were affected by forest fires between 2000 and 2021. The regression trend line indicates that the Area Affected by Fire (ARF) is declining, while the Frequency of Fire Occurrences (FFO) is increasing. The low R-squared values for both ARF and FFO suggest that human behavior is more difficult to predict than physical processes.

In 2010, the largest area affected by fire was recorded, covering 301.84 square kilometers. In contrast, 2003 witnessed the lowest number of fire occurrences (13) and the smallest area affected by fire (1.68 square kilometers). Both skewness and kurtosis are positive, displaying a leptokurtic distribution with a broader, flatter shape and fatter tails, indicating a tendency for the frequency of fire occurrences and area affected by fire to be above the mean.

The standard error of frequency of fire occurrences demonstrates that the values within the dataset are generally close to the mean. However, the higher standard deviation indicates a substantial variation in the data, ranging from 7 to 1277. Similarly, the standard error, standard deviation, kurtosis, and skewness for the area affected by fire display positive values, signifying that the values tend to cluster near the mean.

Table-I

	Frequency of Fire Occurrences	Area effected by Fire (Sq/km)
Mean	164.65	44.356
Standard Error	61.04878442	17.40553081
Median	93	12.095
Mode	13	#N/A
Standard Deviation	273.0184638	77.83990016
Sample Variance	74539.08158	6059.050057
Kurtosis	16.40166939	6.120986844
Skewness	3.904082647	2.512271486
Range	1270	300.16

Minimum	7	1.68
Maximum	1277	301.84
Sum	3293	887.12
Count	20	20
Confidence Level(95.0%)	127.776574	36.43019459

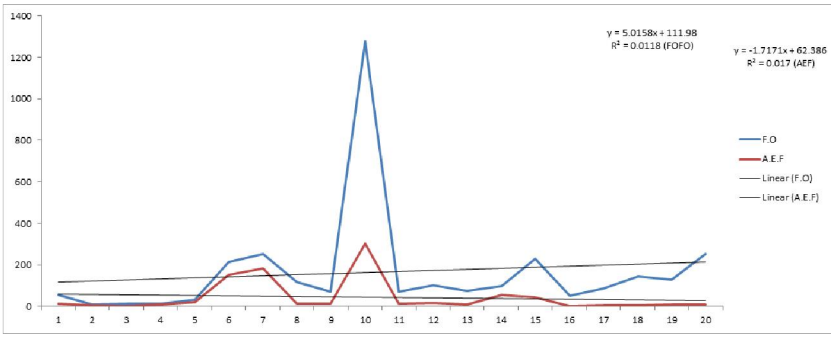

Figure-

Discussion:

Implementing educational campaigns is of paramount importance in combating deforestation through raising awareness. Such campaigns serve as an exemplary means of promoting knowledge about deforestation by educating individuals about the significance of trees and forests. The development of environmental stewardship does not occur overnight; rather, it necessitates awareness from an early age. The concepts of understanding and maintaining the environment and ecological balance should be integrated and promoted through school curricula and activities. In numerous countries, environmental education has emerged as a novel aspect of the educational curriculum, aiming to foster and encourage positive attitudes towards the environment, particularly among young people.

In developing countries, hill areas continue the practice of shifting cultivation, as it is the primary option provided by their environment. Due to the undulating and hilly terrain of these regions, alternative cultivation methods are not as feasible as they are in plain farming areas found in other parts of the region. This situation is evident in the state of Mizoram, which boasts rich flora and fauna, including numerous rare and endemic species of plants and animals. The forests in the state are managed through a three-tier system, comprising state ownership and control, district councils, and village councils.

Forest fires are a common occurrence in Mizoram, typically happening during the dry season from February to April. The majority of these fires result from traditional agricultural practices. On average, 44.35 square kilometers of land are affected by forest fires, with 164.45 incidents occurring annually between 2001 and 2020. According to the latest State of Forest Report (2021), very dense forest class covers less than 1% (157 km²) of the total geographical area, while moderately dense forest constitutes approximately 27.11% (5715 km²).

Mizoram has been classified into five forest fire-prone zones: Extremely Fire Prone Zone (covering 26.28% of the total geographical area), Very Highly Fire Prone Zone (49.73%), Highly Fire Prone Zone (18.91%), Moderate Fire Prone Zone (3.05%), and Less Fire Prone Zone (2.03%). From 2001 to 2021, Mizoram lost 274k hectares of tree cover, equivalent to a 14% decrease since 2000, and 136 Mt of CO, emissions (Global Forest Watch, 2021). Carbon is not the only greenhouse gas affected by deforestation; water vapor is also considered a greenhouse gas. Deforestation has led to reduced vapor flows from the land, and even this minor change can disrupt natural weather patterns and alter current climate models.

Conclusion

The urgent need to preserve our environment, conserve natural resources, and utilize them responsibly cannot be overstated. For sustainable development and to prevent the exploitation of natural resources, individuals must be educated about environmental protection and preservation. It is crucial to view the Earth as a habitat not only for the present but also for the distant future, ensuring space and resources for every living being. Our fundamental responsibility lies in the protection and safeguarding of our environmental heritage, making environmental literacy essential.

Teachers play a vital role in educating and training students on the importance of environmental protection and conservation, instilling environmental awareness and a sense of responsibility. To enable teachers to successfully promote environmental awareness, educational institutions must provide conducive conditions. This support allows teachers to contribute to the development of educational plans focused on environmental awareness and integrate indigenous knowledge into the formal education system.

Additionally, a significant portion of the population is illiterate, having been denied access to formal education. Such individuals are often unable to recognize environmental imbalances, but they continue to use natural resources without consideration for preservation. This diverse and dispersed group, including forest inhabitants, the poor, and villagers, possess strong sense of community. Their environmental education must be locally specific, enabling them to become environmentally friendly and coexist harmoniously with their surroundings.

By educating people on the importance of the environment and sustainable logging practices, deforestation rates may begin to decline. Understanding the positive and negative ways humans interact with ecosystems and the advantages of utilizing renewable energy sources can significantly impact future generations. These generations believe that citizens have a collective responsibility to collaborate, use their voices, and protect the planet. They are motivated to acquire new knowledge and stay informed. As such, educational programs and campaigns are critical – they raise public awareness, promote critical thinking, and enhance individuals' problem-solving skills.

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Registered with the Registrar of Newspapers of India
Registration No. MIZMIZ00939/2010

Declaration

Name of the Journal	: Mizoram Educational Journal
Nature of Journal	: A National Refereed Journal
Periodicity	: March, June, September & December
ISSN	: 2395-731X
Publisher	: Prof. Lalbiakdiki Hnamte
Chief Editor	: Prof. Lalhmasai Chuaungo
Address for Communication	: B-4/8, Upper Republic, Aizawl - 796-001, Mizoram Or Department of Education, Mizoram University, Aizawl, Mizoram – 796 004 Email : mefjournal@yahoo.com

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