# A COMPARATIVE STUDY OF TIME MANAGEMENT BEHAVIOUR OF MEDICAL AND ENGINEERING STUDENTS IN MANIPUR

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# A COMPARATIVE STUDY OF TIME MANAGEMENT BEHAVIOUR OF MEDICAL AND ENGINEERING STUDENTS IN MANIPUR

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## CERTIFICATE

This is to certify that the thesis work done on "A Comparative Study of Time Management Behaviour of Medical and Engineering Students in Manipur" is a bonafide work carried out by Nongmeikapam Jinalee under my supervision and guidance. This thesis is submitted towards partial fulfilment of the award of Degree of Doctor of Philosophy in Management.

She has fulfilled all the required norms laid down under the Ph. D regulations of Mizoram University. The thesis is the result of her own investigation. Neither the thesis as a whole nor any part of it was ever submitted to any university for any research degree.

Aizawl (Dr. Amit Kumar Singh)

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**January 2022**

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## DECLARATION

I Nongmeikapam Jinalee, hereby declare that the subject matter of this thesis is the record of work done by me, and the content of this thesis did not form basis of the award of any previous degree to me or to the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/ Institute.

This is being submitted to the Mizoram University for the degree of Doctor of Philosophy in Management.

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## LIST OF ACRONYMS/ ABBREVIATIONS

| Sl. no. | Abbreviation | Full form |
|---|---|---|
| 1 | ANOVA | Analysis of Variance |
| 2 | AICTE | All India Council for Technical Education |
| 3 | BBC | British Broadcasting Corporation |
| 4 | CGPA | Cumulative Grade Point Average |
| 5 | CIPET | Central Institute of Petrochemicals Engineering & Technology |
| 6 | CAU | Central Agricultural University |
| 7 | DARE | Department of Agricultural Research and Education |
| 8 | DMU | Dhanamanjuri University |
| 9 | EDP | Entrepreneurship Development Programs |
| 10 | GER | Gross Enrolment Ratio |
| 11 | GCT | Government College of Technology |
| 12 | IIT | Indian Institute of Technology |
| 13 | IIIT | Indian Institute of Information Technology |
| 14 | IP | Intellectual Property |
| 15 | JNIMS | Jawaharlal Nehru Institute of Medical Sciences |
| 16 | JEE | Joint Entrance Examination |
| 17 | KVK | Krishi Vigyan Kendra |
| 18 | MIT | Manipur Institute of Technology |
| 19 | MTU | Manipur Technical University |
| 20 | MHRD | Ministry of Human Resource Development |
| 21 | MIU | Manipur International University |
| 22 | NIT | National Institute of Technology |
| 23 | NIELIT | National Institute of Electronics & Information Technology |
| 24 | NBA | National Board of Accreditation |
| 25 | NAAC | National Assessment and Accreditation Council |

| | | |
|---|---|---|
| 26 | PFO | Preference for Organisation |
| 27 | PCOT | Perceived Control of Time |
| 28 | RIMS | Regional Institute of Medical Sciences |
| 29 | RII | Relative Important Index |
| 33 | SGP | Setting Goals and Priorities |
| 31 | SPSS | Statistical Package for Social Sciences |
| 32 | SH | Study Habit |
| 33 | SM | Social Media |
| 34 | TMM | Mechanics of Time Management |
| 35 | TEQIP | Technical education Quality Improvement Programme Phase |
| 36 | TMB | Time Management Behaviour |
| 37 | UGC | University Grant Commission |

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# Introduction

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## 1.1: Introduction

Time management is one of the important keys to success of an individual. Effective time management can help a lot in driving a person towards success. Since different type of people exists, different life activities involving different patterns of time also co- exist. Some people can work actively during the day and some may do so at night. Depending on one's favourable time, a person has to make his/ her own schedule. Prioritising a particular task is important in time management. A proper planning can contribute a lot in time management.

Time is of great importance to all individuals. But the concept of time is an abstract and important value in which events flow spontaneously, and which all beings in the universe own equally (Karakose, 2014). In reality time is unmanageable, however a person can manage the activities in his/ her life (Dobbins and Pettman, 1998). People do time management so as to increase the number and quality of activities to be carried out within a limited period of time (Karakose, 2015). According to Efil (2007) specific knowledge, skills and abilities are required to manage time in a conscious way. Moreover, effective time management can provide individuals with ample opportunities to devote more time to their family and social life. Time management has thus become one of the most important elements of individual and corporate success, especially in professional work life (Koch, 1998).

Time is a resource which cannot be changed, stored or purchased. So there is a need to manage time for success in this competitive and fast changing world. According to Orucu *et al.*, (2007) time is a vital resource every person possesses equally but fails to utilize at the same level due to a variety of reasons. Time management is an act of directing. This process involves self- recognition of the individual first, familiarity with his/ her own personal traits, conducting analysis on the time- use problem and collecting relevant data, assessing alternative solutions, selecting and implementing one of these alternatives (Iz and Ozen, 2010).

Classens *et al.* (2007) have approached time management in a broader way and have described time management behaviour in terms of three dimensions of behaviours which are: time assessment behaviour, planning behaviour and monitoring

behaviour. Recently a fourth dimension called executive behaviour was also added (Classens *et al.,* 2009). These studies clearly incorporate the 'mechanics of time management' of Macan (1994), where mechanics of time management focuses on planning, organising and controlling functions. According to Hellsten (2012) time assessment can be referred as time analysis and time estimation. Time assessment behaviour gives awareness of one's time used (Classens *et al.,* 2009). Time assessment can help students to understand the activities that consume time and they can forecast time consuming events in future (Whipp*et al.,* 2002). Time assessment behaviour is a prerequisite to planning and it is also necessary in monitoring and executive behaviours (Classens *et al,* 2009).

Planning is one of the time management behaviours and it aims at achieving goals through the effective use of time by grouping many work/ job related activities according to their importance, priorities and time deadlines (Eilam & Aharon, 2003). With reference to the needs of the students, planning is about preparing for examinations, facing challenges and taking opportunities to have a successful future. Goal setting, prioritising, organising and scheduling are behaviours associated with planning (McNamara, 2016).

Monitoring can be defined in many ways but in relation to time management, it can be understood as observing the use of time in doing work activities and then taking corrective and appropriate actions so as to make sure that the time deadlines are met (Classens *et al.,* 2009). The advanced technology can help in monitoring time management but technology can also be responsible for creating interruptions (Epper & Fehr- Duda, 2012). Interruptions and distractions often proved costly and can increase time consumption by 25 % (Schwartz, 2007). Thus, monitoring of one's own time with regard to planned activities is a matter of self- regulation (Classens *et al.,* 2009) and it also depends on a person's goals and the approach adopted to complete it (Oettingen *et al.,* 2015).

The executive time management behaviour has little role to play for the conducted study as it is confined to students. However, this can be incorporated by considering the students as executives and teachers/ mentors as monitors. This can be evident in

group projects, group discussions, classroom activities etc. Handing over responsibilities is a kind of motivation and encouragement that can stop wasting time, overcome procrastination and help in self- regulation so as to achieve goals and avoid wasting time in unnecessary activities (Classeens *et al*, 2009).

An individual is living in a competitive world, therefore there is a need to plan and manage time right from elementary level. Students who are good in time management skills are able to manage time effectively even in their professional life in future. Positive time management behaviours increase the academic performance of students, whereas negative time management behaviours decrease academic performance (Sevari and Kandy, 2011). Many students face problems in learning process because of ineffective use of allocated time. Medical and engineering students have to undergo an intensive educational curriculum and syllabus. To achieve success in the learning process, they have to wisely plan and execute their activities. They are engaged in many lab works, projects and field works. So they have to follow course schedules, prepare for exams in a systematic way and use their time wisely for many activities (Karakose, 2015).

Students are part of the society and they cannot be kept separated from social interactions. But often social interactions can act as a disturbance in their learning process. A plan ahead and thoughtful use of time can balance between study time and social life. A proper time management will enable students to accomplish their duties on time. Keeping in view the importance of time management in student life, the study is aimed at comparing the time management skills of medical and engineering students and its effect on their academic performance and social life.

## 1.2: Literature Review

The relevant literatures have been divided into four parts. The first part discusses about time management behaviour along with models and techniques of time management. The second part discusses about academic performance of students. Literatures on study habit of students have been discussed in the third part. The last part discusses about social media engagement of students.

### 1.2.1: Time management behaviour, models and techniques

Aeon *et al.,* (2021) argued that critical gap in time management research is the question of whether time management works or not. Various studies suggested that time management enhances academic achievement, job performance and well being. Gender, age, job autonomy, workload etc. are related to time management practices. There is an increasing concern over time management behaviour even among academics, media and general population all over. The important question is not just 'whether time management works or not?, it is rather the time management techniques designed by time management experts/ gurus can actually be productive or can have adverse effects on the contrary. For instance, some of the time management strategies may not be applicable to women, who share care work such as taking care of young children and home management. Male oriented time management advice may not fit with such category of population. It is suggested to have an individualistic and growth oriented time management practices that can balance the social inequalities prevalent in the society.

Badge (2020) opined that time management is an intellectual skill which helps students to prioritise assignments and accurately calculate time required to complete the assignments. During Covid- 19 pandemic, it is observed that undergraduates are not serious about time management and they spend more time on social media, eating and drinking activities. Educational activity during the pandemic has not come under the 'important and urgent activity'. Rather it has come under 'neither important nor urgent' type of task. It is a matter of concern since time is a resource that cannot be replenished.

Adams and Blair (2019) in their study explored the aspects associated with time management behaviour. Setting goals and priorities (SGP), cumulative grade point average (CGPA), preference for organisation (PFO), mechanics of time management (TMM), and perceived control of time (PCOT) were the aspects of time management covered in the study. Students are found to be setting goals and priorities themselves. They want to be organised but it is not certain that they pass through all the aspects of time management. It is found that students who scored higher than the average in both SGP and PCOT, have a significantly higher CGPA. It can be concluded that students are highly inclined to SGP but they may lack tactical skills to achieve these goals and priorities efficiently. They are also found to procrastinate those activities that they do not like.

Rajali *et al.,* (2018) in their study found that time planning is the most significantly correlated predictor of time management. Based on the research outcomes, time management behaviours can be classified into three groups: time planning, time attitudes and time wasting. Demographic variables like gender and race do not show significant difference in time management behaviours. Year or semester of study and subject or discipline of study show significant relationship with time management. Other variables such as stress, optimism and self- efficacy are also likely to influence time management behaviours of students.

A study has been conducted to develop time- management skills using the dimensions: short- term planning, long- term planning, the time – use style and the study environment. The respondents were found to focus on the short- term planning for a week but lack long- term planning. Regarding the time- use style, preference was given to single tasking rather than multitasking. Multi-activities seem to have lower well being and poor performance. Homely conditions favour study growth. The variable ‘study environment’ is not completely under control of the students but it is a favourable plus point. It is right to conclude that students are prone to be disturbed by external factors, which cause poor concentration to majority of the students (Sainz *et al.,* 2019).

Bast (2016) conducted a study to highlight the importance of time for students. The study was descriptive in nature. It was designed to draw out how one can achieve personal productivity and lead a virtuous life with the effect of time management. In this paper various techniques such as: prioritization, comparison of hard work versus smart work, cultivation of productive habits, scheduling events and tasks, to- do- lists etc., have been explained for better understanding of students. This study even stresses out that procrastination is a foe of productivity and punctuality can add to productivity. The study was solely focused on how students should manage their time so that they can enjoy some quality time of their preference. It can be concluded that one can experience excessive stress and strain due to improper time management. This can lead to many health problems. So a wise allocation of time is of vital significance.

To complete projects within stipulated time is of great importance to construction industry, thereby creating a need to research on time management techniques. A survey was conducted on engineers and contractors so as to identify the cost of time management techniques and also to identify the important time management software. It was found that Cash Flow Forecasting (Relative Important Index, RII= 81.73), Cost Planning and Control (RII= 80.86) and Estimate (RII= 80.25) were given highest importance in cost management. Among time management techniques, Critical Path Method (RII= 81.17), Program Evaluations and Review Technique (RII= 79.66) and Gantt Chart (RII= 79.62) were given highest importance. Primavera and Microsoft project were found to be the most preferred time management software. With a view on the significance of time management, various softwares on it have to be developed to enable completion and monitoring of projects on time (Shanmuganathan *et al.*, 2016).

Ocak and Boyraz (2016) conducted a study to find out if there is a relation between undergraduates' academic procrastination behaviours and time management skills. Correlation method was used to conduct the study. Data from 342 undergraduates of Aksaray University were used. The study found that undergraduates have moderate level of academic procrastination. Most of the students do not volunteer to do academic tasks even if they are enjoyable and attractive. Even though undergraduates

with better time management skills fulfil more academic tasks, there is no statistically significant difference in terms of academic procrastination but it does not guarantee success. Students with academic procrastination can also be successful. Time management helps in predicting academic procrastination in a statistically significant way as nearly as ten per cent only.

De Jager (2014) in her study observed that few students attribute their success to time management and poor time management had been ranked as the number one factor of failure. Time management and self management are the set of pervasive skills set of in the competency framework of South African Institute of Chartered Accountants. Students were found to complain more about unbearable work load. Many students were reported for not completing home assignments, not preparing for class and for not attending their classes. Some major sources of stress among students are changed eating habit, changed sleeping habit, new responsibilities and increased workload. Optimal use of time is one of the best solutions to remove this anomaly.

A study was conducted by Mirzaei *et al.*, (2012) on nursing students' time management, reducing stress and gaining satisfaction to investigate how Iranian nursing students manage their time according to circumstances and obstacles of their academic field. A grounded theory approach was used. Data was collected by semi-structured interview of twenty- one nursing students and analysis was done by the method suggested by Corbin and Strauss. Nursing students were found to use unidirectional time management, which was evident from their opinion of accepting the nursing field, overcoming uncertainties, assessing conditions, stressful feelings and their effort to reduce stress and create satisfaction. They were found to devote most of their time to academic tasks so as to reduce stress. From this study it can be observed that the nursing students need time for their extra- curricular activities and responsibilities and these needs are accordingly to their age.

A study was conducted to investigate the procrastination tendency in individual and collaborative tasks. Data of actual online performance of 120 MBA students were examined. Procrastination was measured by counting the number of days between

the assignment submission day and the due- date. The study found that gender difference was not related to procrastination. Individual tasks are accomplished by most students on time but voluntary/ collaborative tasks were completed only when it becomes compulsory at the last hour. From the study it can be determined that behaviours of the students determine the norms of their conduct and if they find that others in their group did not post, they all followed the same track and avoided posting. People are more punctual to individual assignments than in collaborative assignments. The study indicates that procrastination tendency has stronger effect on human behaviour than attention efficiency considerations (Gafni *et al.*, 2010).

According to Häfner and Stock (2010) time management behaviour induced through time management training is a meaningful predictor of perceived control of time as well as well- being of the trainees. Prioritisation, structuring work day, monitoring one's feeling of control, stress reducing factors are significant time management techniques. Time related problems are serious and thus require proper time management training. It is found that there is a positive effect on the perceived control of time when people are given trainings on time management and well being in a short run; and a positive impact on academic performance in a long run. It is important to focus on evaluation studies of time management training, other than spending lots of resources on time management trainings only.

Agarwal (2008) argued that time management can be taken as a set of practices, principles, systems, tools and skills which require working jointly in order to achieve and improve the quality of living. When a person is conscious about time, then it is imperative that the person has set plans before doing tasks and has set priorities about certain tasks to do daily. Time management helps to deal with adequate time allocation for each and every activity to be performed. Such a practice will effectively manage and complete the activities on time which is set in advance. Prioritisation of activities attributed to how a person makes use of time effectively, understanding the urgency of the needs and time required for each task.

A study was conducted to provide an overview of time management studies by analysing 32 empirical studies on the area of time management between 1982 and

2004. This review of literatures shows that time management behaviour is positively related to job satisfaction, perceived control of time and healthy life. But it is negatively related to stress. Time management skills can be improved with time management trainings but time management trainings are not related directly to improved performance. It could also be pointed out that there is a need of further research to establish stable time management behaviours. Thus the review of related studies shows that time management is not well defined and so far the quality of measurements used need to be improved (Classens *et al.,* 2007).

Kearns and Gardiner (2007) conducted a study to find the relationship that exists between time management behaviour, work related morale, perceived effectiveness and distress in university context. The study mentions that for students to manage their time in a good way, they must have a clear purpose of their study and be able to answer clearly what is important to achieve. Students were not able to manage their time because they had no clear purpose in their study, got distracted easily; things were unorganised and not prioritised. The study found that a clear purpose in study is positively correlated to perceived effectiveness and morale and negatively correlated with distress. Good planning and prioritising are also positively correlated to perceive effectiveness. The study thus shows that timely completion of tasks help in reducing stress.

An empirical examination on the linkages between perception of control over time and time management behaviours was conducted by Macan (1994). 353 samples collected from employees of two organisations were used for research interpretation. The coefficient alpha value for perceived control was found to be 0.68, coefficient alpha value for job satisfaction was found to be 0.57 and job performance rating to be 0.86 alpha value. Those employees who were found to experience lesser job-induced somatic tensions and higher job satisfaction had considered themselves to have good control over time on comparison to those who did not consider themselves to have good control over time. However, there was no significant relationship between job performance and perception of control over time. Good support for the process model of time management was found but it was found that time management training was not effective on increasing adoption of appropriate time

management behaviour. It can be observed that perception of control over time is significantly related to job satisfaction and it reduces stress and tensions.

Lay and Schouwenburg (1993) underwent a study to find the relationship between time management and trait procrastination. Procrastination is the habit of avoiding the starting or completion of tasks creating unnecessary delays. The study observed that those people having procrastination trait are usually lagging behind others in completing projects and assignments. They usually study lesser hours than the intended hours of study. Such people experience low scores in terms of control over time, prioritisation and setting personal goals. They are less in touch with time management techniques. Thus, it can be concluded that procrastination trait is one of the factors responsible for ineffective time management and it can develop into a habit that can hinder personal growth.

### 1.2.2: Academic performance of students

Alyami *et al.,* (2021) argued that to students' perception, preplanning their studies is beneficial for academic performance. It is observed that insufficient sleeping pattern makes the students feel lazy and makes them unable to manage time and decreases academic performance. Decreasing procrastination and increasing time management can help students to improve their academic performance. Students with positive attitude and good time managers are found to have good academic records. Adequate sleeping pattern, diary entry, making a to- do list etc. can enhance time management behaviour of students.

Lahiry *et al*., (2019) in their study found a good correlation between academic performance and social media usage for academic purposes. This study reports on the use of social networking sites by medical and allied students in the Eastern part of India. Most students (88.58%) used social media for academic purposes and these students believed that social media engagement has a positive impact on their academic performance. This research result is an encouraging finding since social media usage for academic purposes means that these students are knowledgeable about harnessing social media to exchange information about professional problems

and clinical experiences with others. Responsible use of social media by medical students will be a contribution both to their education and profession in near future.

Sayari *et al.,* (2017) examined the relationship between time management variables and academic performance. Prioritisation, procrastination and socialisation are taken as time management variables. The study found out that the demographic variables: educational degree and age significantly correlates with academic performance. It can be interpreted that students who have different educational degree and age vary in their time usage. When the educational degree is going higher and the age also increases, time management behaviour of the students also increases, thereby improving academic performance. Prioritisation has a significant relationship with academic performance of students. However, procrastination and socialisation have no significant relationship with academic performance of students. It does not mean that procrastination and socialisation can be ignored since previous studies (Abedayo, 2015; Sevari and Kandy, 2011) showed significant relationship with academic performance.

Karakose (2015) conducted a study to investigate the existing relationship between time management skills and academic achievement of medical students. The study is aimed to determine the effects of medical students' time management skills on their academic performance achievement and to guide students on how to use their free time more effectively. A survey based descriptive scanning model was used. The study had a population of 153 medical students of Turkey. A time management questionnaire developed by Erdem *et al*., (2005) had been used for data collection. The study found that female students are more successful in time management which was determined by a significant t- value 2.91, $p< 0.05$. But no statistically significant difference was observed between students' opinions by year of study. From this study it can be concluded that medical students who had high performance ratings in courses also had high time management scores, and so there is a significant relationship between students' time management and their academic achievements.

Nashrullah *et al.,* (2015) has identified planning- both short and long range, time attitude as independent variables with respect to academic performance of variables.

The findings of the study showed that these variables are significantly correlated with academic achievement. There is a positive relationship between academic performance and time management factors such as socialisation, procrastination and prioritisation. The study suggests that students should learn to prioritise tasks, lessen habit of procrastination and practice socialisation moderately.

A descriptive analytical study was conducted on 180 senior nurse managers by census method. The study was carried out to investigate the time management behaviours along with its related factors. The study found out that among the time management dimensions, setting objectives and prioritising has highest frequency and mechanics of time management has lowest frequency. The mean scores of time management dimensions like gender has p- value less than 0.05, managerial experience has p value less than 0.001, education has p value less than 0.015, job experience has p value less than 0.001 and rank management has p value less than 0.029. Thus, it can be concluded that senior nurse managers enjoyed a good time management skill. Imparting time management behaviours through regular educational programs can help in promoting the performance of the senior nurse managers (Ziapour *et al.*, 2015).

Pehlivan (2013) conducted a research on financial accounting students to find out the effect of time management skills on their grades by taking a sample of 168 students studying in Karadeniz Technical University. The results of the study showed that the students lack sufficient amount of knowledge about time management. There is no statistically significant relationship between time management and gender as against some other studies. However a positive significant relation was observed between grade point averages and time management scores. A linear regression analysis shows that time management skills affect academic achievement even if it is low and it is one of the predictors of grade point averages. The study thus suggested that students should acquire time management skills right from pre- schooling.

Indreica *et al.,* (2010) conducted a study to examine the influence of effective time management on academic performance of students in terms of Grade Point Average (GPA). The study revealed that effective time management programs improve GPA

and successful students are good time managers. Factors such as time attitudes, time management behaviour and time control are significant predictors of academic performance. GPA is a measure of academic performance and it agrees with several other studies (Jalagat, 2016; Adebayo, 2015; Kaushar, 2013).

Tanriogen and Iscan (2009) determined the time management attitude and skill levels of Pamukkale University students and the effects of these skills on their academic achievement. The research findings demonstrated that a majority of Pamukkale University students possess moderate level of time management skills and only a significantly small portion have high level of time management skills. Also according to the findings, the prediction level of time management skills for academic performance is 7.9 per cent. The students' time management skills are one of the predictors of academic performance. It was also suggested at the end of this research that students should start to acquire time management senses on their own in the primary school years by reading materials on the issue via the framework of psychological counselling and guidance studies applied in schools, and adopt effective time management attitudes and techniques to determine how and where they spend their time.

### 1.2.3: Study habit of students

Independent study behaviours are an important part of learning in college and university courses. Students who spent more time on effortful and practical active study strategies had higher scores in exams. It is evident that students who stated studying later or earlier do not score differently if they are not giving full focus on their studies. Students who are more distracted during their studies show poor results compared to those students who are not distracted during their studies. It is to be noted that the degree to which students use practical study strategies and full focus while studying are important factors to success. Encouraging self- explanation of a subject creates better rooms for understanding the subject matter (Walck- Shannon *et al.,* 2021).

Tus *et al.,* (2020) opined that students make use of time to study and they do not always look at managing time during their studies but they are aware of the

necessary things to finish their tasks. It is interesting to observe that students do their home works and passes it on time by balancing their time in studying and taking rest at the same time. Students can improve study habits by taking notes properly, building reading habit and most importantly maintaining a good health. Recognising study habits will make the students more effective in studying and enhance the learning methods. Realising the importance of a good study habit can motivate students to do better in their academic performance.

A cross- sectional study was carried on with an aim to investigate the study habit and its relationship with academic achievement among medical students (Jafari *et. al.,* 2019). The study observed that the study habit of the students was at moderate level and only a small portion of one- tenth of them were at the desirable level of study habit. Problems such as ineffective time management, poor concentration, improper planning, poor study skill and poor examination techniques were found to reduce academic achievement of students. Native students were found to have better study habits compared to those dormitory students. It indicates that place of residence can also affect study habit of students. A positive and significant correlation was obtained between study habit and academic performance. Since study habit is important to academic achievement, it is recommended that study habits of students should be measured at the time of entry to universities and during their studies at the university.

According to Ebele and Olofu (2017), study habit is a gateway to success and it differs from one person to another. It is a combination of study method and study skill. A good study habit includes studying in a quiet environment, studying regularly and daily, staying away from devices that can interfere during studies, maintaining proper notes, joining regular tests, taking breaks on time, adopting self learning style, listening to soft and soothing music, prioritisation of difficult tasks. Procrastination; studying in a noisy environment or in inappropriate environment; avoiding studies; playing loud music and television while studying etc. are some of the bad study habits. Study habit is an important predictor of academic performance and it affects academic performance.

An analysis on the learning environment of post graduate students with respect to study habits and time management showed that bad study habits such as checking phone every time, procrastination, jumping around in between activities had a significant negative correlation with performance, while good study habits had a significant positive correlation with performance. Most of the students feel stressed and are very busy. Time spent on relaxation, exercising, working etc. has no significant effect on overall performance. It is clearly evident that soft skills like time management should be taught to students in order to support them in each step to success (Fouché 2017).

Siahi and Mayo (2015) conducted a relational study to study the relationship between study habits and academic achievement of students. The study revealed that study habits call for a significant attention in order to improve performance. Teachers and students were found not to make efforts to develop good study habits. Further analysis of the study revealed that study habits (based on work method and time management) of the respondents were positively correlated with their success in examinations. However, study attitudes (based on attitudes towards teachers and educational acceptance) were not significantly related to success in examinations. This clearly indicates that students who develop good study habits are more likely to pass examinations.

A survey was conducted to investigate the study habits of higher performing engineering students by taking a sample of 264 engineering students of various engineering colleges of Delhi. This study was an effort to find out the relation of study habits with performance and to analyse how the existing trend of social media and networking influence the engineering students. Goal setting, time management, participation in classroom discussion, maintaining notes properly etc. have been prioritised to analyse the study habits. With respect to time management, 57 % of the students feel that night time is very productive for their studies. 21% of the students follow their time table strictly and 50 % of them try to stick to their time table. This study thus reveals that a student's ability to manage time successfully and productively is related to academic performance and maintenance of a proper time table enables them to improve their study habits. Students are engaged in a wide

range of behaviour with regard to study and a clear connection between classroom learning and students' work outside the class can be recognised (Chitkara *et al.*, 2014)

As many students in Petroleum Institute complained about lack of time to complete their assignments before deadlines, a study was designed to find out effective ways that can help these students to improve their time management skills. The paper aimed to resolve problems like procrastination, distraction, disorganisation and workload pressure. Data were collected from freshers and sophomore students using close ended questionnaire. When the grade point averages (GPA) were observed, all the unsuccessful students were found to have difficulty in managing their time. Successful students were found to complete their assignments before deadlines. Most of the students were found to study only on the last day of the weekend but they find more time for extra-curricular activities. An interesting result was also obtained, that is majority of the students under survey, study only for exams and successful students do not study for more than three hours a day. From the study it can be observed that successful students study daily. Successful students do not study for long hours but they focus and plan before starting. Interruptions like noise, social networking, phone calls, messages etc., can affect the time management of the students (Miqdadi *et al*., 2014).

A study on study habits and attitudes conducted by Mendezabal (2013) found that respondents do not have favourable study habits and positive attitudes. Sufficient time was not devoted to studies and the students hardly develop proper study habits. The noted unfavourable study habits are lack of proper planning, ineffective time management, poor concentration on studies, poor reading skills, ineffective exam techniques and lack of communication with teachers. The students were found to show unfavourable attitudes towards classroom behaviour and teaching methods of teachers. It is suggested to have teacher- learner good communication to enable students in developing good study habits and positive attitude.

Study habit refers to 'the degree to which a student engages in regular acts of studying that are characterised by appropriate studying routines like reviews of

materials occurring in an environment that is conductive to studying'. Studies relating to study time with academic performance found conflicting results and often the effectiveness of study time is not included. Time management behaviour of students cannot be investigated in isolation excluding their study habit (Credé and Kuncel, 2008).

Educational Psychology states that "study requires a purpose and what one learns as a result of study depends largely upon the degree to which one succeeds in achieving that aim of purpose" (Crow and Crow, 2007). The main purposes of the study are to acquire knowledge and habits that will be helpful in idea interpretation, facing new situations, judgment making, creation of new ideas and develop skills. Successful achievement in academic activity is based upon interpretation and application of studies. Study habits of one person differ from another. Poor performance is related to poor study habit. Successful students usually study alone following self designed study techniques with desirable procedures. The essentials to good study habits are sound health, adequate and sound sleep, exercise, nutritious diet etc. unfavourable study conditions such as dim lightning, extreme temperature, poor posture, emotional disturbances, noise etc. are some of the factors that hamper good study habit.

The interrelationship between academic achievement and study habit of the students cannot be overlooked. Generally, it is believed that students who have good study habits excel than those with poor study habits. "Academic performance is a necessary evil because one kind of ability is rewarded economically and socially more than others". It creates the necessary thinking about factors which are linked most commonly with academic achievement. Students experience tremendous pressure to get good grades. Good grades are assumed to possess predictive value and are used as an eligibility condition to enter schools, colleges, universities, appear in exams etc. Thus, the development of a good study habit is helpful not only to get academic success but also in career actualisation (Sharma, 2005).

### 1.2.4: Social media engagement of students

A study on the impact of social media on the academic performance of undergraduate medical students was conducted (Bhandarkar *et. al.,* 2021) using a cross- sectional questionnaire based study. The study aimed to find the types of social media used along with the duration and purpose of use. The study found that there was a significantly higher use of social media among the low academic performers as compared to high academic performers. Female social media users were found to have a significantly higher academic performance compared to male social media users. A positive correlation was observed between social media addiction and duration of social media use. A weak negative correlation was obtained between marks secured in exams and duration of social media use. Whatsapp and Youtube were the most popular social media apps according to the study. Thus, social media usage has a negative impact on academic performance of the students.

A study conducted on the relationship between social networking addiction and academic performance of Iranian medical students observed that social networks have noticeable influence on the performance of students. It was a cross- sectional study of 360 students who were selected by stratified random sampling. It found that there is moderate level of social media addiction where male students were more addicted than female students. There exists a negative significant relationship between social networking and academic performance. This study highlighted the need of immediate help from university authorities to resolve this issue so as to help the students drive away from serious social media addiction (Azizi *et al., 2019*).

A study was conducted to investigate if there is a difference in social media usage and its effect on academic performance based on gender. The research results showed a significant association between social media addiction and gender of the respondents. The male respondents are found to be more addicted to social media than female respondents. There is also an association between academic performance and gender of the respondents. Female students are found to report that social media usage negatively impacted their academic performance. There are many cases of reporting misuse of social media networks. The study observed that students express

their preference on supervision, education and guidance on how to use social media to protect themselves from unauthorised users or cyber bullying (Alnjadat *et al.,* 2019).

A study was conducted by Boahene *et al*., (2019) on social media usage and tertiary students' academic performance taking Facebook and Whatsapp as social media elements. It found out that Facebook and Whatsapp showed mix effect on academic performance i.e., negatively as well as positively affect academic performance of the students. A negative relationship was found between Facebook usage and academic performance however, a positive relationship was observed between Whatsapp usage and academic performance given the condition that it is used only for educational purpose. The study suggested that social media when used only for educational purpose can enhance academic performance. It is necessary to check on how new technologies promote or hamper academic growth. Educational institutions should promote practical education in technology usage and help students to limit use of technology and use technology under control thereby avoiding addiction.

According to a study on the use of smart phones and social media in medical education, it has been observed that social media has a great potential in education and provides the opportunity to share, involve and express opinion, knowledge and information. Social media acts as a constructive tool to supplement traditional method of learning. It enables sharing materials in the form of pictures, videos and discussion sessions. Social media is a potential tool to enhance quality of education through engagement with different stakeholders. Social media engagement is helpful in improving personal skills and professional communication. However, social media engagement can result in less participation in outdoor activities which can lead to health issues. Cyber bullying can cause mental health issues. Excessive use of social media can make the students face difficulties in face to face communication. Managing social media during academic activities can lead to contrasting effects on academic performance. Hence, it is not wrong to conclude that social media is a powerful tool for social interactions and teaching- learning activities. Social media addiction is already increasing and it is better to use it mostly for educational purposes to curb time wastage among students (Latif *et. al.,* 2019).

A clear understanding on the effects of social media on the social development of students help the teachers to design learning techniques which are compatible with the personal and social needs of students. Students of Zambia University were found to use whatsapp for at least half an hour a day and the teachers use this as an opportunity to give valuable information and study materials to students. It increases student- teacher interaction and better understanding among the students and teachers (Akakandelwa & Walubita *et al.,* 2018). It is quite evident on many cases that many students would say "just a few more minutes" while using social media but keeps checking on social media sites even before doing something. They become less productive because of excessive social media usage and they usually fail to reduce their social media usage. It leads to some kind of addiction, later such students feel stressed as many people start passing negative comments due to their social media addiction behaviour.

Teenagers aged 16 to 17 years were found to use social networks actively and even children aged 8- 9 years of age were also found to visit networking sites such as facebook (Talaue *et al.,* 2018). It would not be wrong to say that large numbers of people are spending hours on social media almost every day. Social networks have become more or less an integral part of the students, be it for finding new friends, relaxation, searching news or searching educational information.

Baoteng and Amankwaa (2016) opined that several studies in China and Iraq have shown that social media usage is a positive approach to learning process, by using this platform for discussions on assignment and other course works, getting departmental news and updates on class schedules, information exchange among peers etc. Students who use social media wisely experience academic improvement. However those who fail to regulate social media usage often become addictive to it.

Gok (2016) argued that digital technologies and smartphones have become an inseparable part of many adolescents and students. Social networking sites can negatively influence habit, grades, socialization etc. approximately 60% of the respondents do not have time to read newspaper, books, physical exercise, going to gym etc. However, these students prefer to spend more than 3 hours a day on social

networking sites. 80% of female students and 65% of male students were found to study their main course less than one hour a day. It is thus reported that using social media sites have negative impacts on performance and habit of students. Majority of the students were found to spend more time on social media instead of studying.

A study conducted to study on 'impact of social messengers especially Whatsapp on youth' showed that social media usage can immensely affect the academic performance of many students. It was found that students were subjected to various disturbances like cyber bullying, circulation of false or unregulated information, attending messages, addiction to social media etc. (Sharma and Shukla, 2016).

Owusu- Acheaw and Larson (2015) studied the relationship between academic performance and time spent on social media. A strong and positive relationship is obtained between social media use and academic performance, which implies that more the use of social media, less the academic performance of the students. The study revealed that most of the students use social media sites for chatting rather than for academic purpose. Students should be encouraged to use the internet facility of the phones to supplement study materials, rather than usual chat with friends and acquaintances. Students should be advised to reduce their engagement on social media sites and to use these hours to read novels or relevant academic books to expand their knowledge. The study felt an urgent need to introduce library habit to students at earliest.

However social media usage can have serious breakdown in academic life of students if they are not cautious about it. A study on 'The need for safety consciousness among youths on social networking sites' has revealed that social media usage affects the 'English' of students. Using short forms of words instead of writing the words in correct spelling during social media chats becomes habitual even during academic writings. They got so much used to it that even in exams they make spelling errors without being noticed by themselves (Obi *et al*., 2012).

According to Jacobsen and Forste (2011), the use of technology such as internet/ social media is one of the key factors that can influence academic performance of

students whether adversely or positively. Many parents and guardians are caught in the worry that the students are spending too much time on social media sites thereby having less time to study. Keeping the worries of parents aside, students are constantly engaged in social media sites/ internet. Many of them utilize it on a daily basis neglecting their academic duties and it is a cause of concern.

Social media is a collection of internet, websites, practices and services that provide collaboration, participation, community building and sharing. The rapidly growing dimension of social media use among youths cannot be over emphasized. In the recent years, social networking has become more and more popular among students. It serves as a way to connect people not only on campuses but also with friends outside their academic circle. Social networking helps many people to feel that they belong to a community in the digital world. The increased popularity of social media sites among students is a cause of high concern to many economists and professors. They fear that whether the academic environment and grades of students are affected by the amount of time spent by students on networking sites (Junco *et al.,* 2010).

San- Miguel (2009) studied the relationship between academic performance of students and time spent on Facebook. The study indicated that spending more time on Facebook implies slightly lower grades. According to his study, the CGPA of average facebook users were 3.0 to 3.5, while that of non facebook users were 3.5-4.0. The average facebook users were found to study only 1- 5 hours a week, while the non- facebook users were found to study 11- 15 hours a week. The students who multitask between home assignments and social networking sites were more likely to have 20% lower grades than those who do not use social networking sites. Running a social networking site on the background of the computer while studying can lower grades of the students.

### 1.3: Research Gap

After the review of relevant literatures, it has been observed that there is lack of theoretical framework and empirical examination in time management. Empirical research on areas of time management is less as time management has been considered as a fad and researchers do not hold it in high esteem for undergoing research (Macan, 1994). Many studies have been conducted on time management behaviour with respect to academic performance. Many studies have also been conducted on time management in the field of medical science. But so far not much literature has been found on the comparative study of time management behaviour between medical and engineering students especially on the context of North East India. In Manipur, medical and engineering streams are one of the most preferred streams. Unfortunately, sometimes some medical and engineering students give up their studies as evident from news reports: 50 per cent rise in number of engineering dropouts in Chennai (Dec 21, 2016, Times of India). There may be certain reasons for dropouts and time can also be one factor. Many literatures have supported that time management can increase academic performance. As such this study is aimed at investigating the time management behaviour of medical and engineering students of Manipur as a comparative study between the two streams.

### 1.4: Significance and Scope of the Study

Education plays an important role in the personal, social and economic wellness of people in this competitive world. Time management concept is a tool to help in better organisation of time (Koch, 1998). With the onset of social networking much of the valuable time can be utilised fully or can go wasted. In order to take full advantage of technology, a proper management of time is required. Often students complain about shortage of time during preparations for examinations and during examinations. This is because students face problems in making effective use of allocated time. If the students manage their time effectively their academic success will also increase (Karakose, 2015). Time is something that cannot be stored or purchased. Britton and Tesser (1991) opined that 67 per cent of undergraduate students identified time

management as their most pressing problem. Thus, helping the students in developing awareness about the benefits of time management and imparting time management skills will improve their academic and life achievements.

To ease the problem of time shortage, time management can be recommended. Courses involving rigorous curriculum like those of medical and engineering courses can put a lot of pressure to students. The present study is confined to medical and engineering students of Manipur. Based on the research implications, generalisation about the time management behaviour of the students in medical and engineering streams has be done. The conducted study has come up with a suggestive model on how to improve the time management skills of students and others. Therefore, this study tried to focus on time management behaviour of medical students (JNIMS and RIMS) and also the engineering students (MIT, NIT, IIIT, NIELIT, CIPET, Government Polytechnic and Manipur Technical University) of Manipur. It also aimed to find out the study habit of the selected students. Variables like gender, place of accommodation, percentage of marks obtained in last exam passed, social media usage etc. have been used for the study.

## 1.5: Research Design

### 1.5.1: Statement of the problem

Medical and engineering students are loaded with a rigorous curriculum and the number of drop outs in medical and engineering colleges is also increasing due to a variety of reasons. Academic stress is one of the reasons and it can be reduced with proper time management. Academic stress can become dangerous as it can cause depression. Depression can even lead a student to commit suicide. Suicidal ideation is highest in first professional year and lowest in third professional year among medical students (Goyal *et al.*, 2012). According to Government reports, over 2000 students dropped out of IITs and NITs in the last three years (India Today, 6 August, 2015). Therefore, students need to plan their activities wisely and manage their time. Different students have their different preferred time. The present study investigated

the time management behaviour of the medical and engineering students in Manipur. Misutilisation of time can lead to failure in the long run. This study is therefore designed to investigate how efficiently the students manage their time. It focuses on how they spend their time for academic and social purposes. The study tried to point out different ways of time usage by the medical and engineering students and its relationship with their academic achievements, study habit and social media influence; so as to come up with a good model of time management.

### 1.5.2: Objectives of the study

With regard to the selected institutions, the objectives of the study are as follow:

1. To study and compare the time management behaviour of medical and engineering students
2. To compare the time management behaviour of male and female students
3. To study the relationship between time management behaviour and academic performance of the students
4. To investigate the relationship between time management behaviour and study habit of the students
5. To investigate the relationship between time management behaviour and social media interest of the students
6. To design a time management model for students

### 1.5.3: Hypotheses of the study

1. $H_a$: There is a significant difference in time management behaviour between medical and engineering students

2. $H_a$: There is a significant difference in time management behaviour between male and female students

3. $H_a$: There is a significant relationship between time management behaviour and academic performance

4. $H_a$: There is a significant relationship between time management behaviour and study habit of the students

5. $H_a$: There is a significant relationship between time management behaviour and social media interest of the students

### 1.5.4: Research Methodology

The research undertaken is diagnostic in nature. A comparative study has been conducted between medical and engineering students.

#### 1.5.4.1: Population of the study

The population of the study is the medical students of JNIMS and RIMS and the engineering students of MIT, NIT, IIIT, NIELIT, CIPET, Government Polytechnic and Manipur Technical University. The engineering students include those undergoing B.Tech and Diploma in Engineering.

**Table1.1: Population of the selected institutions**

| Sl. no. | Institution | No. of students | | Total |
|---|---|---|---|---|
| I | Medical | MBBS | BDS | |
| 1 | JNIMS | 500 | 250 | 750 |
| 2 | RIMS | 500 | 250 | 750 |
| II | Engineering | B.Tech | Diploma | |
| 1 | MIT | 460 | 0 | 460 |
| 2 | NIT | 600 | 0 | 600 |
| 3 | IIIT | 60 | 0 | 60 |
| 4 | NIELIT | 240 | 0 | 240 |
| 5 | CIPET | 0 | 180 | 180 |
| 6 | Government Polytechnic | 0 | 450 | 450 |
| 7 | Manipur Technical University | 150 | 0 | 150 |
| 8 | Grand Total | | | 3640 |

*(Source: Compiled from the data available at the various institutional websites)*

### 1.5.4.2: Sampling

To collect data proportionately from the students of the selected institutions, stratified random sampling has been done. From the total population of 3640 students, 520 samples have been taken for data analysis. 260 samples have been taken from medical students and another 260 samples have been taken from engineering students. A sample size of 520 has been obtained by using the following sample size determination formula:

Sample size= $[\{z^2 \times p(1-p)\}/e^2] \div [\ 1+ \{(\ z^2 \times p(1-p))/e^2 N\}]$

Where z = z-score

e = margin of error

N = Total population

For calculation of the sample size, 95 % confidence level has been assumed with corresponding z- score = 1.96, the margin of error, e = 4 % = 0.04 and p = 50 % = 0.5, assuming an intermediate value.

Using the following simple proportionate formula, the sampling has been determined:

Strata allocation size= $(n \div N) \times n_1$

Where N = Total population

n = Total number of samples to be taken

$n_1$ = Population size of each strata/ institution

**Table 1.2: Sampling**

| Sl. No. | Institution | No. of samples |
|---|---|---|
| 1 | JNIMS | 130 |
| 2 | RIMS | 130 |
| 3 | MIT | 56 |
| 4 | NIT | 73 |
| 5 | IIIT | 7 |
| 6 | NIELIT | 29 |
| 7 | CIPET | 22 |
| 8 | Government Polytechnic | 55 |
| 9 | Manipur Technical University | 18 |
| 10 | Total | 520 |

*(Source: Calculated value)*

#### 1.5.4.3: Data collection

For the conducted research, primary as well as secondary data have been utilised. Journals, annual reports of the concerned institutions, books etc. have be used for secondary data collection. Primary data have been collected using structured questionnaire based on standard questionnaires and relevant literatures; and has been designed to determine the time management behaviour of students.

#### 1.5.4.4: Data analysis

To analyse data and test hypotheses, appropriate statistical tools like mean, standard deviation, frequency and percentage, independent sample t- test, one- way ANOVA, Pearson's Correlation, Chi square test and regression analysis have been adopted to analyse the data and test hypotheses. SPSS has been used to enter data collected through the distributed questionnaire. Cronbach's Alpha test has been used to test reliability and normality plots have been used. The research results are based on the values obtained by using the mentioned statistical tools.

### 1.6: Limitations of the study

As the study has employed a close ended questionnaire with self reporting by respondents to collect primary data, it could call for a biased reporting. An in- depth duration and pattern of social media/ internet usage was not studied. The study is quantitative in nature however addition of a qualitative analysis should have been conducted to explore more aspects of time management behaviour.

### 1.7: Chapterisation

1. Introduction

Chapter 1 introduces the importance of time management behaviour. Literature review, research gap, significance and scope the study, research design and limitations of the study are described in this chapter.

2. Time Management

Chapter 2 describes the significance of time management as a tool. It describes the various time management models and theories. A discussion on time management models and theories has been included in this chapter.

3. Higher and technical education in Manipur

This chapter is a descriptive presentation about the importance of the Department of Higher Education (Ministry of Education, Government of India) and the Department of Technical Education, Manipur. A brief description has been written about the universities of Manipur. The profile of the selected institutions presented in this chapter.

4. Quantitative Data Analysis

Chapter 4 highlights the dependent and independent variables associated with the study. Respondents' profile; data analysis and interpretation; hypotheses testing and regression analysis of time management behaviour are the components of the chapter.

5. Conclusion and Suggestions

Chapter 5 represents the findings, conclusion and suggestions of the study.

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# CHAPTER 2

# Time Management

## 2.1: Introduction

## 2.2: Time Management as a tool

## 2.3: Time Management Models and Theories

## 2.4: Discussion

## 2.1: Introduction

The concept of time management can be traced to have its origin in the Indian Vedanta. The Ancient Indian scriptures had largely shown light on concepts of management such as self development and elf management. Satyam (Truthfulness), Brahmacharya (Self- control) and Ahimsa (Non- injury) are the three disciplines which are fundamental values that are eternal. These three principles are fundamental to regulate intellectual, mental and physical states of personality. Self management can be effectively improved by following Satyam, Brahmacharya and Ahimsa. Among the three disciplines, Brahmacharya (Self control) clearly explains the concept of time management (Satija and Satija, 2013).

Time management is the capability that teaches us the art to manage personal time as well as working time. In today's advanced era of science and technology, the students' ways of learning have shown a tremendous change. They are usually called "Digital Natives" or "Gamer Generation" as they are born and brought up in a digitally advanced environment (Hernandez- Linares *et al*., 2016). Due to this transformation, it has become a necessary action to change from traditional lecture based teaching to learner centred teaching approach. (Covey (1999) opined that time management involves tasks identification and recognising the demands of these tasks on time. People in general usually developed the habit to look for consequences rather than the methods involved and efficiency of time management practices. One of the keys to success is to concentrate on highly important but not urgent activities.

Relatively less scientific studies had been conducted earlier on how people manage time and also on those processes that are involved to manage time despite the importance of proper time management. Recognition of time management as a scientific research has gained steady recognition in the last two decades (Molaee *et al*., 2014). A review of time management literatures in a comprehensive way witnessed three dimensions of time management behaviour: planning behaviour, time assessment behaviour and monitoring behaviour (Classens *et al*., 2007). A subsequent research had also added executive behaviour has been added as a fourth dimension of time management (Classens *et al.*, 2009). Awareness, analysis and

estimation are part of time assessment behaviour. Goal setting, planning, prioritising and scheduling are the components of planning behaviour. Monitoring behaviours are evaluating in nature, helps in decision making and does resetting if required. Executive behaviour can influence ongoing activities and thus it can change track of an ongoing activity.

Different environments impose different demands and it determines how the concept of time has been perceived (Nadkarni and Chen, 2014), time can be conceptualised either as a system or a clock. Time as a clock considers time as an instrument that measures happening activities and moments 24 hours a day. Time as a system considers those cultural rules which are used to arrange experiences in significant ways (Lustig and Koester, 2006). Technical, formal and informal are the components of a time system. The technical system measures time precisely and in a scientific way. Formal time system measures the ways that describe and distribute units of time amongst a cultural group. Informal time system makes certain assumptions about how much time has to be used. It should be noted that time is one of the cultural variables and it varies in usage significantly across different traditions as there are behavioural differences among cultures of different people, their societies or their nations (Brodowsky *et al*., 2008).

People can be broadly divided into three groups based on time management. The first group of people takes time management necessary to achieve success, the second group of people considers time management as an intervention that is not necessary and the third group of people likes to bring some change in life but they have low concentration and dedication to work. Such a grouping can be seen among many students. Thinkings such as ‘what activities are to be done, when to do certain activities and that should be done’ allow students to complete important tasks qualitatively. For quality development of one’s profession in future, there should be optimization of life continuously and improvement of personal time management skill (Kirillov *et al.,* 2015).

In general there are four stages of time management models and techniques. ‘What should be done?’ is the first stage and it involves marking tasks and activities. The

second stage involves attaching schedules to particular activities and making forward the question ‘When to do?’. The third stage asks the question ‘How can a particular task be completed?’. This stage of time management includes defined purposes and works on various strategies to complete tasks. Emotions, moods and sensation fall under the fourth stage of time management. Efforts are made in order to achieve a balance between understanding and accepting priorities and strategies of time management. The fourth stage works towards achieving a balance between emotions and reasons. Organising and planning of time are the significant factors that contribute to goal achievement, maintain balance between emotions and reasons, and completion of activities on time successful system of time management provides opportunities to analyse actions, experience, feelings and priorities. It enhances better coordination between motivation and actions of individuals to achieve goals (Panayotova *et al.,* 2015).

Macan (1994) proposes that learning time management skills lead to greater perception of control over time. The Process Model of time management behaviour consists of three attributes: the mechanics of time management behaviour, setting goals and priorities; and a preference for organisation. In another way, time management is a cluster of skills that paved way to academic success and those activities performed by students like work prioritization, advance planning, preparation for test and following schedules are included in time management (Sansgiry *et al*., 2006). According to Powell (2004), effective balancing of time management and techniques of study can impove academic performance. Time management in general has a positive effect on success of students both in academic and in non- academic fields.

All activities should be prioritised to make rooms for other vital activities. The technique of time management facilitates better use of available time. Setting priorities and doing activities in organised manner help to accomplish jobs/ tasks successfully (Eid *et al*., 2015). For effective utilisation of time, it is important to predict the time required to complete an activity (Kelly, 2002).

The gaining popularity of empirical studies on areas of time management is an indication of the importance of time management in every step of life. In order to ensure management of time systematically, researchers have designed different models and theories of time management. The role of digital media cannot be overlooked in this digital era as many people nowadays spend a lot of time on digital platforms. This particular practice or habit is one of the time wasting factors. The way a person spends leisure time affects his/ her behaviour, growth and life, thus proving the necessity to wisely manage leisure time. Untimely completion of tasks and responsibilities can lead to psychological stress. Such psychological stress can be largely reduced by learning time management skills.

The role of leisure time is becoming very significant and it plays vital roles in the lives of adults, adolescents as well as children. The way in which youngsters spend leisure time affects the behaviour, growth and life of the youngsters. It is thus necessary to take care of leisure time (Gajewska & Piskrzynska, 2017). It is also necessary to study the nature and contribution of the existing time management models to bring out the practical importance of the existing models and theories of time management (Jinalee and Singh, 2018).

## 2.2: Time Management as a tool

The process of time management eliminates unwanted activities and provides more time for important activities, while assisting the smooth progress in academic pursuit (Kumar, 2021). Time is really tricky, it is something that we couldn't have more, but surely can be utilized better through wise practice. There are many constraints on time available to a student. Students need to devote to school and study time, additionally for friends, family, personal jobs, social obligations etc. Some principles can guide effective and efficient management of time. Appreciable time management is more than what experience teaches us but it must be learnt and practiced until we understand the science and art of time management. It cannot be strictly guided by rules or laws but it can be practiced systematically (Adu-Oppong *et al*., 2014). According to Achuine (2004), proper time management can be done through:

a) Planning: It includes formulation of goals and practical ways to achieve the target. It also involves adequate patterning of time according to tasks or activities so as to enhance role performance and completing tasks within the expected period.
b) Organising: It involves arrangement of planned activities. Time management provides opportunities to create work schedules to achieve goals.
c) Responsibility: One should be responsible for who you are, what you can do, what you have received and to those that guided you.
d) Accountability and integrity: Time must be evaluated to show efficiency in accomplishing targeted goals. This can help to find out the work ability of planned activities, if the targets are achieved within the allocated time or not.
e) Effectiveness: Time management depends very much on effectiveness. The principle of force efficiency states that "there is never enough time to do everything, but there is always time to do the most important things".

The Rule of Indispensability stated that '10% of time taken to plan activities carefully will save 90% the effort involved in achieving goals later on'. The very act of a person planning his/ her work in advance can see dramatically reduction in the amount of time taken to do the actual job (Hisrich and Peters, 2002).

The time management ladder (Killian *et al.,* 1987), proposed the 'notion of time scheduling and time allocation to tasks based on how educationally productive they are for ensuring effective teaching and learning'. According to this ladder, numerous functions of educational administration are divided into three categories; the professional goal functions, the critical/ crisis functions and maintenance functions. The professional goal functions are at the apex of the ladder and maintenance functions at the base of the ladder. This arrangement is done in order of priority.

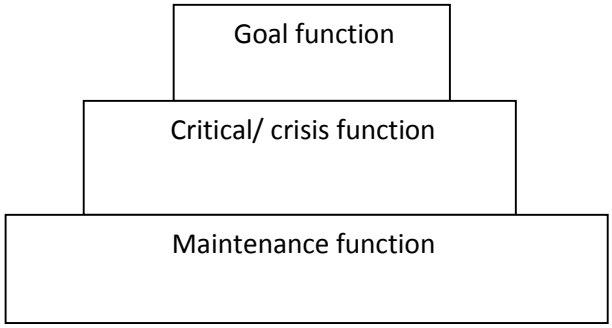


Fig. 2.1: Time Management Ladder

*(Source: Climbing the ladder to leadership, Killian et al., 1987)*

Effective time management is a remedy to work effectiveness. It can improve productivity and inculcate the habit to prioritise and accomplish important tasks.

## 2.3: Time Management Models and Theories

### 2.3.1: ABC Model of Time Management

Awareness, Believe and Continuation are the basis of ABC model, which are explained as:

a) Awareness

Every moment or second is an opportunity if a person is aware of its significance. The activities/ tasks that can be performed in 24 hours a day can be grouped into four quadrants/ levels as indicated:

| Particulars | Urgent | Not urgent |
|---|---|---|
| Important | 1<br>To prepare for exam | 2<br>To exercise regularly |
| Not important | 3<br>To attain unimportant phone calls | 4<br>Getting engaged in gaming or watching TV |

Fig. 2.2: Four quadrants of ABC Model

*(Source: LeanDNA)*

‘Important and urgent tasks’ have to be done first of all. ‘Important but not urgent’ tasks should be done after ‘important and urgent tasks’. ‘Urgent but not important’ must be done after the first and second type of tasks. ‘Not important and also not urgent’ type of tasks should be done last.

b) Believe

One is half way down the road to success, if a person is well aware of time and its value; and the importance of aim in life. Following the four quadrants with full focus will create a habit to complete tasks on time and with confidence, thus creating belief in oneself.

c) Continuation

Some kind of tool or technique is required to put awareness and belief into real practice and ‘Continuation’ is such a tool. To bring will success in personal and professional life of a person, time management techniques and tools should be continuously used (Chowdhury, 2013).

### 2.3.2: Pareto’s Principle- The 80- 20 Rule

The Pareto’s principle is named after the renowned Italian economist- sociologists Vilfredo Pareto (1848- 1923). The 80- 20 Rule finds its application in many aspects of organisation and business management. This principle gives an easy and quick way to understand clearly ‘what are unnecessary’ and ‘what are important’ (Reh, 2018). This principle consists of the following steps to be taken:

1) It is required to identify 20% of an activity/ job that is considered vital. This would probably enable performance, productivity, effectiveness etc. to atleast 80%.

2) This 20% has to be retained and nothing else, if it serves a crucial point

3) It has to be then tested for implications and effectiveness of the reduced range/ holding

4) Then it must be referred to aspects of project management and change management as considered appropriate.

The 80- 20 principle thus claims that 20% of vital activities completed will account to 80% of productive results. Each task can take equal amount of time to complete, but doing one or two important tasks will contribute to five or ten times the value as against other tasks that are not important.

Productive people discipline themselves always to start with the most important task set before them. They usually force themselves to complete the important task first of all under any circumstance.

| Time | | Effects |
|---|---|---|
| 20%<br>The most important task | → | Up to 80%<br>Achievement |
| 80%<br>Secondary affairs | → | Only 20%<br>Achievement |

Fig. 2.3: Pareto Principle in Time Management

*(Source: Productiveclub)*

Pareto's 80- 20 rule gives maximum results in minimum duration of time. It creates an opportunity to increase personal effectiveness.

### 2.3.3: Covey's Time Management Grid

The Covey's Time Management grid consists of four quadrants and it is one of the effective methods to organise priorities (Covey, 2013).

| Particulars | Urgent | Not urgent |
|---|---|---|
| Important | Quadrant I<br>Urgent and important activities | Quadrant II<br>Not urgent but important activities |
| Not important | Quadrant III<br>Urgent but not important | Quadrant IV<br>Neither urgent nor important |

Fig. 2.4: Covey's Time Management Grid

*(Source: Stephen Covey, 7 Habits of Highly Effective People)*

Quadrant I signifies immediate/ urgent and important deadlines.

Quadrant II signifies how to plan development programmes and implement long term strategies.

Quadrant III shows light on time pressured distractions. They are not really important but many people want to accomplish them immediately.

Quadrant IV comprises of those activities that yield little value. Such activities are often considered as breaks from pressured tasks.

Many people find that most of the activities/tasks fall under quadrants I and II. Quadrant II is not often used but it is exceptionally important. It is because works need to be done tactically and strategically at the same time. The importance of using this grid is to find ways to expand the activities in quadrant II (Mueller, 2017).

**How to use the grid**

Taking into account the current 'to- do' list and sorting all of them into appropriate grid is the first and most obvious use of the Covey's Time Management Grid. The amount of time required to complete the lists should be assessed and if necessary, the activities have to be allocated again.

The second approach of using the grid is a 'One Week Assessment Strategy'. Six copies of the grid should be used and one copy of the grid should be used everyday. All the activities and time spent on these activities should be listed in the grid. Data of all the five individual days should be combined onto grid number 6 at the end of the week. Time spent on each grid should also be calculated. Lastly, evaluation is done to find out how time has been spent on those activities. It also checks if there is a further need to reorganise the grids or not.

### 2.3.4: Eishenhower Matrix

Eishenhower Matrix is almost similar to Covey's Time Management Grid. However, the difference lies in the fact that quadrant IV must be deleted in Eishenhower Matrix as it is considered as a factor to waste time, but Covey pointed out that the activities covered in quadrant IV are refreshment or recreational activities, which are sometimes important to relieve pressures from hectic duties.

In 1954, D. Eishenhower the then President of US gave a speech and classified his activities into two categories: important activities and urgent activities. He claimed that important activities lead to goal achievement and urgent activities call for immediate actions but usually they are associated with someone else's goals. However, people often pay attention to urgent activities as the consequences of not complying with them are immediate (Fowler, 2012).

| Particulars | Urgent | Not urgent |
|---|---|---|
| Important | 1<br>Do | 2<br>Decide |
| Not important | 3<br>Delegate | 4<br>Delete |

Fig. 2.5: Eishenhower Matrix

*(Source: IONOS startup guide)*

Eishenhower matrix consists of four quadrants, which can be explained as under:

1) Important and urgent

To avoid last minute rush, one must plan ahead and avoid procrastination. When there are many urgent and important activities, it is always better to note down those similar activities and do in similar ways.

2) Important but not urgent

These activities are important but not urgent. The can help us achieve professional and personal goals. There should be abundant time to accomplish important but not urgent activities.

3) Not important but urgent

Such tasks usually prevent us from achieving goals as they are generally associated with others. Saying ‘no’ politely and giving the reason why it cannot be done can stop others from bothering us.

4) Not important and not urgent

‘Not important and not urgent’ types of activities are distractions. Hence, the best way to handle is to neglect them.

### 2.3.5: Parallel Programming Model

Zohreh Molaee, Dr. Hasan Azadzadeh and Dr. Fariborz Dortaj designed Parallel Programming Model by combining cognitive, metacognitive, physical, emotional skills. These skills try to manage all roles and tasks in a parallel way and at the same time. The logic behind the model is that 'man is an integrated whole who cannot be successful in all areas, if he couldn't be in peace with all the realms' (Molaee *et al,* 2014). A person who is not self satisfied and gets involved in many conflicts cannot be successful even though he/she has the potential to do so. This model is specially designed to check the academic achievement of married women.

Parallel Programming Model explains that time management has been discussed mostly in work areas, but it is also equally important in other aspects of life. Time management can be focussed even on educational aspects, especially to those people who plays various roles in day- to- day life as for instance the married women continuing their studies.

### 2.3.6: ALPEN Method

| | |
|---|---|
| A- Activities | Noting down assignments, activities, appointments |
| L- Length estimation | Estimating the duration of activities to be performed |
| P- Planning | To plan buffer times |
| E- Establishing Priorities | To make decision about which activities are to be done first |
| N- Next Day | To recheck |

Fig. 2.6: ALPEN Method

*(Source: IONOS startup guide)*

ALPEN method is a simple yet effective time management technique. Daily/weekly tasks are planned earlier and ALPEN method splits a complex task into smaller parts. The following are the steps to be followed:

1) A- Activities

First of all a list of tasks, activities or appointments for the day/week should be prepared. Related tasks should be clubbed together and similar tasks should be coded as for instance, M for meeting, S for shopping, E for exercise etc. It should be always made sure that all important activities are included in the list and no activity is left out. It is easier to sort the tasks if all the tasks are noted down.

2) L- Length estimation

It is important to estimate the duration for each task and more time should be given to those activities that are considered important.

3) P- Planning ahead

60 percent of available time in general should be reserved to complete the planned activities/ tasks. Remaining 40 percent should be reserved for untold circumstances. This 40 percent of the reserved time can be used for recreation if no untold circumstances show up. When we stick to 60/40 rule we shall get rid of stress. If the average day of a person is predictable with less or no emergency, the person can plan his/ her time in 80/20 rule instead of 60/40 rule.

4) E- Establishing priorities

To prioritise important tasks and delegate appropriate action is the next step to accomplish all the activities on time efficiently. Prioritisation allows a person to stay focused on the most important kind of tasks.

5) N- Next day

An important thing to remember keep is to keep track of the progress made so far. Completed tasks should be verified at the earliest and any unfinished tasks should be moved to the top of the next time table if possible. It should be checked if all the

objectives are successfully fulfilled or not and whether they are completed within the estimated time or not at the end of the day. This will improve correct prediction and increase ability to plan ahead in future.

All the five steps have to be kept in mind while using ALPEN method to build a positive time management habit. It reduces stress and improves efficiency (Panayotova *et al.,* 2015).

### 2.3.7: Mind Map

Psychologist Tony Buzan introduced the term 'Mind Map' for the first time during a series called 'Use Your Head' in the year 1974 at BBC TV. It was hosted by Buzan himself. However, it is an age old practice over centuries to use diagrams to map information visually using radial maps branching.

Mind maps can be used for creative thinking and can be used to visualize, generate, structure and classify ideas. It can help to organise information, solve problem and help in decision making and in studies. Mind Maps can enhance productivity of mind 3 to 5 times (Panayotova *et al.,* 2015). Mind Mao could be applied to analyse problems from different aspects. The advantages of Mind Map are as follow:

i) To encourage creative thinking

ii) It helps in generating more ideas

iii) It can summarise a huge number of information easily

iv) Activities which rely on keywords and images would be reflected in the presentation of the map

Mind mapping can be used for various purposes as the data retrieved from mind maps carry a lot of information.

### 2.3.8: Pickle Jar Theory

The story of pickle jar is quite familiar. It is simple but quite a good solution to improve time management. Life has its own purpose. Likewise, each component in

the pickle jar has a purpose for existence. The pickle jar is undoubtedly comparable to life of a person. Rocks, sand and pebble inside the jar have their own meanings of existence. The rocks represent the major important tasks that have serious consequences on our life if they are not fulfilled on time. The pebbles denote the daily tasks of life that are of average importance. The sand represents unimportant tasks like unnecessary calls, phone alerts, emails, app notifications etc. Those activities that can distract us from important tasks are represented by sand in the pickle jar.

The underlying principle of the theory is that if the jar is first filled with sand, there will be no space available for rocks and pebbles. If the jar is filled with pebbles first, there would be room for sand but not for the rocks. However, if the jar is first filled with rocks and pebbles afterwards, there would still be room left for sand. Thus, the story of pickle jar tries to convey a simple lesson that if important and major tasks are fulfilled first then there would be an ample room to fulfil other tasks. It will create possibilities to get leisure time and enjoy life (Mulder, 2017).

## 2.4: Discussion

1) Correct use of time management grids can reduce undue engagement on unnecessary or wasteful activities.

2) ABC model has clearly suggested that time management tools and techniques should be continuously used to achieve success.

3) The Eishenhower Matrix and Covey's Time Management Grid are almost similar. The difference lies in the fact that according to Eishenhower Matrix quadrant IV has to be deleted. It is being considered as a time wasting factor but Covey has noted that the activities covered in quadrant IV are refreshment or recreational activities. Such activities are of vital importance in order to get rid of undue pressures associated with hectic duties.

4) Pareto's principle strongly emphasised that if 20% of time is given to important activities, the rate of success will be 80%. It is observed that there is always a tendency to give 80% of time to secondary affairs and it is responsible for failures.

5) Parallel programming model has highlighted the notion that combining certain skills such as cognitive, meta-cognitive, physical, emotional skills enables successful management of activities/ roles in the same time.

6) ALPEN model is a rule based on proper planning and estimating of time schedule. It usually follows a follow- up approach. It checks if the objectives are fulfilled on estimated time or not enables prediction and planning ahead for future efficiently.

7) Exercising and training of mind can be done with the help of Mind Map. It teaches the mind to reflect on images and information to enhance creativity. It improves mental aptitude skills.

8) A simple story of pickle jar teaches us that fulfilling major tasks before secondary tasks can give ample time for other affairs. We must understand the underlying meaning of the story to see the wonders it can do on real practice.

The theories and models discussed in this chapter have focussed on making list of activities/ tasks to be performed and prioritisation of these activities/ tasks. The models are somehow more or less alike. The models and theories have highlighted strongly on the need to divide activities/ tasks into groups of important, urgent, not important but urgent, important but not urgent and neither urgent nor important kind of task. Many people have the poor habit to get indulged in tasks which are neither important nor urgent. Researchers developed time management models and theories to suggest people to focus on those activities that are important and to avoid wasteful activities, which are neither urgent nor important. After understanding the principles and values of various time management theories and models properly, what becomes significant next is how much one puts weight or importance on those principles and values and how far practical applications can be made. A balance has to be created in between the emotions and moods of individuals on accepting the priorities and strategies of time management that have been understood. It is good to inculcate the

habit of re- checking all the processes involved in the mental activities like reasoning, problem solving, learning process, making meaning of observations, understanding concepts etc. The techniques of time management help to reduce stress and efficiency of time usage can be improved.

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# CHAPTER 3

# Higher and Technical Education in Manipur

## 3.1: Introduction

## 3.2: Department of Higher Education, Ministry of Education, Government of India

## 3.3: Department of Technical Education, Manipur

## 3.4: Universities in Manipur

## 3.5: Profile of the selected institutions

### 3.1: Introduction

Education is one of the indicators of development in a society. Education system is not something that remains constant, but keeps on changing according to time and demand of the society. Higher education system generally refers to the education imparted in colleges and universities. It is concerned with the process of creating and imparting deeper knowledge as well as developing skills among students thereby indicating more advanced phases of human learning (Devi, 1995). Every country is therefore placing high importance on higher education (Bhoite, 2012). The importance of higher education has been growing constantly and knowledge based industries are occupying significant place in development of the nation. 'The modern higher education system in India is almost 135 years old, its growth has been much faster after India became independent' (Tenth Five Year Plan, 2002- 07). The University Grant Commission (UGC) has been playing pivotal role in development of higher education in India. It has been providing financial assistance to all eligible central, state and deemed universities to improve infrastructure and basic facilities. The grants- in- aid provided by UGC would be used to set up central universities especially in states that do not have any central university. It also aimed to support more autonomous colleges and private colleges.

According to the North Eastern Regional Council (2010) reports, the literacy rate of North East India is high but the standard and quality of education are of great concern. In Manipur there are many colleges offering many subjects of arts, science and commerce. Mention may be made of Dhanamanjuri (DM) College of Arts, DM College of Science, DM College of Commerce, DM College of Teachers' Education, Ghanapriya (GP) Women's College, Imphal College, Manipur College, Kha-Manipur College, Moirang College, Oriental College etc. There are technical and medical colleges also. MIT, NIT, NIELIT, CIPET, IIIT etc. are some of the technical colleges and RIMS and JNIMS are the only medical colleges in Manipur. Most of the colleges are affiliated to Manipur University. The state has a fewer number of universities. Manipur has witnessed growth of some private universities in the last few years. However, the number of universities is not in proportionate to the number of students, many students are forced to study outside the state and many gave up

their post graduate studies. This prevailing condition calls for increasing the number of universities in the state.

### 3.2: Department of Higher Education, Ministry of Education, Government of India

The Department of Higher Education under the Ministry of Education, Government of India plays prominent role in the development of higher education in India. It is responsible for the overall growth of basic infrastructure of higher education sector in India in terms of both policy and planning. This department looks after expansion and qualitative improvement in higher education through world class universities, colleges and institutions. The department works with the vision 'to realize India's human resource potential to its fullest in the Higher Education sector, with equity and inclusion'.

The department is guided by the mission to provide greater opportunities of access to Higher Education to all the eligible persons and in particular to the vulnerable sections of the nation. It expands access by supporting existing institutions, establishing new institutions, supporting State Governments and Non-Government Organizations/civil society. It works to supplement public efforts that aimed to remove regional or other imbalances that exist. Policies and programmes are initiated to strengthen research and innovations and to encourage institutions both public and private to engage in stretching the frontiers of knowledge. It works relentlessly to promote the quality of Higher Education by investing in infrastructure and faculty development programmes, making academic reforms, improving governance and institutional restructuring toward the inclusion of the deprived communities.

The Department of Higher Education emphasizes on the objectives to expand the Higher Education sector in all modes of delivery so as to increase the Gross Enrolment Ratio (GER) in Higher Education to 15% by 2011-12 to 21% by 2016-17 and 30% by the year 2020. It expands institutional base of Higher Education including those of technical, professional and vocational education by creating

additional capacity in existing institutions, to establish new institutions and provide incentives to State Governments and Non-Governmental Organizations/civil society. Opportunities are provided to socially-deprived communities and it aims to remove disparities by promoting the inclusion of women, minorities and differently-abled persons. It works to remove regional imbalances in access to Higher Education by setting up institutions in underserved areas. Collaboration with International community, foreign governments, universities/institutions and regional and international institutions are promoted for the advancement of universal knowledge and intellectual property rights. It promotes development of Indian languages. Institutional restructuring is undertaken to improve efficiency, relevance and creativity in Higher Education.

The key functions of the department are to enhance Gross Enrolment Ratio by expanding access through all modes and promoting the participation of those sections of the society whose GER is lower than the national average. To improve quality and to promote academic reforms new educational institutions are set up and also works are carried on to improve the capacity expansion and improvement of the existing institutions. It emphasises on the use of technology in higher education and development of vocational education and skill development. It works on the development of Indian Languages. It encourages international collaboration in the field of education.

### 3.3: Department of Technical Education, Manipur

The Department of Technical Education, Government of Manipur was created in the year 1973 with the Controller of Technical Education as the Head of Department. It is located at the Government Polytechnic campus, Takyelpat, Imphal. It is responsible to administer and run the Government Polytechnic at Takyelpat. The department of higher and Technical Education has also obtained approval to run one Government Polytechnic at each district of Manipur. It has been given the responsibility to promote Technical Education including Engineering courses for nomination of Manipur State Government nominees to various Government

Engineering Colleges of India. This department has taken large initiatives to promote technical education in Manipur.

### 3.4: Universities in Manipur

There are altogether nine universities in Manipur. Manipur University, Central Agricultural University and National Sports University are central universities. Dhanamanjuri University, Manipur Technical University and Manipur University of Culture are the state universities. The private universities of the state are Sangai International University, Manipur International University and Bir Tikendrajit University. Indira Gandhi National Tribal University and Indira Gandhi Nationa Open University have their regional centres in Imphal.

#### 3.4.1: Manipur University

On 5$^{th}$ June, 1980, the Manipur University was established under the Manipur University Act, 1980. It was the only state university of Manipur but it was converted into a Central University on 13$^{th}$ October, 2005. The university is located at Canchipur, Imphal. The campus spreads over an area of 287.53 acres of land. Canchipur is a historic site of "The Langthabal Konung", the old palace of Manipur. The Langthabal Konung was established by Maharaja Gambhir Singh in 1827 A.D., just after Manipur was liberated from Burmese occupation. There are 108 affiliated colleges inclusive of two medical colleges under the Manipur University. It has nine schools: Education, Humanities, Human and Environmental Sciences, Life Sciences, Mathematics & Physical Sciences, Social Science, Medical, Engineering and School of Agricultural Science. Besides, the nine schools the university has nine more centres: EMMRC (Education Multimedia Research Centre), CSSEIP (Centre for Study of Social Exclusion and Inclusive Policy), Centre of Entrepreneurship and Skill Development, Centre for Myanmar studies, Centre for Manipur Studies, Centre for Gandhian studies, Community College, Human Rights and Duties Education, and University Museum. The Manipur Technical University is a constituent college of Manipur University operating from two campuses: one at Takyelpat and other within the Manipur University campus.

The vision of the university is 'to become a world class university and educate the youth of the region, enable them to participate freely in the development of the Nation and become responsible citizens'.

The university is driven by its mission 'to foster excellence in teaching and research, to maintain the social relevance of education, to educate the youth of this region to become responsible citizens, and to promote innovation in the teaching- learning process'.

The primary objectives listed by the university are to disseminate knowledge by providing instructional and research facilities in branches of learning as it may deem fit and make provisions for integrated courses in humanities, natural and physical sciences, social sciences, forestry, and other allied disciplines. Appropriate measures are taken to promote innovations in the teaching-learning process, interdisciplinary studies, and research in a way to educate and train manpower for the development of Manipur and to pay special attention to improve the social and economic conditions as well as welfare of the people towards intellectual, academic, and cultural development.

### 3.4.2: Central Agricultural University (CAU)

The Central Agricultural University has been established by an act of Parliament, the Central Agricultural University Act 1992 and the act came into effect on 26$^{th}$ January, 1993 with the issue of notification by DARE (Department of Agricultural Research and Education), Government of India. The first Vice- Chancellor joined on 13$^{th}$ September, 1993 and the university has become functional since then. The headquarter of the university is at Imphal, Manipur with jurisdiction over seven North- Eastern States: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Nagaland and Tripura. The university imparts integrated programmes of teaching, research and extension education in the areas of agriculture and allied sciences. There are thirteen constituent colleges under CAU viz, College of Agriculture, Imphal; College of Fisheries, Agartala; College of Veterinary Sciences & Animal Husbandry, Aizawl; College of Horticulture & Forestry, Pasighal; College of Community Science, Tura; College of Agricultural Engineering and Post Harvest

Technology, Gangtok; College of Post Graduate Studies in Agricultural Sciences, Umiam; College of Food Technology, Lamphelpat;College of Agriculture, Kyrdemkulai; College of Agriculture, Pashighat, College of Horticulture, Bermiok; College of Horticulture, Thenzawl and College of Veterinary Science and Animal Husbandry, Jalukie.

The Krishi Vigyan Kendras (KVK) under CAU, Imphal are KVK Imphal East, KVK Pasighat, KVK Aizawl, KVK East Garo Hills and KVK South Garo Hills.

The primary objectives of the university are to impart education in different branches of agriculture and allied science as it may deem fit inorder to further the advancement of learning and conducting of research in agriculture and allied sciences. Extension education programme is taken in the states under its jurisdiction.

The goals of the University are to produce globally competitive graduates and postgraduates in agriculture and allied sciences; and to develop sustainable and profitable farming system to improve productivity, production and profitability in the agriculture and allied sectors. Extension functionaries are educated to disseminate effectively the agro technologies to the farmers, entrepreneurs and agro industries. It serves to be an important link in the chain for converting agriculture and allied vocations into profitable enterprises and provide food and nutritional security to the people of North Eastern Region of India, and the world.

The mission of the university is to be a Centre of Excellence in Teaching, Research and Extension Education in the field of agriculture and allied sciences.

### 3.4.3: National Sports University

The National Sports University was established in 2018 and presently functioning from its temporary campus at the Khuman Lampak Sports Complex of Imphal. Its permanent campus spreads over 325 acres of land at Koutruk. It is the only Central University in India focussing on sports education. It will have the flexibility to open new schools/ departments to develop sports science, sports medicine and allied areas. It has signed memorandum of understanding (MOU) with Universities of Canberra and Victoria in April 2017. The university is in the developing stage and once

developed will be the first of its kind to promote sports education in the areas of sports sciences, management and sports coaching. It will also function as a traing centre for selected sports disciplines. The university will have four schools:

1) School of Sports Science and Sports Medicine
2) School of Sports Management and Technology
3) School of Sports Education
4) School of Interdisciplinary Studies

The university is driven by its motto 'Sports Excellence through Education' and works with the vision to be the best and lead the rest institutions in sports education, research and training across the globe'.

'To promote sports education in the areas of sports sciences, sports technology, sports management and sports coaching besides functioning as the national training centre for selected sports disciplines and to adopt best international practices' is the motto guiding the National Sports University, Manipur.

### 3.4.4: Dhanamanjuri University (DM University)

The Dhanamanjuri University Act, 2017 came into force on 6th April, 2018 and it marked the existence of Dhanamanjuri University. It was established under National Scheme of Rashtriya Uchchatar Shiksha Abhiyan (RUSA).

The university is built up of three Dhanamanjuri Colleges namely DM College of Arts, DM College of Science, DM College of Commerce along with Ghanapriya (GP) women's College and LMS Law College. These colleges are neighbouring colleges. The university is presently functioning from DM College campus situated in the heart of Imphal City. It is bounded by National Highway No. 2 in the East, Thangmeiband road in the West and the Naga river in the South. GP College is to the South West of the Kangla Fort of Manipur and LMS Law College is located in East of DM Campus crossing National Highway No.2.

The university conducts bachelor and master degree courses in Arts, Science and Commerce stream. DM college of Science, Arts and Commerce are the best colleges

in Manipur and conversion of DM colleges into a State University will certainly prove to be one of the best universities in India.

### 3.4.5: Manipur Technical University (MTU)

Manipur Technical University was established under the Manipur University Ordinance, 2016 on April 23, 2016. It is temporarily located at Government Polytechnic Campus, Takyelpat, Imphal. The Government has allotted 116.22 acres of land at Khaidem Makha Leikai and Heigrujam Mamang Leikai under Patsoi Sub-Division of Imphal West District. It is the first and only technical university in Manipur. It has been included in the UGC list of Universities under Section 2 (f) of the UGC Act 1956 and has been empowered to award degrees under Section 22 of the UGC Act, 1956. After two batches have passed out from MTU, the National Board of Accreditation (NBA), the National Assessment and Accreditation council (NAAC) and All India Council for Technical education (AICTE) will begin the process of accreditation.

All the technical institutions in Manipur are going to be affiliated to Manipur Technical University in due course of time. It offers Bachelor of Technology courses in five disciplines: Civil Engineering, Mechanical engineering, Electrical Engineering, Electronics and Communication Engineering, and Computer Science and Engineering. The intake capacity of each discipline is 30 students per year.

The university engages itself in capacity building both in terms of human resource development and infrastructure. Tremendous efforts have been laid to develop the university into a modern university incorporating all scientific and socio- cultural aspects. College of Engineering, Pune has been appointed as the mentor of MTU under Technical Education Quality Improvement Programme Phase III (TEQIP- III) till the year 2020. MHRD monitors and provides suggestions to improve classroom transactions and overall quality of teaching faculties and students under the programme. MHRD also closely monitors the state of art laboratory equipment and academic- related resources in the form of faculty development program and assessment in specific areas of concern.

The university aims to appoint outstanding faculties from all across the country. It encourages the faculty members to conduct exceptional research and aims to create avenues for student internships and placements in reputed organisations. The university endeavours to collaborate with prestigious organisations and industries to promote industry- sponsored projects and research.

### 3.4.6: Manipur University of Culture

The Government of Manipur introduced a bill called "The Manipur University of Culture Bill, 2015" in the Manipur Legislative Assembly and thus the Manipur University of Culture came into being. It is established with a hope to promote Art and Culture; and rich cultural heritage of India. The university was formally inaugurated by the Hon'ble Governor of Manipur on 12th August 2016. The university is empowered to grant degrees under Section 22 of the UGC Act 1956 by the University Grant Commission.

The office of the university is currently functioning from the complex of the Department of Art and Culture, Government of Manipur. Teaching programmes are conducted at Imphal Art College, Government Dance College and Government Music College. The first academic session had commenced on 20th September, 2016. The university offers the following graduate courses:

1) Graduate Course in Dance
2) Graduate Course in Music
3) Graduate Course in Sankirtana
4) Graduate Course in Umang Lai Haraoba
5) Graduate Course in Thang- Ta
6) Graduate Course in Theatre
7) Graduate Course in Tribal Studies
8) Graduate Course in Visual Arts

The departments of the university are divided into four heads as under:

1) Faculty of Social Sciences: Department of Culture Studies, Department of Tribal Studies and Department of Umanglai Haraoba are the three departments under Faculty of Social Sciences.
2) Faculty of Arts: It comprises of two departments; the Department of English and Department of Manipuri.
3) Faculty of Performing Arts: Department of Dance, Department of Music, Department of Sankirtana, Department of Thang- Ta and Department of Theatre & Performing Studies are under this head.
4) Faculty of Visual Arts: it consists of only one department, Department of Visual Arts.

The Manipur University of Culture is the first of its kind in the entire North- Eastern part of India and it is new and unique. It is established with the objectives 'to advance and disseminate knowledge by teaching, training and research in various aspects of culture, particularly the culture of the state'.

### 3.4.7: Sangai International University

The Sangai International University is the first private university of the Manipur located at Renkai Road, Churachandpur District, Manipur. It was established under the Sangai International University Manipur Act, 2014 by an Act of State Legislature under self finance mode. It has received assent of His Excellency, the Governor of Manipur and same has been published in the Manipur gazette. The UGC has also accorded the university as a state private university, in accordance with the provisions contained in section 2 (f) of UGC Act, 1956.

The university is offering Choice Based Credit System (CBCS) granting freedom to students to choose optional courses. Quality and flexibility contributing to students' success is the underlying importance of CBCS initiative.

Vision of the university

'Sangai International University aspires to be premier university that imagines and influences the future by providing unparalleled educational opportunities to the

learner community especially for those coming from the lower socio- economic strata of society seeking quality and job oriented education',

The primary mission of the university is 'to produce versatile and resourceful professionals who are relevantly qualified for their chosen profession and vocations within an educational environment that fosters innovation, enterprise and enthusiasm for excellence.

The university is guided by the philosophy: wisdom, integrity and brilliance. The green colour of Globe in the university logo conveys that the university's philosophy and objectives of eGovernance refer to paperless work which is environmental friendly. The Sunlight on Globe is an embodiment of the cherished mission of the university: to provide 'knowledge for all' beyond boundaries and to facilitate students and faculties success.

### 3.4.8: Manipur International University (MIU)

Manipur International University is an autonomous Statutory State International University located at Ghari Awang Leikai, Manipur established and recognised by the Government of Manipur via Manipur International University Ordinance, 2018 (Manipur Ordinance No.1 of 2018). The MIU Act, 2018 (Manipur Act No.2 of 2019) has received final assent of the Hon'ble Governor of Manipur on 23rd January, 2019 and it has therefore been notified by the Law and legislative Affairs Department, Government of Manipur in the official Gazette Extraordinary of Manipur State on February 14, 2019.

The mission of the university is 'to provide high quality higher education with emphasis on educating the nation's rural and tribal communities by offering respected, relevant, accessible, affordable, and student- focused programs that prepare students for service and leadership in a diverse, global society'.

ECHER is the 5 pillars of development that Manipur International University focuses to initiate pivotal role to bring inclusive exponential development and transform people, place and society. E signifies Environment Protection Development, C signifies Cultural Preservation Development, H signifies Human Resource and

Education, E signifies Economic and Infrastructural Development, and R signifies Rural and Tribal Development.

The university strives to passionately work for a better future so as to ensure sustainability by developing growth through inclusive development. It is a new university and its achievements are yet to be seen.

### 3.4.9: Bir Tikendrajit University

Bir Tikendrajit University is a state private university established by an Act No.9 of 2020 and under u/s 2(f) of UGC act 2956. It is temporarily functional near Manipur University, South view and its permanent location would be at Thoubal Leishangthem Leikai. The university offers courses in various streams viz, science, arts, commerce, management, para- medical and engineering but it is not yet fully functional.

Vision of the university is 'to become a globally known educational institution responsive to the dynamic world around by grooming students to pursue lifelong learning; empowering them to meet and exceed challenges through active participation in shaping the future'.

The university's mission is 'to provide high quality and accessible education through blended learning processes, qualitative and influential research, creative endeavours and scholarly experiences enabling students to contribute locally and globally to knowledge, innovation and creativity'.

The university has been established with the objective that it shall impart job oriented courses and small scale industry based courses so that the youths will become independent and self employed.

### 3.4.10: Indira Gandhi National Tribal University,Regional Campus Manipur (IGNTU- RCM)

The Regional Campus Manipur (RCM) of Indira Gandhi National Tribal University (IGNTU) was established in 2009 and presently functioning from its temporary campus situated at Adimjati Shiksha Ashram, Chingmeirong, Imphal. The permanent

campus of IGNTU- RCM is located at Makhan village of Senapati District which is at a distance of 25Kms from Imphal city. The campus spreads over 301 acres of land and under construction. Four department viz. Departments of Political Science, Sociology, Social Work and Tribal Studies offering Master Degree Programmes are opened under IGNTU- RCM. It has started Ph.D course in Political Science and Social Work from the academic session 2014- 15 onwards.

### 3.4.11: Indira Gandhi National Open University (IGNOU), Imphal Regional centre

The Indira Gandhi National Open University (IGNOU), Imphal Regional centre has become functional on 1st December, 2000 at Asha Jina Complex, North AOC, Imphal. The three IGNOU Study Centres (SCs): the Manipur University Study Centre, Churanchandpur College Study Centre and Presidency College Study Centre were earlier functioning under Shillong Regional Centre till they were brought under the administrative control of the Imphal Regional Centre. Within the period from 2000 to 2005, as many as five new Study Centres and one Programme study centre were established making a total of nine SC/ PSCs. It offers various certificate programmes as well as Bachelor's Degree, Post Graduate Diploma and Advance Diploma and Master's Degree courses in various disciplines.

## 3.5: Profile of the selected institutions

The study has selected two medical colleges and seven engineering colleges/ university operational in Manipur.

### 3.5.1: Medical Colleges

There are only two medical colleges in Manipur: Jawaharlal Nehru Institute of Medical Sciences (JNIMS) and Regional Institute of Medical Sciences (RIMS).

### 3.5.1.1: Jawaharlal Nehru Institute of Medical Sciences (JNIMS), Imphal

Jawaharlal Nehru Institute of Medical Sciences (JNIMS) was initiated in 2007 and recognised by the Medical Council of India (MCI) in 2010. It is a state government medical college affiliated to Manipur University. Formerly it was a state run hospital known as JN (Jawaharlal Nehru) hospital. It is located at Porompat in Imphal East District of Manipur. First it was only a hospital but now it is a hospital as well as a medical college conducting Bachelor of Medicine and Bachelor of Surgery (MBBS) course. The college has started post graduate (PG) course in seven different pre and Para- clinical departments. Process of opening PG course in six other different para-clinical and clinical departments is also on process. BDS (Bachelor of Dental Surgery) course would be opened shortly. It is a 650 bedded hospital with different departments and many dedicated doctors, nurses and staffs. The intake capacity is 100 students per year.

The newly inaugurated block of JNIMS houses administrative and faculty section along with a central library, one examination hall of 300 seating capacity, 3 lecture halls, two common rooms and one lecture theatre of 450 seating capacity. Construction work to expand the infrastructure of the institution is in progress.

It has various medical facilities like OPD, lab, Accident Trauma Centre, Gynae, ENT, Psychiatry, Dermatologist, Cardiologist, Pediatric, Radiodiagnostic etc. Apart from these many speciality clinics are added viz, spine clinic, knee clinic, CTEV clinic, urology clinic, neurosurgery clinic, paediatric surgery, oncology clinic, cardiology clinic, diabetic clinic, thyroid clinic, gastroenterology clinic, pain clinic etc., to provide better patient care services. The institute has framed a scheme to provide free treatment to socio- economically backward patients, with financial contributions from benevolent donors. Under this scheme so far 25 patients have been given free treatment and one artificial limb has been donated. The institute has given free cochlear implant to 22 children. The institute has been serving mankind with utmost dedication and care.

### 3.5.1.2: Regional Institute of Medical Sciences (RIMS), Imphal

Regional Institute of Medical Sciences is situated at Lamphelpat, Imphal, Manipur. It was inaugurated on October 22, 1968 as a 300 bedded General Hospital by Y.B. Chavan, the then Union Home Minister. The foundation stone of first ever medical college on the soil of Manipur was laid on May 22, 1972, with the name 'Manipur Medical College' by the then Governor Shri B.K. Nehru. It was established as a joint venture of the North Eastern States. The name of the college was changed to Regional Medical College, Impal on September 14, 1972. The college was renamed again as North Eastern Regional Medical College under the management of North Eastern Regional Medical Society. From August 1976, it was run under the Ministry of Home, Government of India and it was the only medical college run by the Ministry of Home. The college was renamed again after nearly 19 years as Regional Institute of Medical Sciences and its management was taken over by North East Council (NEC), Ministry of DoNER, and Government of India from April 1, 1995. On April 1, 2007, the institute was transferred to the Ministry of Health & Family welfare, Government of India. It is affiliated to Manipur University ad fulfils the prescribed norms of MCI (Medical Council of India). It is now a 1074 bedded teaching hospital equipped with modern equipment and teaching facilities.

It has many facilities such as: Medical Literature Analysis and Retrieval System Online (MEDLINE) access from World Health Organisation (WHO), Tele- Medicine Centre, Regional Medical Library, Advanced Hospital Information and Management System etc. The intake capacity is 100 MBBS, 147 post graduate, 7 M.Phil in Clinical Psychology, 50 B.Sc Nursing and 50 BDS students per year. It is a premier institute of regional importance catering to the needs of North Eastern Region in the field of medical education and medical treatment. The objective of the institute is to impart quality medical education and improve the health condition of the entire North East India excluding Assam.

### 3.5.2: Engineering colleges/ universities in Manipur

There are seven engineering institutes in the state including National Institute of Technology (NIT), Manipur.

#### 3.5.2.1: Manipur Institute of Technology (MIT), Imphal

Manipur Institute of Technology (MIT) was formerly known as Government College of Technology (GCT). It was established by an act of parliament called Manipur University Act 2005. It was established on 28$^{th}$ August 1998 as Government College of Technology offering three disciplines: computer science & engineering, electronics & computer engineering and civil engineering. It operates from two campuses: one at Takyelpat and other at Manipur University Campus, Canchipur. Takyelpat is at a distance of 5 Km from the heart of Imphal city and 6 Km from the Imphal Airport. The intake capacity is 115 students per year. There are six departments under the institute: Department of Electronics & Communication Engineering, Department of Civil Engineering, Department of Basic sciences & Humanities, Department of Computer Science and Engineering, Department of Electrical engineering and Department of Mechanical engineering. It offers B.E., M. tech and doctoral programs under the six departments.

The institute has a vision to bring excellence in Engineering Education and Technology with Global Leadership in Human Resource Development. The mission of Manipur Institute of Technology can best be noted down as an aim to produce technically strong, research oriented, innovative, all round developed engineers who would be capable to solve modern challenges. It aims to impart engineering and technology education and to produce productive engineers with social commitment.

MIT provides placement assistance to its students at many corporate houses, industries, reputed firms and Government organisations. The Placement officer acts to facilitate the process of interaction between the students and representatives of recruitment firms. Many students of MIT have got placement in reputed companies like Hewlett Packard, HCL, Airtel, State Bank of India etc. The institute ensures to provide technology for all round development and to produce world class engineers.

### 3.5.2.2: National Institute of Technology (NIT), Imphal

National Institute of Technology, Imphal is one of the 31 National Institutes of Technology in India. It was established in 2010 and it is affiliated to the Ministry of Human Resource Development. It is located at Langol, Imphal at a distance of 10 Km from the Imphal International Airport. The campus spreads over 341.5 acres of land. NIT, Manipur is administered by the director of the Institute under direct supervision of Board of Governors (BOG) headed by The Chairman of Board of Governors for the institute has been registered under Manipur Societies Registration Act, 1989. Dean (Academic) implements policy for all academic activities. Dean-Planning and Development (P & D) implements planning and development of the institute. Dean (Student welfare) looks after the affairs of the students. The custodian of all the official records of the institute is kept under the Registrar and he is responsible for proper implementation of all the policy matter of the institute.

It offers Bachelor of Technology (B.Tech), Master of Technology (M.Tech), Master of Science (M.Sc) in Physics, Chemistry, Maths and Computing, Ph.D in Engineering/Technology, Humanities and Basic Sciences. The intake capacity for B.Tech is 150 students per year, out of which 50 per cent seats are reserved for the students of Manipur and the remaining 50 per cent seats are reserved for the students of other states. JEE (Joint Entrance Examination) is the qualifying exam to gain admission at NIT, Manipur. The institute has begun global participation with the programme Direct Admission of Students Abroad (DASA) from 2013- 14 onwards. Different development programmes have been undertaken to establish well equipped laboratories, library and computer facilities.

Vision of the institute is to provide the best infrastructure and amenities to the students. The institute envisions to be one of the best technical institutes in South-East Asia. It aims to attract students from the neighbouring South-East Asian countries keeping in view the Look-East Policy of the Government of India. The Institute strongly believes that the success of an Institute lies in the faculty and it leaves no stone unturned to attract the best faculty available in the country.

Mission of the institute: The Institute being accorded the status of "An Institute of National Importance" aspires to be a knowledge hub for the region. The Institute through its academic and research activities would act as incubation center for aspiring "technopreneurs". The Institute provides an ideal platform for national integration through emotional integration as half of the students are from outside the state. It envisions being an institute producing human resource of world class standard, who will contribute significantly in the well being of mankind.

Objectives of the institute are to nurture and develop talented young minds, encouraging creativity with academic excellence so as to provide a platform to young entrepreneurs and technocrats to experiment and fulfill their dreams and aspirations. Faculties and students are encouraged to conduct research of international standard. It works to produce students who would fulfill the employability criteria of MNCs. Laboratories with latest equipment and other facilities are planned to be set up. It works progressively to set up standard infrastructure for extra curriculum activities to reach up to the international level.

Infrastructural development of the institute has been well planned so that the institute enjoys facilities if international standard.

### 3.5.2.3: Indian Institute of Information Technology (IIIT), Manipur

Indian Institute of Information Technology, Manipur was established in 2015 and it is monitored by Indian Institute of Technology (IIT), Guwahati. The temporary campus of the institute is located at Mantripukhri, Imphal and it is to be permanently located at Senapati District of Manipur.

Currently the institute has offered only two B. tech courses in the disciplines of Computer Science and Engineering (CSE) and Electronics and Communication Engineering (ECE). The current intake capacity is 30 students each discipline per year, which is planned to increase to 50 students each discipline per year. It has five academic departments: CSE, ECE, Mathematics, Physics, Humanities and Social Sciences. In the coming years it is planning to start M.Tech and Ph.D programmes. It

is a public- private partnership (PPP) institute but currently it is run by the Ministry of Human Resource Development, India. It is looking for private/ industry partner. It is one of the twenty IIITs set up by the Government of India in PPP mode. It is a new institute, yet it has adequate classrooms, hostels, faculty quarters, guest house and administrative office with excellent student- faculty ratio that enables 360- degree technical supervision and personal development of the students.

Vision of the institute

The IIIT Senapati, Manipur undertakes the mission to provide technical education by offering state-of-the-art undergraduate, postgraduate and doctoral programmes with international standards of excellence and with emphasis on research to undertake collaborative projects which offer opportunities for long-term interaction with academia and Information Technology (IT) industry as well as technology development in the area of national importance.

Mission of the institute

To contribute to India and the World through excellence in Information Technology in general; to build leaders and entrepreneurs through transformative and Innovative Education in the context of socio-economic relevance to the North East of India in particular; to serve as a valuable resource for industry and society; and remain a source of pride for all Indians.

Manipur, being projected as a Gateway to South East Asia under the Look East Policy of the Government of India, IIIT Senapati, Manipur will be looking for opportunities to spread IT education and to contribute to Human Resource development in its neighboring countries.

IIIT Senapati, Manipur has a vision of establishing itself as an Institution of excellence in Cyber Security, Cyber Crime and Forensic so that human resource from IIIT Senapati, Manipur will be prepared to face this growing global threat. It also envisages itself for achieving excellence in application of robotics facilitating human life to overcome congenital as well as acquired disabilities.

IIIT Senapati, Manipur has been set up as an institute of international standard for offering UG (B.Tech.), PG (M.Tech.) and Ph.D. degree designed with a unique model of partnership of the Government of India in joint partnership with the State Government of Manipur and industry partners as well. It aims to provide best-in-class human resources to the growing electronics, manufacturing & design and IT software and services industry in India. It also aims in foster research and development in areas of advanced engineering and applied sciences in M.Tech. and Ph.D. levels. It works to harness the multi-dimensional facets of IT, electronics and design in various domains and to increase the student capacity to meet the growing demands for industry leaders of domestic and international Markets. The institution creates the provision to intake a certain percentage of foreign student starting from graduation level, especially from the South East Asian and SAARC countries. There is a mechanism for exchange of faculty with similar institutions of international repute. It ensures to improve the quality of life of people in general and improve the socio economic environment of North East Indian region in particular as an outreach activity.

IIIT, Manipur being an Institute of National Importance strives to be attentive towards the academic needs of the students and faculties at large.

**3.5.2.4: Manipur Technical University, Imphal**

The profile of Manipur Technical University has already been given in section 3.4.5 of the chapter.

**3.5.2.5: Government Polytechnic, Imphal**

It was established in 1956 by the Adimjati Shiksha Ashram to provide technical education to the students of North- East India. In 1972, the Government of Manipur take over the authority from the said Ashram and renamed it as the Government Polytechnic. First it was affiliated to the State Council for Technical Education, Assam and then it is affiliated to Manipur University since 1987. The campus of the institution spreads over 20 acres of land with large number of class rooms, laboratory and workshop buildings. The institute offers three years diploma courses in Civil,

Electrical, Mechanical, Electronics and Communication Engineering and Diploma in Pharmacy also. The intake capacity is 30 students each discipline per year.

The main objective of the Government Polytechnic, Imphal is to produce technicians at supervisory level to feed the demand of Technical Manpower in various fields of development activities. It also prepares the students for lateral entry to pursue degree courses in the appropriate stream/ trade.

All the students of the institute shall be under complete disciplinary control of the Principal or any officer (s) appointed by him for the purpose and must act in accordance with the disciplinary rules of the institute. The students have to strictly abide by the rules and regulations of the institute. The institute not only imparts technical education but also teaches disciplinary rules to the students.

### 3.5.2.6: National Institute of Electronics & Information Technology (NIELIT), Imphal

It is an autonomous body of Department of Electronics and Information Technology. It was first established as a Centre of Electronics Design & Technology (CEDT) in 1987 and renamed as Department of Electronics and Accreditation of Computer Classes (DOEACC) in December 2002. Since 2011 it is known as NIELIT. It is affiliated to Manipur University. It is located at Akampat about 5 Km from the heart of Imphal city. It spreads over 20 acres of land with many facilities like lecture hall, computer lab, mechanical workshop, Eletro- medical lab, servicing centre and other labs. It offers various short term and long term courses as well as skill development training programmes also. It offers various courses like Bachelor of Computer Application (BCA), Master of Computer Application (MCA), DOEACC O, A level, three years Diploma in Computer Science and Engineering, three years Diploma in Electronics and Communication Engineering, Post Graduate Diploma in Computer Application (PGDCA) etc. The intake capacity for the engineering diploma is 60 students per year in each discipline.

Vision of the institute: To be the leader in the development of industry oriented quality education and training and be the country's premier Institution for

examination and certification in the field of Information, Electronics and Communications Technology (IECT).

Mission of the institute: To be the single source for quality assurance in computer education among the nation's non-formal institutes, After turning out competent IT professionals in large numbers, NIELIT reach is now being extended to all regions of the country as well as overseas.

NIELIT Imphal specializes in development of skill in the fields of Electronics & Communication Engineering and Information Technology through various long term and short term courses.

### 3.5.2.7: Central Institute of Petrochemicals Engineering & Technology (CIPET), Imphal

It was formerly known as Central Institute of Plastics Engineering & Technology, Imphal and it was established in 1988 at Takyelpat, Imphal. It is an autonomous institute under the Department of Chemicals and Petro- Chemicals, Ministry of Chemicals and Fertilizers, Government of India. The headquarter is in Chennai. CIPET, Imphal is offering many short term courses in plastic engineering and three years diploma courses like Diploma in Plastics Mould Technology and Diploma in Plastic Technology. It plays important role in generating employment opportunities for unemployed youths and promotes entrepreneurial skills through various training programmes. It is an institution dedicated in providing academic and technological support to plastic and allied industries. It also organises awareness programmes on environmental issues towards plastics and plastics waste management. The intake capacity in the diploma courses is 30 students each discipline per year.

Vision of the institute: To become an apex Institute of International repute in the field of Polymer Science & Technology and ensure sustainable growth.

Academic and Skill Development Training Programs in the field of Polymer Science & Technology are conducted in order to provide qualified Human Resources with entrepreneurship qualities for Polymer & Allied Industries and to provide technology support in the form of consultancy services in the fields of design, tooling, plastics

processing, testing & quality assurance. Inspection services to the plastics industries are provided by the institute through a Quality Management System

Dedicated R & D wings on Plastic Materials & Product development are selected to develop new polymeric materials and its applications from Technology Transfer, Intellectual Property (IP) and Knowledge Base. CIPET, Imphal actively organises a number of vocational skill development programs in association with Central and State Government Departments and agencies like ‘Skill India’. It also conducts technology based Entrepreneurship Development Programs (EDP) to create self employment opportunities for educated unemployed youths of the state. Many participants have become successful entrepreneurs. It is extending technological support services to aspiring local entrepreneurs by allowing the machineries and other facilities of CIPET at a very nominal charge. The contribution of the institute towards economic development and awareness on plastic waste management is appreciable.

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# CHAPTER 4

# Quantitative Data Analysis

## 4.1: Introduction

## 4.2: Dependent and independent variables

## 4.3: Profile of the respondents

## 4.4: Data analysis and interpretation

## 4.5: Hypotheses testing

## 4.6: Designing a Time Management Model

## 4.1: Introduction

Chapter 4 has been divided into six different parts. The first part is introduction to the chapter. The independent and dependent variables are presented in the second part of the chapter. The third part of the chapter presents respondents' profile. Gender, educational area, percentage of marks obtained in previous exam passed, engagement in part time job, place of accommodation and social media interest comprise the demographic profile of the respondents. The fourth part of the chapter discloses data analysis and interpretation. Various statistical tools have been used to undergo data analysis. Mention may be made of simple mean, frequency, percentage, standard deviation, one way- ANOVA, independent sample t- test, correlation, chi-square etc. The fifth part of the chapter witness's hypotheses testing and the last part of the chapter is regression analysis of time management behaviour. It has been done to develop a time management model for students. All together five hypotheses have been tested. The first and second hypotheses have been tested using independent sample t- test, the third one by Chi- square test, the fourth and fifth hypotheses by using Pearson's Correlation. Specifically, the hypotheses of the study are accordingly with the research objectives as under:

Research hypotheses:

1. $H_a$: There is a significant difference in time management behaviour between medical and engineering students
2. $H_a$: There is a significant difference in time management behaviour between male and female students
3. $H_a$: There is a significant relationship between time management behaviour and academic performance
4. $H_a$: There is a significant relationship between time management behaviour and study habit of students
5. $H_a$: There is a significant relationship between time management behaviour and social media interest of students

## 4.2: Dependent and independent variables

### Dependent variables

To study the time management behaviour of medical and engineering students is the main objective of this research. It is also aimed at finding the relationships that exist in between time management behaviour (TMB), study habit (SH) and social media (SM) influence on the students. Therefore, TMB, SH and SM are the main dependent variables. A 5 point Likert Scale has been adopted with values ranging from 5, 4, 3, 2 and 1 for strongly agree, agree, neither agree nor disagree, disagree and strongly disagree respectively for positive statements and vice versa for negative statements.

To study time management behaviour, 25 statements were framed. Likewise, 25 statements were framed to study the study habit of students. There are also statements to understand social media interest of students.

### Independent variables

The conducted research is intended not only to study time management behaviour of students, but it is also aimed at studying the social media interest and study habit of students. Various factors like gender, educational area, academic performance, part time job engagement, place of accommodation etc are being considered as independent variables to undergo this research. The statements presented in the questionnaire are also considered as independent variables.

## 4.3: Profile of the respondents

The first part of the questionnaire had been designed to find the personal information of the respondents like gender, educational area, percentage of marks obtained in last exam passed, engagement in job, place of accommodation etc are included in the first part of the questionnaire. This information is being presented in this chapter. The study has covered a total of 520 respondents.

**Demographic variables**

**Table 4.1: Gender of the respondents**

| Gender | No. of respondents | Percentage (%) |
|---|---|---|
| Male | 255 | 49 |
| Female | 265 | 51 |
| Transgender | 0 | 0 |
| Total | 520 | 100 |

*(Source: Compiled from primary data)*

Table 4.1 shows gender of the respondents. It has been divided into three groups: male, female and transgender. Out of 520 respondents, 255 (49%) are male and 265 (51%) are female. There is no transgender among the respondents.

**Table 4.2: Educational area of the respondents**

| Educational area | No. of male | No. of female | Total | Percentage |
|---|---|---|---|---|
| Medical | 73 | 187 | 260 | 50% |
| Engineering | 182 | 78 | 260 | 50% |
| Total | 255 | 265 | 520 | 100% |

*(Source: Compiled from primary data)*

Table 4.2 shows the number of male and female students undertaking medical and engineering courses. Out of 255 male students, 73 are medical students and 182 are engineering students. And out of 265 female students, 187 are medical students and 78 are engineering students.

**Table 4.3: Percentage of marks obtained in the last exam passed**

| Sl. no. | Percentage of marks (class) | No. of medical students | No. of engineering students | Total number of respondents | Percentage (%) |
|---|---|---|---|---|---|
| 1 | 50-60 | 11 | 10 | 21 | 4 |
| 2 | 60-70 | 160 | 43 | 203 | 39 |
| 3 | 70-80 | 62 | 148 | 210 | 40.4 |
| 4 | 80-90 | 25 | 40 | 65 | 12.5 |
| 5 | 90-100 | 2 | 19 | 21 | 4 |
| 6 | Total | 260 | 260 | 520 | 100 |

*(Source: Compiled from primary data)*

Table 4.3 shows the percentage of marks obtained in the last exam passed. 4% of the students passed with 50- 60 % marks, 39% of the students passed with 60- 70 % marks, 40.4% of the students passed with 70- 80 % marks, 12.5% of the students passed with80-90 % marks and 4% of the students passed with 90- 100 % marks in their last exam passed. From this data it is evident that maximum number of students passed with 70- 80 % marks in their last exam.

**Table 4.4: Frequency distribution of TMB class**

| TMB score percentage (Class) | No. of medical students | No. of engineering students | Total number of respondents (frequency) | Percentage of respondents |
|---|---|---|---|---|
| 40- 50 | 1 | 9 | 10 | 1.9 |
| 50- 60 | 60 | 39 | 99 | 19 |
| 60- 70 | 160 | 91 | 251 | 48.3 |
| 70- 80 | 32 | 100 | 132 | 25.4 |
| 80 and above | 7 | 21 | 28 | 5.4 |
| Total | 260 | 260 | 520 | 100 |

*(Source: Compiled from primary data)*

Frequency distribution of time management behaviour (TMB) shown in table 4.4 shows that 10 (1.9%) of the students have TMB score between 40- 50 %, 99 (19%) of the students have TMB score between 50- 60 %, 251 (48.3%) of the students have TMB score between 60- 70 %, 132 (25.4%) of the students have TMB score between 70- 80% and 28 (5.4%) of the students have TMB score between 80% and above.

**Table 4.5: Engagement of the respondents in part- time job (if any)**

| Respondents | No. of medical students | No. of engineering students | Total number of respondents | Percentage (%) |
|---|---|---|---|---|
| Engaged in job | 18 | 7 | 25 | 4.8 |
| Not engaged in job | 242 | 253 | 495 | 95.2 |
| Total | 260 | 260 | 520 | 100 |

*(Source: Compiled from primary data)*

As shown in table 4.5, it is observed that only 4.8% of the respondents are engaged in part time job and 95.2% of the respondents are not engaged in any job.

**Table 4.6: Place of accommodation of the respondents**

| Accommodation place | Educational area | | Total | Percentage (%) |
|---|---|---|---|---|
| | Medical | Engineering | | |
| Home | 5 | 95 | 100 | 19.23 |
| Rent | 2 | 24 | 26 | 5 |
| Hostel | 253 | 141 | 394 | 75.76 |
| Grand total | | | 520 | 100 |

*(Source: Compiled from primary data)*

Table 4.6 shows that 19.23% of the respondents stay at home, out of these 5 respondents are medical students and 95 respondents are engineering students. 5% of the students stay at rent. Out of these 5 respondents are medical students and 24 are

engineering students. 75.76% of the respondents stay at hostel. Out of these 253 respondents are medical students and 141 respondents are engineering students.

## 4.4: Data Analysis and Interpretation

### 4.4.1: Reliability test for time management behaviour (TMB) and study habit (SH) using Cronbach's Alpha

Cronbach's alpha is a measure of internal consistency. It shows how a set of items in a group are closely related. It is not a statistical test but a coefficient of reliability. It is commonly used to determine if a scale is reliable.

**Table 4.7: Reliability statistics of time management behaviour**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | No. of items |
|---|---|---|
| 0.799 | 0.813 | 25 |

*(Source: Calculated value)*

All the 520 respondents are covered in the study and there is no missing value. Table 4.7 shows that the value of Cronbach's Alpha is 0.799. It is close to the optimum Alpha value which is equal to 1.000. The value 0.799 denotes reliability as a minimum 70% Alpha value is generally considered reliable. It explains that 79.9% of the variability in a composite score is true and consistent. It thus shows reliability by combining all the 25 items in the scale.

This table shows that the Cronbach's Alpha value based on standardised items is 0.813 and the difference between the two values is that Alpha= 0.813 is calculated based on the pre- test or pre- assumption that all the scales have the same variance

which in actual practice is not possible and not true as there will always be some variance in the scale or items so that first Alpha value is taken in most cases.

**Table 4.8: Reliability statistics of study habit**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | No. of items |
|---|---|---|
| 0.702 | 0.710 | 25 |

*(Source: Calculated value)*

There is no missing value as all the 520 respondents are covered in the study. Table 4.8 shows the Cronbach's Alpha value. It is found to be α= 0.702 and it is close to the optimum value of Alpha= 1.000. It denotes reliability as explained earlier. Alpha value= 0.702 denotes 70.2% of variability in a composite score is true and consistent. It has thus shown reliability by combining all the 25 items in the scale.

The Cronbach's Alpha based on standardised items is 0.710 and the difference between the two values is α = 0.710 is calculated based on pre- test or pre-assumption that all the scales have the same variance which is not possible in actual practice and not true as there will always be some variance in the scale or items so that the first α value is taken in most case.

### 4.4.2: Social media interest of respondents

**Table 4.9: Social media interest of the students**

| Sl. no. | Social media apps | Educational area | Frequency of use | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | W | Total | Percentage (%) | X | Total | Percentage (%) | Y | Total | Percentage (%) | Z | Total | Percentage (%) |
| 1 | Fb | A | 96 | 136 | 26.15 | 83 | 253 | 48.65 | 49 | 86 | 16.53 | 32 | 45 | 8.65 |
| | | B | 40 | | | 170 | | | 37 | | | 13 | | |
| 2 | In | A | 69 | 151 | 29.03 | 166 | 304 | 58.46 | 24 | 54 | 10.38 | 1 | 11 | 2.11 |
| | | B | 82 | | | 138 | | | 30 | | | 10 | | |
| 3 | Wh | A | 4 | 12 | 2.30 | 255 | 499 | 95.96 | 1 | 7 | 1.34 | 0 | 2 | 0.38 |
| | | B | 8 | | | 244 | | | 6 | | | 2 | | |
| 4 | Tw | A | 235 | 443 | 85.19 | 6 | 33 | 6.34 | 16 | 30 | 5.76 | 3 | 14 | 2.69 |
| | | B | 208 | | | 27 | | | 14 | | | 11 | | |
| 5 | Yo | A | 9 | 21 | 4.03 | 233 | 471 | 90.57 | 17 | 27 | 5.19 | 1 | 1 | 0.19 |
| | | B | 12 | | | 238 | | | 10 | | | 0 | | |
| 6 | Li | A | 245 | 438 | 92.88 | 8 | 17 | 3.26 | 5 | 12 | 2.30 | 2 | 8 | 1.53 |
| | | B | 238 | | | 9 | | | 7 | | | 6 | | |
| 7 | Ga | A | 169 | 293 | 56.34 | 57 | 166 | 31.92 | 30 | 48 | 9.23 | 4 | 13 | 2.5 |
| | | B | 124 | | | 109 | | | 18 | | | 9 | | |
| 8 | Ot | A | 225 | 435 | 83.65 | 27 | 61 | 11.73 | 5 | 16 | 3.07 | 3 | 8 | 1.53 |
| | | B | 210 | | | 34 | | | 11 | | | 5 | | |

*(Source: Compiled from primary data)*

*Fb= Facebook, In= Instagram, Wh= Whatsapp, Tw= Twitter, Yo= Youtube, Li= Likee, Ga= Gaming, Ot= Others

**A= Medical, B= Engineering, W= Not in use, X= Everyday, Y= Once in a week, Z= Once in a month

As shown in table 4.9, 26.15% of the respondents do not use facebook. 48.67% of the respondents use facebook everyday. 16.53% of the respondents use facebook once in a week and 8.65% of the respondents use facebook once in a month. Thus, majority of the respondents use facebook everyday, where the number of engineering students exceeds the number of medical students in terms of daily facebook usage.

29.03% of the respondents do not use instagram, 58.46% of the respondents use instagram everyday, 10.38% of the respondents use instagram once in aweek and 2.11% of the respondents use instagram once in a month. Majority of the respondents use instagram everyday, where the number of medical students exceeds the number of engineering students in terms of daily instagram usage.

Regarding whatsapp, 2.30% of the respondents do not use whatsapp, 95.96% of the respondents use whatsapp everyday, 1.34% of the respondents use whatsapp once in a week and a very small percentage of 0.38% use whatsapp once in a month. It is evident that a high number of respondents use whatsapp everyday and the number of medical students using whatsapp is more than the number of engineering students.

Out of 520 respondents, 443 i.e., 85.19% of the respondents do not use twitter, 6.34% of the respondents use twitter everyday, 5.76% of the respondents use twitter once in a week and 2.69% of the respondents use twitter once in a month. Thus, majority of the respondents do not use twitter.

4.03% of the respondents do not use youtube, 90.57% of the respondents use youtube everyday, 5.19% of the respondents use youtube once in a week and 0.19% of the respondents use youtube once in a month. Thus, majority of the respondents use youtube everyday, where the number of medical stydents is 233 and that of engineering students is 238.

A majority of 92.88% of the respondents do not use Likee App, 3.26% of the respondents use Likee App everyday, 2.30% of the respondents use Likee App once in a week and 1.53% of the respondents use Likee App once in a month.

For gaming, 56.34% of the respondents do not engage in gaming, 31.92% of the respondents are found to be engaged in gaming everyday, 9.23% of the respondents are engaged in gaming once a week and 2.5% of the respondents are engaged in gaming once a month.

For other apps, 83.65% of the respondents are not engaged in other apps, 11.73% of the respondents are engaged in other apps everyday, 3.07% of the respondents are

engaged in other apps once in a week and 1.53% of the respondents are engaged in other apps once a month.

From this table it can be concluded that majority of the respondents are interested in whatsapp followed by youtube, instagram, facebook, gaming, other apps, twitter and likee (as in decreasing order of daily usage).

**Table 4.10: Frequency distribution of social media use**

| Statement | SD | D | N | A | SA | Total |
|---|---|---|---|---|---|---|
| I use internet (or social media) only for educational purposes | 27 | 157 | 162 | 125 | 49 | 520 |
| My attention gets shifted to ads or other sites while browsing for educational materials | 52 | 166 | 114 | 137 | 51 | 520 |

*(Source: Compiled from primary value)*

*SA= Strongly agree, A= Agree, N= Neither agree nor disagree, D= disagree and SD= Strongly disagree

**Table 4.11: Descriptive statistics of first statement of social media use with respect to educational purposes**

| Educational area | I use internet (or social media) only for educational purposes | | | | | Total |
|---|---|---|---|---|---|---|
| | SD | D | N | A | SA | |
| Medical | 13 (5%) | 93 (35.76%) | 102 (39.23%) | 45 (17.30%) | 7 (2.69%) | 260 |
| Engineering | 14 (5.38%) | 64 (24.61%) | 60 (23.07%) | 80 (30.76%) | 42 (16.15%) | 260 |
| Total | 27 | 157 | 162 | 125 | 49 | 520 |
| Percentage | 5.2 | 30.2 | 31.2 | 24 | 9.4 | 100 |

*(Source: Calculated value)*

*SD= Strongly disagree, D= Disagree, N= neither agree nor disagree, A= Agree, SA= Strongly agree

As observed in the above table, out of 260 medical students, 13(5%) students strongly disagree, 93 (35.76%) students agree, 102 (39.23%) students neither agree nor disagree, 45 (17.30%) students agree and 7 (2.69%) students strongly agree to the statement.

Out of 260 engineering students, 14 (5.38%) students strongly agree, 64 (24.61%) students agree, 60 (23.07%) students neither agree nor disagree, 80 (30.76%) students agree and 42 (16.15%) students strongly agree to the given statement.

**Table 4.12: Descriptive statistics of second statement of social media use with respect to educational purposes**

| Educational area | My attention gets shifted to ads or other sites while browsing for educational materials | | | | |
|---|---|---|---|---|---|
| | SD | D | N | A | SA |
| Medical | 25 (9.61%) | 98 (37.69%) | 50 (19.23%) | 69 (26.53%) | 18 (6.92%) |
| Engineering | 27 (10.38%) | 68 (26.15%) | 64 (24.61%) | 68 (26.15%) | 33 (12.69%) |
| Total | 52 | 166 | 114 | 137 | 51 |
| Percentage | 10 | 31.9 | 21.9 | 26.3 | 9.8 |

*(Source: Calculated value)*

*SD= Strongly disagree, D= Disagree, N= Neither agree nor disagree, A= Agree, SA= Strongly agree

Table 4.12 shows that out of 260 medical students, 25 (9.61%) students strongly disagree, 98 (37.69%) students agree, 50 (19.23%) students neither agree nor disagree, 69 (26.53%) students agree and 18 (6.92%) students strongly agree to the statement.

Out of 260 engineering students, 27 (10.38%) students strongly agree, 68 (26.15%) students agree, 64 (24.61%) students neither agree nor disagree, 68 (26.15%) students agree and 33 (12.69%) students strongly agree to the given statement.

**Table 4.13: Descriptive statistics of first statement of social media use with respect to gender of the respondents**

| Gender | I use internet (or social media) only for educational purposes | | | | |
|---|---|---|---|---|---|
| | SD | D | N | A | SA |
| Male | 17 (6.66%) | 60 (23.52%) | 67 (26.27%) | 77 (30.19%) | 34 (13.33%) |
| Female | 10 (3.77%) | 97 (36.60%) | 95 (35.84%) | 48 (18.11%) | 15 (5.66%) |
| Total | 27 | 157 | 162 | 125 | 49 |
| Percentage | 5.2 | 30.2 | 31.2 | 24 | 9.4 |

*(Source: Calculated value)*

*SD= Strongly disagree, D= Disagree, N= Neither agree nor disagree, A= Agree, SA= Strongly agree

Out of 255 male students, 17 (6.66%) students strongly disagree, 60 (23.52%) students agree, 67 (26.27%) students neither agree nor disagree, 77 (30.19%) students agree and 34 (13.33%) students strongly agree to the statement.

Out of 265 female students, 10 (3.77%) students strongly agree, 97 (36.60%) students agree, 95 (35.84%) students neither agree nor disagree, 48 (18.11%) students agree and 15 (5.66%) students strongly agree to the given statement.

**Table 4.14: Descriptive statistics of second statement of social media use with respect to gender of the respondents**

| Gender | My attention gets shifted to ads or other sites while browsing for educational materials | | | | |
|---|---|---|---|---|---|
| | SD | D | N | A | SA |
| Male | 25 (9.80%) | 66 (25.88%) | 64 (25.09%) | 68 (26.66%) | 32 (12.54%) |
| Female | 27 (10.18%) | 100 (37.73%) | 50 (18.87%) | 69 (26.03%) | 19 (7.16%) |
| Total | 52 | 166 | 114 | 137 | 51 |
| Percentage | 10 | 31.9 | 21.9 | 26.3 | 9.8 |

*(Source: Calculated value)*

*SD= Strongly disagree, D= Disagree, N= Neither agree nor disagree, A= Agree, SA= Strongly agree

The above table shows that out of 255 male students, 25 (9.80%) students strongly disagree, 66 (25.88%) students agree, 64 (25.09%) students neither agree nor disagree, 68 (26.66%) students agree and 32 (12.54%) students strongly agree to the statement.

Out of 265 female students, 27 (10.18%) students strongly agree, 100 (37.73%) students agree, 50 (18.87%) students neither agree nor disagree, 69 (26.03%) students agree and 19 (7.16%) students strongly agree to the given statement.

**Table 4.15: Descriptive statistics of first statement of social media use with respect to percentage of marks obtained in the last exam passed by the respondents**

| Percentage of marks obtained | I use internet (or social media) only for educational purposes | | | | | Total |
|---|---|---|---|---|---|---|
| | SD | D | N | A | SA | |
| 50-60 | 1 | 5 | 11 | 3 | 1 | 21 |
| 60-70 | 6 | 78 | 69 | 38 | 12 | 203 |
| 70-80 | 13 | 49 | 56 | 60 | 32 | 210 |
| 80-90 | 5 | 13 | 23 | 20 | 4 | 65 |
| 90-100 | 2 | 12 | 3 | 4 | 0 | 21 |
| Total | 27 | 157 | 162 | 125 | 49 | 520 |
| Percentage | 5.2 | 30.2 | 31.2 | 24 | 9.4 | 100 |

*(Source: Calculated value)*

*SD= strongly disagree, D= disagree, N= neither agree nor disagree, A= agree, SA= strongly agree

Out of 21 students in the percentage mark range of 50- 60, a maximum of eleven students neither agree nor disagree to the statement. Out of 203 students in the percentage mark range of 60- 70, a maximum of seventy- eight students disagree with the statement. Out of 210 students in the percentage mark range of 70-80, a maximum of sixty students agree with the statement. Out of 65 students in the percentage mark range of 80- 90, a maximum of 23 students neither agree nor disagree with the statement. Out of 21 students in the mark range of 90- 100, a maximum of twelve students disagree with the statement. Hence a total majority of 162 (31.2%) of the students neither agree nor disagree with the statement, followed by 157 (30.2%) students who disagree with the statement.

**Table 4.16: Descriptive statistics of second statement of social media use with respect to percentage of marks obtained in the last exam passed by the respondents**

| Percentage of marks obtained | My attention gets shifted to ads or other sites while browsing for educational materials | | | | | Total |
|---|---|---|---|---|---|---|
| | SD | D | N | A | SA | |
| 50-60 | 2 | 7 | 9 | 3 | 0 | 21 |
| 60-70 | 21 | 70 | 38 | 65 | 9 | 203 |
| 70-80 | 23 | 66 | 49 | 44 | 28 | 210 |
| 80-90 | 6 | 17 | 13 | 20 | 9 | 65 |
| 90-100 | 0 | 6 | 5 | 5 | 5 | 21 |
| Total | 52 | 166 | 114 | 137 | 51 | 520 |
| Percentage | 10 | 31.9 | 21.9 | 26.3 | 9.8 | 100 |

*(Source: Calculated value)*

*SD= strongly disagree, D= disagree, N= neither agree nor disagree, A= agree, SA= strongly agree

The above table 4.16 shows that out of 21 students in the percentage mark range of 50- 60, a maximum of nine students neither agree nor disagree to the statement. Out of 203 students in the percentage mark range of 60- 70, a maximum of seventy students disagree with the statement. Out of 210 students in the percentage mark range of 70-80, a maximum of sixty six students disagree with the statement. Out of 65 students in the percentage mark range of 80- 90, a maximum of 20 students neither agree nor disagree with the statement. Out of 21 students in the mark range of 90- 100, a maximum of six students disagree with the statement. Hence a total majority of 166 (31.9%) of the students disagree with the statement, followed by 137 (26.3%) students who agree with the statement.

### 4.4.3: Statistical result of TMB and SH with respect to place of accommodation

The place of accommodation of the respondents has been categorised into home, rent and hostel. The relationship between TMB and place of accommodation, which involves three variables (home, rent and hostel) can be found out using one way ANOVA as shown in table 4.17. Similarly, one way ANOVA can be used to find the relationship between SH and place of accommodation as shown in table 4.18.

**Table 4.17: ANOVA result of time management behaviour (TMB) with respect to place of accommodation**

| Particulars | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 2056.454 | 2 | 1028.227 | 16.459 | 0.001 |
| Within groups | 32297.849 | 517 | 62.472 | | |
| Total | 34354.303 | 519 | | | |

*(Source: Calculated value)*

The F value is found to be F= 16.459 with p value= 0.001, which is less than 0.05. From this result it can be assumed that there is a significant relationship between TMB and place of accommodation.

**Table 4.18: ANOVA result of Study habit (SH) with respect to place of accommodation**

| Particulars | Sum of squares | Df | Mean square | F | Sig. |
|---|---|---|---|---|---|
| Between groups | 2030.672 | 2 | 1015.336 | 16.672 | 0.001 |
| Within groups | 28112.831 | 517 | 54.377 | | |
| Total | 30143.503 | 519 | | | |

*(Source: Calculated value)*

As observed from table 4.18, the value of F is found to be F= 16.672 with p value= 0.001, which is less than 0.05. Hence there is a significant relationship between SH and place of accommodation.

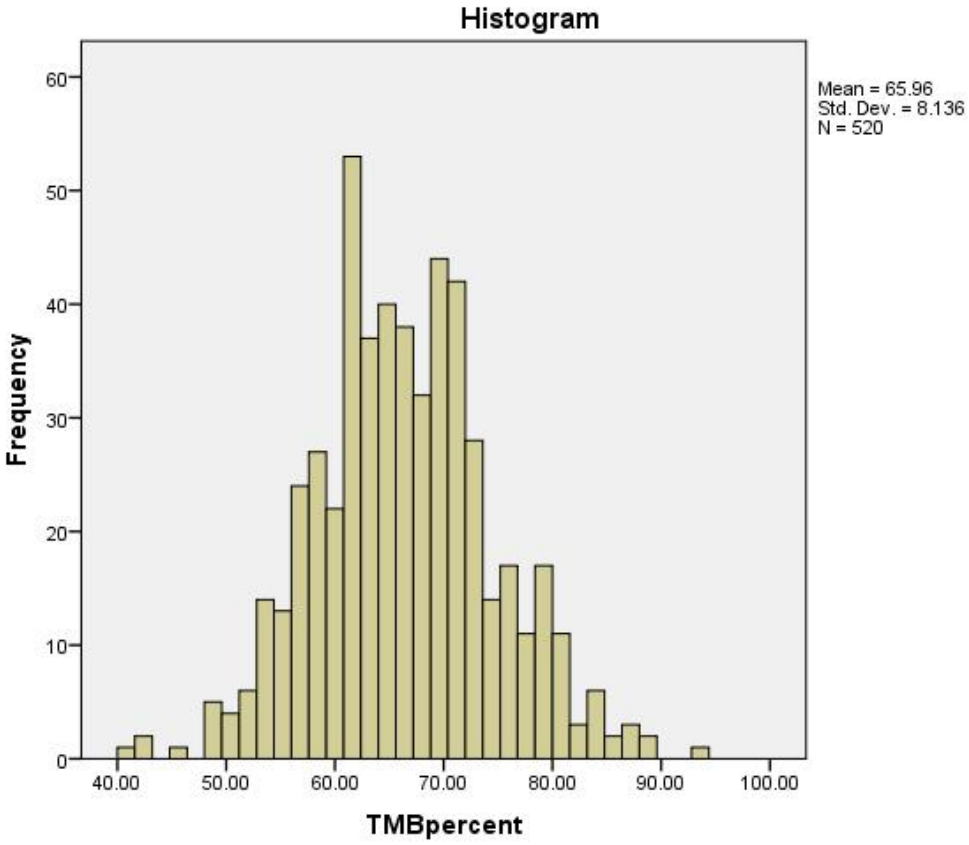
### 4.5: Hypotheses Testing

Before testing the hypotheses, the variables have been first tested to determine normality of data. Normality test was conducted and no outlier was found in the process. The histograms, Normal Q- Q plots and boxplots indicate that the data are distributed normally. The skewness and kurtosis values of time management behaviour (TMB) were found to be 0.151 and 0.177 respectively. Similarly, the skewness and kurtosis values of study habit (SH) were found to be -0.333 and 0.915 respectively. Negative skew indicates longer or fatter tail on the left side of the distribution, while positive skew indicates longer or fatter tail on the right of the distribution.

The histograms, Normal Q- Q plots and boxplots of TMB and SH are represented as under:

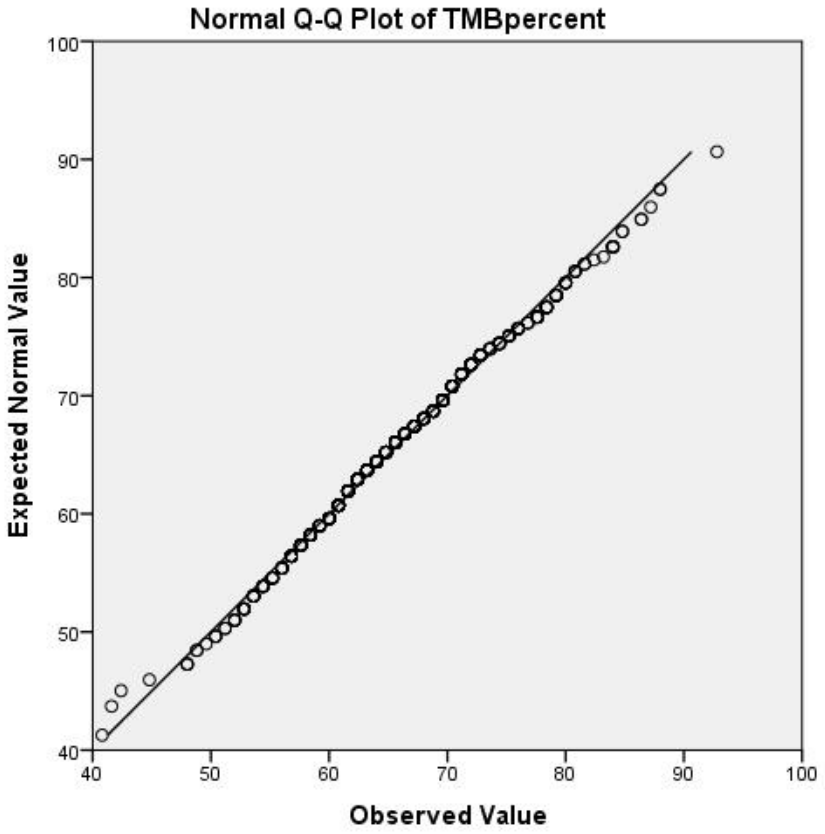
### 4.5.1: Normality test of time management behaviour (TMB)

**Graph 4.1: Distribution of time management behaviour (TMB) represented through a histogram**



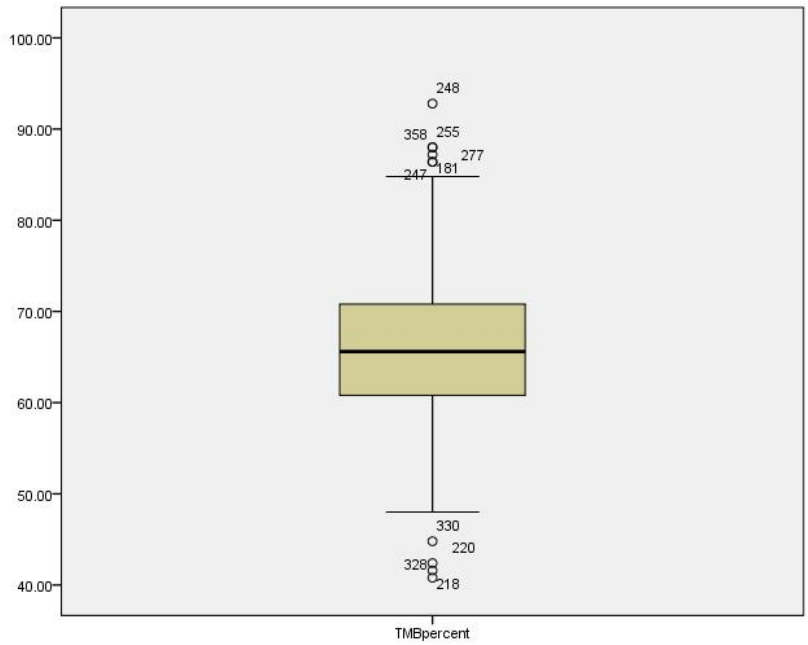

The histogram (graph 4.1) has been plotted with TMB percentage score on the X-axis and frequency of the values of TMB percentage score on the Y- axis. The histogram is found to be approximately a bell curve and thus represents a normal distribution. The mean and standard deviation are 65.96 and 8.136 respectively.

**Graph 4.2: Normal Q- Q plot of time management behaviour**




Graph 4.2 shows the normal Q- Q plot of TMB percentage score. Observed value and expected value are plotted in this graph. If the values vary more from a straight line, then the data is not normally distributed. Otherwise, data is normally distributed. In the above Q- Q plot, the values are aligned almost along a straight line indicating a normal distribution.

**Graph 4.3: Boxplot of time management behaviour**

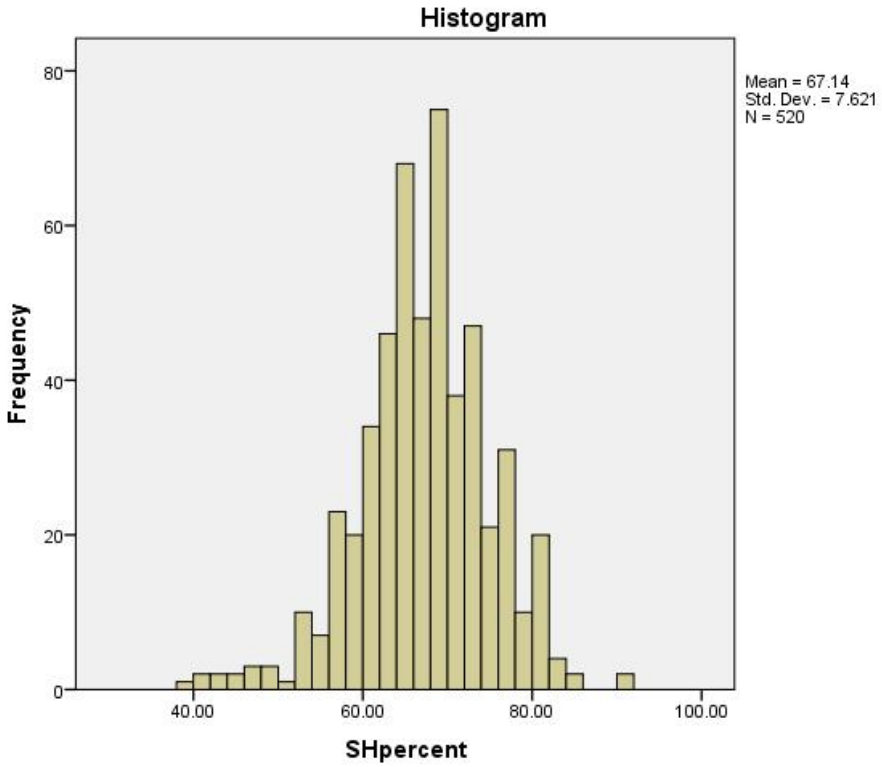



Graph 4.3 shows the boxplot of TMB percentage score. Boxplot determines if outliers are present in the data or not. It is a test of symmetry and a test of symmetry is a sufficient substitute for normality of data. The boxes on each side of the line of symmetry are found to be almost symmetry.

Graphs 4.1, 4.2 and 4.3 have clearly shown that the TMB percentage scores of the respondents are normally distributed.

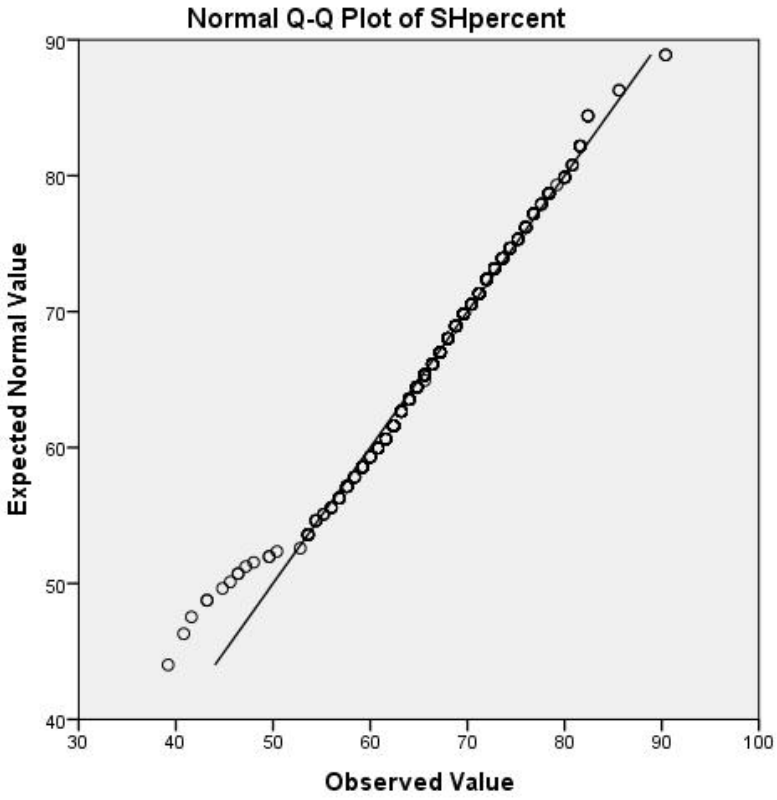
### 4.5.2: Normality test of study habit (SH)

**Graph 4.4: Distribution of study habit (SH) through a histogram**



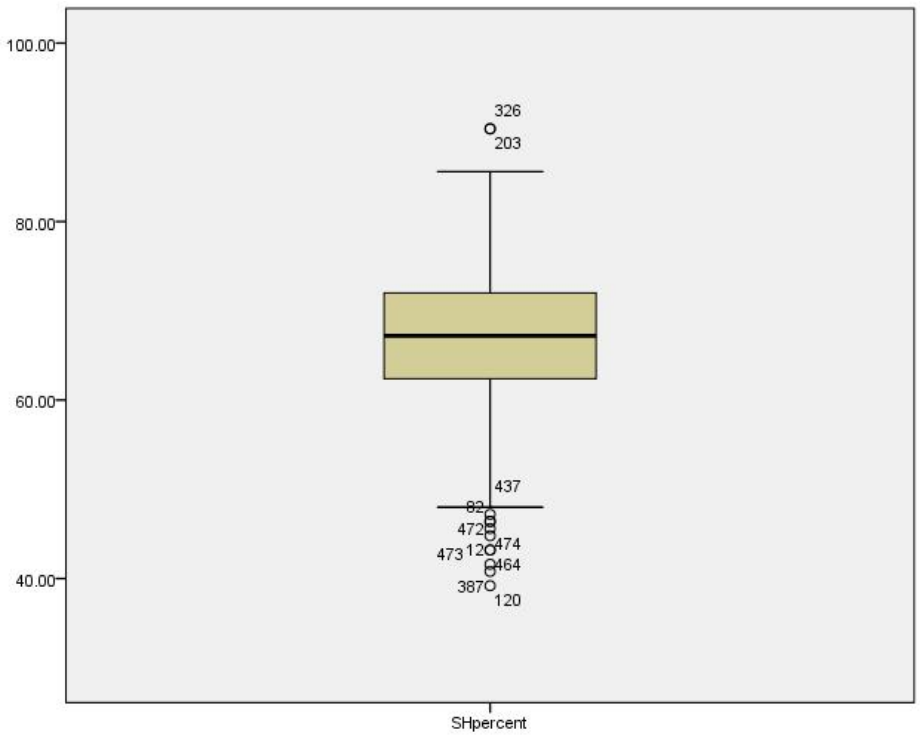

The histogram (graph 4.4) has been plotted with SH percentage score on the X- axis and frequency of the values of SH percentage score on the Y- axis. The histogram is found to be approximately a bell curve and thus represents a normal distribution. The mean and standard deviation are 67.14 and 7.621 respectively.

**Graph 4.5: Normal Q- Q plot of study habit**




Graph 4.5 shows the normal Q- Q plot of SH percentage score. Observed value and expected value are plotted in this graph. In the above Q- Q plot, the values are aligned almost along a straight line indicating a normal distribution.

**Graph 4.6: Boxplot of study habit**




Graph 4.6 shows the boxplot of SH percentage score. The boxes on each side of the line of symmetry are found to be almost symmetry.

Graphs 4.4, 4.5 and 4.6 have clearly shown that the SH percentage scores of the respondents are normally distributed.

**Hypothesis 1**

$H_a$: There is a significant difference in time management behaviour (TMB) between medical and engineering students

This hypothesis has been tested using Independent sample t- test as it involves comparison of TMB between medical and engineering students. The result of the test has been shown in the following three tables.

**Table 4.19: Group statistics**

| Particulars | Educational area of study | No. of respondents (N) | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| TMB | Medical | 260 | 63.766 | 6.313 | 0.392 |
| | Engineering | 260 | 68.151 | 9.118 | 0.565 |

*(Source: calculated value)*

**Table 4.20: Levene's Test for Equality of variance**

| F | Sig. |
|---|---|
| 30.440 | 0.001 |

*(Source: calculated value)*

**Table 4.21: t- test for equality of variance**

| Particulars | T | Df | Sif. (2-tailed) | Mean difference | Std. error difference | 95% confidence interval of the difference | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower | Upper |
| Equal variances assumed | -6.375 | 518 | 0.001 | -4.385 | 0.688 | -5.735 | -3.033 |
| Equal variances not assumed | -6.375 | 460.907 | 0.001 | -4.385 | 0.688 | -5.736 | -3.033 |

*(Source: calculated value)*

Table 4.19 shows that the mean of time management behaviour (TMB) score of medical students (66.766) and engineering students (68.151) differ by a value 1.385. This shows that TMB of medical and engineering students differ and so it can be assumed to be unequal.

Table 4.20 shows that Levene's Test for Equality of Variance and the significant level is found to be p= 0.001, which is less than 0.05. This denotes that the variance is significantly different and hence the bottom row of the test results (equal variances not assumed) should be interpreted.

Table 4.21 has thus presented the t- value. Since the significance value p= 0.001, which is less than 0.05, it can be concluded that TMB of medical and engineering students are different. Hence, the alternative hypothesis is accepted.

Thus, it is evidently clear from the test that medical and engineering students have a significant difference in time management behaviour with t- value (460.907)= 0.001 and Sig. (2- tailed) = 0.001 at 95% confidence level. It is also observed that engineering students have higher time management behaviour score as compared to medical students.

**Hypothesis 2**

$H_a$: There is a significant difference in time management behaviour (TMB) between male and female students

The second hypothesis has been tested using independent sample t- test so as to compare the gender of respondents with TMB. The test has been precisely presented in the following three tables.

**Table 4.22: Group statistics**

| Particulars | Gender of the respondents | No. of respondents (N) | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| TMB | Male | 255 | 67.554 | 8.074 | 0.506 |
| | Female | 265 | 64.423 | 7.911 | 0.489 |

*(Source: calculated value)*

**Table 4.23: Levene's Test for Equality of variance**

| F | Sig. |
|---|---|
| 0.350 | 0.555 |

*(Source: calculated value)*

**Table 4.24: t- test for equality of variance**

| Particulars | T | Df | Sif. (2-tailed) | Mean difference | Std. error difference | 95% confidence interval of the difference | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower | Upper |
| Equal variances assumed | 4.468 | 518 | 0.001 | 3.132 | 0.701 | 1.754 | 4.509 |
| Equal variances not assumed | 4.466 | 516.209 | 0.001 | 3.132 | 0.701 | 1.4754 | 4.509 |

*(Source: calculated value)*

Table 4.22 shows that the mean of time management behaviour (TMB) score of male (67.554) and female (64.423) differ by a value 3.131 . This shows that TMB of male and female students differ and so it can be assumed to be unequal.

Table 4.23 shows that Levene's Test for Equality of Variance and the significant level is found to be p= 0.555, which is greater than 0.05. This denotes that the variance is not significantly different and hence the top row of the test results (equal variances assumed) should be interpreted.

Table 4.24 has thus presented the t- value. Since the significance value p= 0.001 , which is less than 0.05, it can be concluded that TMB of male and female students are different. Hence, the alternative hypothesis is accepted.

Thus, it is evidently clear from the test that male and female students have a significant difference in time management behaviour with t- value (518)= 0.001 and Sig. (2- tailed) = 0.001 at 95% confidence level.

**Hypothesis 3**

$H_a$: There is a significant relationship between time management behaviour (TMB) and academic performance

This hypothesis has been tested using Chi- Square Test of Independence. Chi- square is an effective test to determine association between categorical variables. Percentage of marks obtained in last exam passed has been considered as a factor to determine academic performance of the students. For this study a 5x5 crosstabulation has been identified and the results are shown in the following tables.

**Table 4.25: Crosstabulation of TMB class and Percentage of marks obtained in last exam passed**

| Particulars | | | TMB class (classified in terms of percentage) | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | | | 40- 50 | 50- 60 | 60- 70 | 70- 80 | 80 and above | |
| Percentage of marks obtained in last exam passed | 50-60 | Count | 1 | 7 | 6 | 6 | 1 | 21 |
| | | Expected count | 0.4 | 4 | 10.1 | 5.3 | 1.1 | 21 |
| | 60-70 | Count | 1 | 43 | 126 | 28 | 5 | 203 |
| | | Expected count | 3.9 | 38.6 | 98 | 51.5 | 10.9 | 203 |
| | 70-80 | Count | 8 | 40 | 77 | 73 | 12 | 210 |
| | | Expected count | 4.0 | 40 | 101.4 | 53.3 | 11.3 | 210 |
| | 80- 90 | Count | 0 | 7 | 35 | 15 | 8 | 65 |
| | | Expected count | 1.3 | 12.4 | 31.4 | 16.5 | 3.5 | 65 |
| | 90- 100 | Count | 0 | 2 | 7 | 10 | 2 | 21 |
| | | Expected count | 0.4 | 4.0 | 10.1 | 5.3 | 1.1 | 21 |
| Total | | Count | 10 | 99 | 251 | 132 | 28 | 520 |
| | | Expected count | 10 | 99 | 251 | 132 | 28 | 520 |

*(Source: Calculated value)*

Table 4.25 shows crosstabulation of TMB class and percentage of marks obtained in last exam passed. Here observed values (count) and expected value (expected count) are represented. The crosstabulation procedure creates a two- way table, which summarises the distribution of the two categorical values i.e., TMB class and percentage of marks obtained in last exam passed.

**Table 4.26: Chi- Square Tests**

| Particulars | Value | Df | Asymptotic Significance ( 2- sided) |
|---|---|---|---|
| Pearson Chi- Square | 63.659 | 16 | 0.001 |
| Likelihood Ratio | 65.290 | 16 | 0.001 |
| Linear- by- Linear Association | 19.716 | 1 | 0.001 |
| Number of valid cases | 520 | | |

*(Source: Calculated value)*

* 10 cells (40.0%) have expected count less than 5. The minimum expected count is 0.40

Table 4.26 shows the Chi- Square Tests. Here the key result is the Pearson Chi-Square. The value of the test statistics is 63.659 with degrees of freedom (df) 16 as the test statistics is based on 5x5 crosstabulation table. The footnote pertains to the expected cell count assumption i.e., expected cell counts are all greater than 5 and 10 cells had an expected count less than 5 and the minimum expected count is 0.40.

The corresponding p- value is 0.001, which is less than the chosen significance level Alpha= 0.05. Therefore, the alternative hypothesis is accepted. It can be concluded that there is an association between time management behaviour and academic performance. Hence, there is a significant relationship between time management behaviour and academic performance of students.

**Table 4.27: Symmetric Measures**

| Particulars | | Value | Approx. Sig. |
|---|---|---|---|
| Nominal by Nominal | Phi | 0.350 | 0.001 |
| | Cramer's V | 0.275 | 0.001 |
| Number of valid cases | | 520 | |

*(Source: Calculated value)*

Since a 5x5 crosstabulation has been used, Cramer's V has to be interpreted. Cramer's V is a measure of relative strength of association between two variables and the coefficient ranges from 0 to 1. In the above table, Cramer's V of 0.275 is obtained and the value of 0.275 indicates that the fields are moderately associated.

**Hypothesis 4**

$H_a$: There is a significant relationship between time management behaviour and study habit of students

This hypothesis has been tested using Pearson's correlation. It is determined to find the relationship between time management behaviour (TMB) and study habit (SH) of the respondents.

**Table 4.28: Descriptive statistics of time management behaviour (TMB) and study habit (SH)**

| Particulars | Mean | Std. Deviation | Total |
|---|---|---|---|
| TMB | 66.25 | 9.07 | 520 |
| SH | 67.14 | 7.62 | 520 |

*(Source: Calculated value)*

**Table 4.29: Correlation of TMB and SH**

| Particulars | | TMB | SH |
|---|---|---|---|
| TMB | Pearson Correlation | 1 | 0.521 |
| | Sig. (2- tailed) | | 0 |
| | N | 520 | 520 |
| SH | Pearson Correlation | 0.521 | 1 |
| | Sig. (2- tailed) | 0 | |
| | N | 520 | 520 |

*Correlation is significant at the 0.01 level (2- tailed)*

*(Source: Calculated value)*

Table 4.29 shows that the Pearson's correlation (r) = 0.521 and is significant at 0.01 level. This means that there is a significant relationship between TMB and SH. The significance or p- value = 0, which is less than 0.05. The p- value thus denotes that the test is statistically significant.

There is a positive correlation between TMB and SH. It signifies that the respondents who are good at time management also have a good study habit; and those who are poor at time management will show poor study habit.

**Hypothesis 5**

$H_a$: There is a significant relationship between time management behaviour and social media interest of students

This hypothesis is tested using Pearson's correlation as it is to find the relationship between two variables: time management behaviour and social media interest of students. To determine social media interest of students, two separate factors are

used and hence separate correlation test has been conducted for the two factors with respect to time management behaviour.

**Table 4.30: Correlation of TMB and first statement of internet (social media) usage**

| Particulars | | TMB | SH |
|---|---|---|---|
| I use internet (or social media) only for educational purposes | Pearson Correlation | 1 | 0.306 |
| | Sig. (2- tailed) | | 0 |
| | N | 520 | 520 |
| TMB | Pearson Correlation | 0.306 | 1 |
| | Sig. (2- tailed) | 0 | |
| | N | 520 | 520 |

*Correlation is significant at the 0.01 level (2- tailed)*

*(Source: Calculated value)*

Table 4.30 shows that the Pearson's correlation (r ) = 0.306 and is significant at 0.01 level. This means that there is a significant relationship between TMB and the statement "I use internet (or social media) only for educational purposes". The significance or p- value = 0, which is less than 0.05. The p- value thus denotes that the test is statistically significant.

There is a positive correlation between TMB and the statement "I use internet (or social media) only for educational purposes". It signifies that the respondents who are good at time management use social media or internet mostly for educational purposes.

**Table 4.31: Correlation of TMB and second statement of internet (or social media) usage**

| Particulars | | TMB | SH |
|---|---|---|---|
| My attention gets shifted to ads or other sites while browsing for educational materials | Pearson Correlation | 1 | 0.121 |
| | Sig. (2- tailed) | | 0.006 |
| | N | 520 | 520 |
| TMB | Pearson Correlation | 0.121 | 1 |
| | Sig. (2- tailed) | 0.006 | |
| | N | 520 | 520 |

*Correlation is significant at the 0.01 level (2- tailed)*

*(Source: Calculated value)*

The above table 4.31 shows that the Pearson's correlation (r ) = 0.121 and is significant at 0.01 level. This means that there is a significant relationship between TMB and the statement "My attention gets shifted to ads or other sites while browsing for educational materials". The significance or p- value = 0.006, which is less than 0.05. The p- value thus denotes that the test is statistically significant.

There is a weak positive correlation between TMB and the statement "My attention gets shifted to ads or other sites while browsing for educational materials". It signifies that the respondents who are good at time management also sometimes get their attention shifted to other sites or ads while browsing for educational materials.
In both the above two cases, the test is statistically significant. Hence, the alternative hypothesis is accepted. Therefore, there is a significant relationship between time management behaviour and social media interest of students.

### 4.6: Designing a Time Management Model

In order to develop a time management model for students, regression analysis of time management behaviour has been conducted. Regression analysis can describe relationships between a set of independent variables and the dependent variable. It produces a regression equation where the coefficients represent the relationship between each independent variable and the dependent variable.

The 25 statements included to determine time management behaviour has been clubbed into seven heads as listed under:

1) No procrastination (A): It consists of three statements.
   A1: I rush at the last minute to meet deadlines
   A2: I am busy on phone calls/ texting/ gaming etc
   A3: I have the habit of procrastination (unnecessary delay)

2) Stay fit (B): It consists of two statements.
   B1: I make constructive use of my time
   B1: I exercise daily

3) Continuous self check (C): It consists of six statements
   C1: I always do my assignments on time
   C2: I keep myself up- to- date with home assignments and studies
   C3: I set my own deadlines to accomplish a task
   C4: I am aware of the 'next step' to be taken in doing a job
   C5: I can differentiate between important and urgent tasks
   C6: I complete all activities listed in the daily 'to- do' list on time

4) Self planning (D): It consists of two statements.
   D1: I plan before doing a task
   D2: I prepare a daily or weekly 'to do list' (or I follow a daily time table)

5) Self confidence (E): It consists of four statements

   E1: I tackle difficult or unpleasant tasks first

   E2: I am satisfied with the way I use my time

   E3: I take major role for completing group projects/ assignments

   E4: When tackling a new task, I assume that it will be easy and any obstacle will be overcome

6) Self grooming (F): It consists of six statements.

   F1: I plan 'to- do' activities so as to have time to relax and meet friends

   F2: I get enough time for exam preparation

   F3: I get time for extra- curricular activities

   F4: I get enough time for sleep, rest and taking meals

   F5: I consciously avoid phone calls/ chats during my studies

   F6: I take action to minimise interruptions while studying or doing a particular job

7) No lowly feeling (G): It consists of two statements

   G1: During exam, I face time shortage

   G2: I feel stressful due to my academic workload

Time management is the dependent variable and the statements included under the seven heads listed above are the independent variables used to determine regression analysis. The number of statements included under the seven heads no procrastination (A), stay fit (B), continuous self check (C), self planning (D), self confidence (E), self grooming (F) and no lowly feeling (G) vary since the statements are clubbed accordingly with their purpose served under the heads. The following tables show the statistical value of regression analysis.

**Table 4.32: Model Summary of time management behaviour (TMB)**

| Model | R | R square | Adjusted R square | Std. error of estimates |
|---|---|---|---|---|
| 1 | 0.998 | 0.997 | 0.997 | 0.45109 |

*(Source : Calculated value)*

a. Predictors (constant): A, B, C, D, E, F, G

b. Dependent variable: TMB

In the above table the value of adjusted R square is 0.997, which implies that 99.7 percent of the variations in TMB are explained by the constants A,B, C, D, E, F and G. The standard error of estimates is 0.45109 and it is the measure of variation of the observation made around the computed regression line.

**Table 4.33: Regression results for time management behaviour**

| Model | | Unstandardized coefficients | | Standardized coefficients | T | Sig. | Collinearity statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 0.301 | 0.184 | | 1.638 | 0.102 | | |
| | A | 0.119 | 0.001 | 0.248 | 90.117 | 0.000 | 0.784 | 1.275 |
| | B | 0.081 | 0.001 | 0.163 | 53.967 | 0.000 | 0.652 | 1.533 |
| | C | 0.239 | 0.003 | 0.322 | 95.249 | 0.000 | 0.519 | 1.928 |
| | D | 0.081 | 0.002 | 0.154 | 50.388 | 0.000 | 0.632 | 1.583 |
| | E | 0.155 | 0.002 | 0.175 | 66.847 | 0.000 | 0.862 | 1.160 |
| | F | 0.238 | 0.002 | 0.312 | 99.902 | 0.000 | 0.607 | 1.648 |
| | G | 0.084 | 0.001 | 0.168 | 66.916 | 0.000 | 0.973 | 1.067 |

*(Source: Calculated value)*

a. Dependent variable: TMB

In the above table it is observed that all the factors A, B, C, D, E, F and G are statistically significant as Sig. t < 0.05. All the variables in the equation explain TMB. The higher the beta- coefficient, more is the contribution of the factors A, B, C, D, E, F and G on time management behaviour. Therefore, time management behaviour is influenced by the seven factors: no procrastination, stay fit, continuous self check, self planning, self confidence, self grooming and no lowly feeling.

The tolerance values are found to be above 0.50. Generally, a tolerance value below 0.40 is a cause of concern. A high tolerance indicates low multicollinearity.

The values of VIFs are found to be in between 1 to 2. VIFs in between 1 to 5 indicate moderate correlation that is not severe enough to warrant corrective measures to undergo regression. VIF identifies correlation between the independent variables and the strength of their correlation. Thus, the values of tolerance and VIF suggest low multicollinearity and detecting multicollinearity is important as it reduces the statistical significance of the independent variables.

The regression analysis equation of the study can be expressed as under:

$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \epsilon$, where $\epsilon$ are the residual terms or errors of the model

$y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_{n7} + \epsilon$,

$Y = 0.301 + 0.119\ X_1 + 0.081\ X_2 + 0.239 X_3 + 0.081 X_4 + 0.155 X_5 + 0.238 X_6 + 0.084\ X_7 + \epsilon$

Here Y = TMB

$X_1$ = A (No procrastination)

$X_2$ = B (Stay fit)

$X_3$ = C (Continuous self check)

$X_4$ = D (Self planning)

$X_5$ = E (Self confidence)

$X_6$ = F (Self grooming)

$X_7$ = G (No lowly feeling)

This equation describes how a single response variable Y (dependent variable) depends on the seven predictors (A, B, C, D, E, F and G).

Based on the above regression analysis, a model has been developed as depicted below:

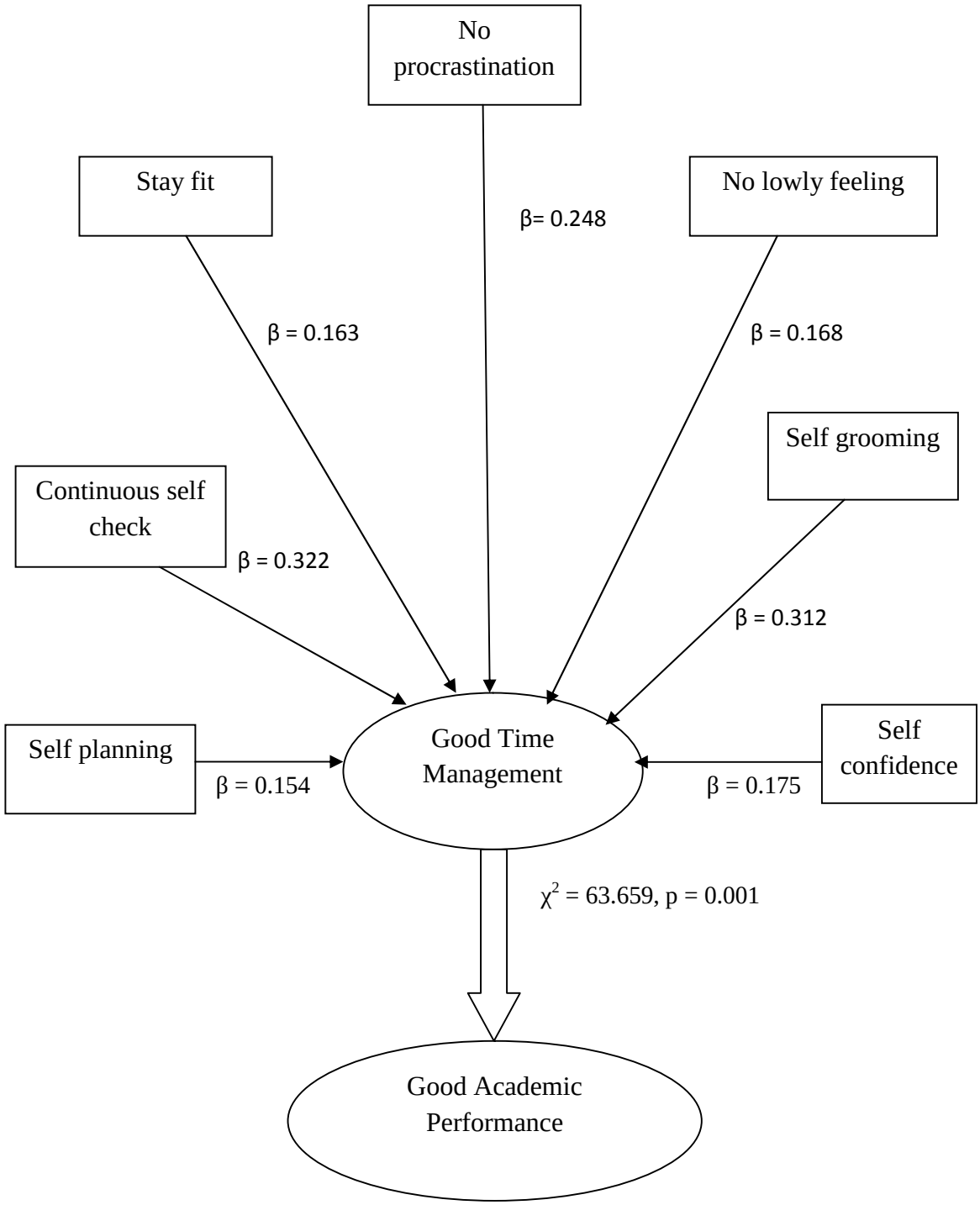



Fig. 4.1: Time Management Model for Students

The time management model developed as a part of the study shows that a good time management behaviour is influenced by seven factors: no procrastination, stay fit, continuous self check, self planning, self confidence, self grooming and no lowly feeling.

Procrastination is a bad habit and should be left out. One should not wait for the last hour to complete an activity or a task. A healthy body and healthy mind contribute significantly to achieve targets. One should always keep in mind that staying fit and healthy enables a person to work actively towards success. No one knows our time better than us. So a proper planning should be charted out based on our available time. It is important to continuously check our own achievements and practice self evaluation. It will help to complete tasks/assignments well before time and fetch time to do any needful correction on time. Self confidence is a driving force to move on the path of success. We should be confident on ourselves. Otherwise, fear and low self confidence will push life backwards. There should be adequate time to enjoy and relax. We should get time to groom ourselves accordingly with our needs and preference. It is the right of every person to block all kinds of disturbances and move forward to realise one's mission. A poor or lowly feeling can be hazardous and it can make a person feel depressed. Hence, lowly feelings should be best avoided and develop the sense to work harder to rectify past mistakes. We should learn from mistakes instead of lamenting.

Thus, good time management behaviour contributes significantly towards improving academic performance, thereby resulting into academic success.

# CHAPTER 5

# Conclusion and Suggestions

## 5.1: Findings

## 5.2: Conclusion

## 5.3: Suggestions

The last chapter has been divided into 3 parts. The first part is findings of the study. The findings obtained through data analysis and interpretations are listed in this part of the chapter. The conclusion of the chapter is presented in the second part of the chapter. The last part of the chapter highlights the possible suggestions that would be helpful to students and people at large.

## 5.1: Findings

1) From the collected data it is observed that more number of girls undergo medical study and more number of boys undergo engineering.
2) Maximum number of respondents has mark scores in between 70- 80%.
3) The time management behaviour score of maximum number of students falls between 60- 70%. TMB score of 60 percent and above is considered acceptable and 80 percent and above as good according to Dr. Jon Warner (2002). 48.3% of the respondents have 60- 70% TMB score, 25.4% of the respondents have 70- 80% TMB score and 5.4% of the respondents have 80% and above TMB score. Thus, only 5.4% of the respondents are good at time management and the remaining percentage of respondents need to improve their time management skill. Engineering students have higher TMB score as compared to engineering students.
4) Only a small number of respondents (4.8%) are found to be engaged in part time jobs.
5) Most of the medical students are found to stay at hostels. A majority of 75.76% of the respondents stay at hostel, 5% stay at rent and 19.23% stay at home. 95 engineering students stay at home and only 5 medical students stay at home. 24 engineering students stay at rent and only 2 medical students stay at rent.

6) Majority of the respondents are interested in Whatsapp followed by Youtube, Instagram, Facebook, Gaming, Other apps, Twitter and Likee.

7) Majority of the respondents use facebook every day, where the number of engineering students exceeds the number of medical students in terms of daily facebook usage.
8) The number of medical students exceeds the number of engineering students in terms of daily Instagram usage. Majority of the respondents use Instagram every day. Hence, this photo sharing app is more popular among medical students.
9) A high number of students use Whatsapp every day. More number of medical students use Whatsapp more than the number of engineering students.
10) Majority of the respondents i.e., 85.19 % do not use Twitter.
11) Majority of the respondents (90.57%) use Youtube everyday and almost an equal number of medical and engineering students use Youtube every day.
12) 92.88% of the respondents do not use Likee App.
13) Almost half of the respondents are not engaged in gaming with 31.92% of them playing games every day.
14) Majority of the respondents (92.88%) are not engaged in any other apps which are not mentioned in the study.
15) Less than 40% of the respondents are in agreement with the statements 'I use internet (or social media) only for educational purposes' and 'My attention gets shifted to ads or other sites while browsing for educational materials'.
16) The Cronbach's Alpha test of reliability for time management behaviour (TMB) showed an Alpha value 0.799 indicating reliability of all the 25 items included in the TMB scale.
17) To test reliability of study habit (SH) scale, Cronbach's Alpha was again conducted and the Alpha value 0.702 was obtained. It indicates that the scale is reliable.
18) A one- way ANOVA was conducted to study the relationship between TMB and place of accommodation. The F value was found to be 16.459 with significant p- value 0.001, which is less than 0.05. It can thus be

assumed that there is a significant relationship between TMB and place of accommodation.

19) To study the relationship between study habit and place of accommodation, one – way ANOVA was conducted. The F- value was found to be 16.672 with significant p- value 0.001, which is less than 0.05. Hence it can be assumed that there is a significant relationship between study habit and place of accommodation.
20) Normality test of time management behaviour has been conducted using Histogram and Normal Q- Q plot along with test of symmetry using boxplot method. The data were found to be normally distributed as indicated by the bell curve of the Histogram and alignment of data along a straight line in Normal Q- Q plot. The boxes on each side of the boxplot were also found to be symmetrical.
21) The normality test of study habit showed that the histogram is approximately bell curved and the data are aligned almost in a straight line in the Normal Q- Q plot; thereby indicating a normal distribution of data. The boxes on each side of the line of symmetry are almost symmetrical. Hence, it indicates that the data are symmetrical.
22) To compare the time management behaviour of medical and engineering students, an independent sample t- test was conducted. As evident in hypothesis 1, the mean score of TMB for medical students is 63.766 and that of engineering student is 68.151. The p value at Levene's test is found to be 0.001, which is less than 0.05. This indicates that the t- test is significant. It is clearly evident that medical and engineering students have a significant difference in TMB with t- value (460.907)= 0.001. Hence, the TMB of medical and engineering students are different.
23) Hypothesis 2 shows the relationship between TMB and gender of the respondents. The mean TMB score of male (67.554) and female (64.423) differ by a value 3.131. From the test it is clear that male and female students have significant difference in time management behaviour with t- value (518)= 0.001 and Sig. (2- tailed) = 0.001 at 95% confidence level.

24) Chi square test has been conducted to find the association between TMB and academic performance. The value of test statistics is 63.659 with degrees of freedom 16 and the statistics is based on 5x5 crosstabulation. The corresponding p- value is 0.001, which is less than 0.05. It can be concluded that there is an association between TMB and academic performance. Hence, there is a significant relationship between TMB and academic performance.
25) The study found a significant relationship between TMB and SH. It is evident from the Pearson's correlation value (r) = 0.521, significant at 0.01 level as shown in hypothesis 4. The p- value is also found to be 0, which is less than 0.05 indicating statistical significance of the test. It can thus be assumed that good time management skill leads to better academic performance.
26) A positive correlation is found between TMB and the statement 'I use internet (or social media) only for educational purposes'. The Pearson's correlation value (r) is found to be 0.306 significant at 0.01 level. The significant p- value= 0, which is less than 0.05. This value denotes statistical significance. It signifies that the respondents who are good at time management use social media or internet mostly for educational purposes.
27) A weak positive correlation is found between TMB and the statement 'My attention gets shifted to ads or other sites while browsing for educational materials'. The Pearson's correlation value (r) = 0.12 significant at 0.01 level. The significant p- value is 0.006, which is less than 0.05. The p- value denotes statistical significance. Hence, the respondents who are good at TMB also sometimes get their attention shifted to other sites or ads while browsing for educational materials.
28) A significant relationship between time management behaviour and social media interest of students is observed as being shown in hypothesis 5.

29) Regression analysis of TMB shows that all the seven factors (no procrastination, stay fit, continuous self check, self planning, self

confidence, self grooming and no lowly feeling) are statistically significant as Sig. t < 0.05. The adjusted R square is found to be 0.997, which implies that 99.7 percent of the variations in TMB can be explained by the constants. The standard error of estimates is 0.45109 and it is the measure of variation of the observation made around the computed regression line.

30) The beta value of TMB with respect to the seven constants: no procrastination, stay fit, continuous self check, self planning, self confidence, self grooming and no lowly feeling are respectively β= 0.248, β= 0.163, β= 0.322, β= 0.154, β= 0.175, β= 0.312 and β= 0.168.

## 5.2: Conclusion

Time management is a key to success. Different people have different habit and so is their view on better management of time. Yet an important point to consider is that we should consider time as a resource that cannot be changed, stored or purchased. Prior planning and prioritising important and urgent tasks can contribute to time management. Complaining about time shortage is not a solution but an effective and efficient utilisation of time is a wise option. In this competitive world, planning and proper time management should start from elementary level till the last. Effective time management provides opportunities to devote more time to self grooming, family and friends. It is an act of directing that involves self recognition and familiarising our own personal traits first. Developing the habit of checking if all the tasks are completed on time or not, can help in building time management skill and lead to success. People are nowadays quite involved in digital world, which can lead to time wastage if not managed properly. It is thus important to develop time management models compatible to the digital natives. Time management enables better planning ahead in near future and have better control over completion of projects on time.

One should inculcate the habit of checking if all the objectives have been accomplished within the estimated time or not. The models of time management which had been developed so far are more or less similar to one another. It is high time to develop advanced theories of time management along with models that would be best compatible to today's fast growing technology where most people are found to be much indulged in internet, social media, online activities, digital gaming etc. such activities are mostly a factor to waste time among the new generation. To make ample room for productive result, one should follow techniques to manage time effectively. It will give time to enjoy social interactions. Time management can improve prediction about time taken to complete a work and also it can enable the capability to make planning ahead in future. New time management models and theories should be designed in a way to focus on how to improve management skills and reduce psychological stress resulted from untimely completion of responsibilities or tasks.

This research has been conducted only on the medical and engineering students of Manipur. Therefore generalising the research results on all the college and university students of Manipur would not be a wise decision. The results might get contradictory points when the entire student population of all the colleges and universities of Manipur is considered instead of only medical and engineering students of Manipur. Had the entire student population be covered in the study, more accurate and generalised results might be observed.

In this research, time management has been studied with respect to study habit, academic performance and social media interest. Many more dimensions like family influence, social and cultural perspectives, peer influence etc. can be added and can further explore the influence of such dimensions on time management behaviour of a selected population. Strong theoretical framework and empirical examination of time management is a need and further research should aim at developing better theoretical frameworks and time management models.

### 5.3: Suggestions

The findings of the study suggests that many students are poor in time management skill therefore teachers and educators can identify this weakness and extend guidance. Institutions should take active role in shaping a better time management skill of students. It is advisable that students prepare a daily or weekly to- do list, prioritise activities and never wait for the last minute to accomplish a task. Procrastination is a bad habit and it should be best avoided. Students should develop self confidence and keep lowly feelings away. To understand poor habits and improve performance, self monitoring should be practiced. Moreover, maintaining a good health is of utmost important to make good decisions and move ahead. Hence, a continuous practice and continuous self check of time management behaviour is a prerequisite to academic success.

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**Annexure I**

## Time Management Behaviour (TMB) Scale

1) No procrastination (A): It consists of three statements.
   A1: I rush at the last minute to meet deadlines
   A2: I am busy on phone calls/ texting/ gaming etc
   A3: I have the habit of procrastination (unnecessary delay)

2) Stay fit (B): It consists of two statements.
   B1: I make constructive use of my time
   B1: I exercise daily

3) Continuous self check (C): It consists of six statements
   C1: I always do my assignments on time
   C2: I keep myself up- to- date with home assignments and studies
   C3: I set my own deadlines to accomplish a task
   C4: I am aware of the 'next step' to be taken in doing a job
   C5: I can differentiate between important and urgent tasks
   C6: I complete all activities listed in the daily 'to- do' list on time
4) Self planning (D): It consists of two statements.
   D1: I plan before doing a task
   D2: I prepare a daily or weekly 'to do list' (or I follow a daily time table)

5) Self confidence (E): It consists of four statements
   E1: I tackle difficult or unpleasant tasks first
   E2: I am satisfied with the way I use my time
   E3: I take major role for completing group projects/ assignments
   E4: When tackling a new task, I assume that it will be easy and any obstacle will be overcome

6) Self grooming (F): It consists of six statements.

F1: I plan ‘to- do’ activities so as to have time to relax and meet friends

F2: I get enough time for exam preparation

F3: I get time for extra- curricular activities

F4: I get enough time for sleep, rest and taking meals

F5: I consciously avoid phone calls/ chats during my studies

F6: I take action to minimise interruptions while studying or doing a particular job

7) No lowly feeling (G): It consists of two statements

G1: During exam, I face time shortage

G2: I feel stressful due to my academic workload

**Annexure II**

## Questionnaire

I. Personal information

1. Name of the respondent (optional): ……..

2. Gender: ……..

3. Name of the course under study: …….

4. CGPA (or percentage) of marks for the last exam passed: ……

5. Any part time job engaged in: Yes. …… No …….

If yes, kindly mention it …….

Kindly tick your place of accommodation: Home/ Rent/ Hostel

6. Contact details (optional)

a) Mobile number: ……

b) Email: ……..

Kindly read the following statements carefully and tick the option that you consider best

[Strongly Agree = SA, Agree = A, Neither agree nor disagree = N, Disagree = D and Strongly Disagree = SD]

II: To check social media interest

Tick whichever is possible

| Sl. no. | Social media app | Not used | Used everyday | Used once in a week | Used once in a month |
|---|---|---|---|---|---|
| 1 | Facebook | | | | |
| 2 | Instagram | | | | |
| 3 | Whatsapp | | | | |
| 4 | Twitter | | | | |
| 5 | Youtube | | | | |
| 6 | Like | | | | |
| 7 | Gaming | | | | |
| 8 | Others | | | | |

| Sl. no. | Statement | SA | A | N | D | SD |
|---|---|---|---|---|---|---|
| 1 | I use internet (or social media) only for educational purposes | | | | | |
| 2 | My attention gets shifted to ads or other sites while browsing for educational materials | | | | | |

III: To check study habit

| Sl. no. | Statement | SA | A | N | D | SD |
|---|---|---|---|---|---|---|
| 1 | I study in the library | | | | | |
| 2 | I study everyday | | | | | |
| 3 | I study only during exam | | | | | |
| 4 | I attend classes regularly | | | | | |
| 5 | I study actively at night | | | | | |
| 6 | I take extra tuition or coaching classes | | | | | |
| 7 | I study on weekends only | | | | | |
| 8 | I prefer group studies/ group discussion | | | | | |
| 9 | Whenever I find difficulty in my studies, I prefer to consult my teachers | | | | | |
| 10 | I prefer studying from books or printed materials | | | | | |
| 11 | I concentrate on studies in quite environment | | | | | |
| 12 | I take breaks during studies for progress, not for fatigue or daydreaming | | | | | |
| 13 | I study tough subjects during my active time | | | | | |
| 14 | I take notes properly during class | | | | | |
| 15 | I study while watching TV or listening to music | | | | | |
| 16 | I prefer self study rather than classroom study | | | | | |
| 17 | I study tough subject first | | | | | |
| 18 | Mood swing affects study schedule | | | | | |
| 19 | I get easily distracted by unnecessary phone calls, notifications, alerts, sounds etc. | | | | | |
| 20 | I read non- academic books to refresh my mind | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 21 | I pay proper attention during class | | | | | |
| 22 | I study while using mobile phone | | | | | |
| 23 | I depend on educational videos, online lectures, educational apps etc. | | | | | |
| 24 | Whenever I get time I do my studies | | | | | |
| 25 | During exam, I study only self prepared notes instead of books | | | | | |

IV: To check time management behaviour

| Sl. no. | Statement | SA | A | N | D | SD |
|---|---|---|---|---|---|---|
| 1 | I always do my assignments on time | | | | | |
| 2 | I tackle difficult or unpleasant tasks first | | | | | |
| 3 | I plan before doing a task | | | | | |
| 4 | I rush at the last minute to meet deadlines | | | | | |
| 5 | I keep myself up- to- date with home assignments and studies | | | | | |
| 6 | I plan to- do activities so as to have time to relax and meet friends | | | | | |
| 7 | I am satisfied with the way I use my time | | | | | |
| 8 | I make constructive use of my time | | | | | |
| 9 | I prepare a daily or weekly ‘to- do’ list (or I follow a daily time table) | | | | | |
| 10 | I get enough time for exam preparation | | | | | |
| 11 | During exam, I face time shortage | | | | | |
| 12 | I exercise daily | | | | | |
| 13 | I am busy on phone calls/ texting/ gaming etc. | | | | | |
| 14 | I take major role for group projects/ assignments | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 15 | I get time for extra- curricular activities | | | | | |
| 16 | I get enough time for sleep, rest and taking meals | | | | | |
| 17 | I feel stressful due to my academic workload | | | | | |
| 18 | When tackling a new task, I assume that it will be easy and any obstacle will be overcome | | | | | |
| 19 | I have the habit of procrastination | | | | | |
| 20 | I consciously avoid phone calls/ chats during my studies | | | | | |
| 21 | I set my own deadlines to accomplish a task | | | | | |
| 22 | I take action to minimise interruptions while studying or doing a particular job | | | | | |
| 23 | I am aware of the 'next step' to be taken in doing a job | | | | | |
| 24 | I can differentiate between important and urgent tasks | | | | | |
| 25 | I complete all activities listed in the daily 'to- do' list on time | | | | | |

V: Express your opinion on how important time management is.

……
……
……
……

VI: do you feel satisfied with the way you use your time in various activities? Elaborate your views.

……
……

……
…….

VII: Suggest some ways that you consider best to improve time management skill.

……
……
……
……

VIII: Do you sometimes feel the need of a “Time Machine” as in movies to rectify your past mistakes, if any? If so what would you like to rectify?

……
……
……
……

**Annexure III**

## Papers presented in seminars

1) Presented a paper entitled 'Role of Manipuri Women Entrepreneurs in the Society' in the National Seminar sponsored by National Commission For Women, New Delhi, organised by Department of Management, Mizoram University ($17^{th}$ – $18^{th}$ September, 2015)

2) Presented a paper entitled 'Solid waste management practices for carbon mitigation: A case study of Imphal Municipal Corporation' in the National Seminar sponsored by North Eastern Council, NABARD, ZOFISFED LTD and India Council of Social Science Research, organised by Department of Management, Mizoram University (30– 31 October, 2017)

3) Presented a paper entitled 'Social media influence on study time" in Two-Day Virtual National Conference on "Transformation of Technology in Higher Education', organised by Central University of Tamil Nadu, Central University of Jharkhand and SRM Institute of Science and Technology, Chennai (27- 28 April, 2021)

4) Presented a paper entitled 'Time management during the Covid- 19 Pandemic: A descriptive study' in the 'Conference on Excellence in Research and Education (CERE)' organised by Indian Institute of Management, Indore (18- 20 June, 2021)

## Articles published in journals and edited books

1) Published paper entitled 'Manipuri Women Entrepreneurs: A case study of Meira Packaged Food' at SMS Journal of Entrepreneurship & Innovation, vol. 1, No. 2, June (2015), ISSN 2349- 7920

2) Published paper entitled ‘Emotional stability, age and work experience: An analytical study’ at Pacific Business Review International, vol. 10 (6), December 2017

3) Published paper entitled ‘A descriptive study of time management models and theories’ at International Journal of advanced Scientific Research and Management, 3(9), 2018

4) Published paper entitled ‘Social media influence on study time: A review’ at Management Convergence, 12 (1), 2021

**Workshops/ webinars participated**

1) “A one- week online skill development programme”, organised by the Dept. of Management and career Counselling and Placement Cell, Mizoram University (19- 24 July, 2021)
2) “Relevance of corporate social responsibility”, organised by dept. of Management, Mizoram University (28 May, 2021)
3) “The Science of Learning”, organised by Mizoram University (25$^{th}$ May, 2021)
4) “New Education Policy, 2020 and Management Education”, organised by Department of Management, Mizoram University (20$^{th}$ May, 2021)
5) “The Age of Pandemics”, organised by JAIN Deemed- To- Be University (29$^{th}$ April, 2021)
6) “Clinical Trials and Drug Development” and “Business Communication for Professional Graduates”, organised by Mizoram University (4$^{th}$ June, 2020)
7) “Sustainable IT in Rural and Remote Environments”, organised by Department of Management, Mizoram University (2$^{nd}$ June, 2020)
8) Seven- Day National Level Online Faculty Development Programme on “A Paradigm Shift in Social Sciences Research”, organised by Department of Management Studies, Periyar University (27.07.2020 to 02.08.2020)

9) “10- Day Research Methodology Workshop”, organised by Dept. of Mass Communication, Mizoram University, sponsored by ICSSR (22- 31 March, 2016)

**Annexure IV**

**Brief bio-data of the candidate**

**Personal profile**

Name: Nongmeikapam Jinalee

Date of Birth: 4th March, 1990

Gender: Female

Nationality: Indian

Father's name: (Late) Nongmeikapam Tharongou Singh

Mother's name: NK (O). Dhanamanjuri Devi

Address: Thangmeiband Yumnam Leikai, Tharon Gate, Imphal- 795004, Manipur

Contact number: 9774234030

Email: jinaleenongmeikapam@gmail.com

**Education**

1. M.Phil in Management, Department of Management, Mizoram University (77.8%)
2. MBA (HR), Sikkim Manipal University (70.22%)
3. UGC- NET qualified (December 2019)

**Research areas**

1. Time Management
2. Emotional Intelligence

**Annexure V**

**Personal profile of the candidate**

Name: Nongmeikapam Jinalee

Degree: Doctor of Philosophy

Title of Thesis: A comparative study of time management behaviour of medical and engineering students in Manipur

Date of admission: 15th March, 2017

Approval of research proposal

1) DRC: 24/04/2017
2) BOS: 8/06/2017
3) SCHOOL BOARD: 22/05/2017

MZU registration number: 1506552

Ph. D registration number: MZU/Ph.D./974 of 22.05.2017

Extension (if any):

Head

Department of Management, MZU

# ABSTRACT

## A COMPARATIVE STUDY OF TIME MANAGEMENT BEHAVIOUR OF MEDICAL AND ENGINEERING STUDENTS IN MANIPUR

A thesis submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

**Nongmeikapam Jinalee**

**MZU Regn No. 1506552**

**Ph.D. Regn No: MZU/Ph.D./974 of 22.05.2017**

**Department of Management**

**School of Economics, Management and Information Science**

**Mizoram University**

**January 2022**

# A COMPARATIVE STUDY OF TIME MANAGEMENT BEHAVIOUR OF MEDICAL AND ENGINEERING STUDENTS IN MANIPUR

## 1.1: Introduction

Time management is one of the important keys to success of an individual. Effective time management can help a lot in driving a person towards success. Since different type of people exists, different life activities involving different patterns of time also co- exist. Some people can work actively during the day and some may do so at night. Depending on one's favourable time, a person has to make his/ her own schedule. Prioritising a particular task is important in time management. A proper planning can contribute a lot in time management.

Students are part of the society and they cannot be kept separated from social interactions. But often social interactions can act as a disturbance in their learning process. A plan ahead and thoughtful use of time can balance between study time and social life. A proper time management will enable students to accomplish their duties on time. Keeping in view the importance of time management in student life, the study is aimed at comparing the time management skills of medical and engineering students and its effect on their academic performance and social life.

## 1.2: Literature Review

The relevant literatures have been divided into four parts. The first part discusses about time management behaviour along with models and techniques of time management. The second part discusses about academic performance of students. Literatures on study habit of students have been discussed in the third part. The last part discusses about social media engagement of students.

### 1.2.1: Time management behaviour, models and techniques

Aeon *et al.,* (2021) argued that critical gap in time management research is the question of whether time management works or not. Various studies suggested that time management enhances academic achievement, job performance and well being. Gender, age, job autonomy, workload etc. are related to time management practices. There is an increasing concern over time management behaviour even among academics, media and general population all over. The important question is not just 'whether time management works or not?, it is rather the time management techniques designed by time management experts/ gurus can actually be productive or can have adverse effects on the contrary. For instance, some of the time management strategies may not be applicable to women, who share care work such as taking care of young children and home management. Male oriented time management advice may not fit with such category of population. It is suggested to have an individualistic and growth oriented time management practices that can balance the social inequalities prevalent in the society.

### 1.2.2: Academic performance of students

Alyami *et al.,* (2021) argued that to students' perception, preplanning their studies is beneficial for academic performance. It is observed that insufficient sleeping pattern makes the students feel lazy and makes them unable to manage time and decreases academic performance. Decreasing procrastination and increasing time management can help students to improve their academic performance. Students with positive attitude and good time managers are found to have good academic records. Adequate sleeping pattern, diary entry, making a to- do list etc. can enhance time management behaviour of students.

### 1.2.3: Study habit of students

Independent study behaviours are an important part of learning in college and university courses. Students who spent more time on effortful and practical active study strategies had higher scores in exams. It is evident that students who stated studying later or earlier do not score differently if they are not giving full focus on their studies. Students who are more distracted during their studies show poor results compared to those students who are not distracted during their studies. It is to be noted that the degree to which students use practical study strategies and full focus while studying are important factors to success. Encouraging self-explanation of a subject creates better rooms for understanding the subject matter (Walck- Shannon *et al.,* 2021).

### 1.2.4: Social media engagement of students

A study on the impact of social media on the academic performance of undergraduate medical students was conducted (Bhandarkar *et. al.,* 2021) using a cross- sectional questionnaire based study. The study aimed to find the types of social media used along with the duration and purpose of use. The study found that there was a significantly higher use of social media among the low academic performers as compared to high academic performers. Female social media users were found to have a significantly higher academic performance compared to male social media users. A positive correlation was observed between social media addiction and duration of social media use. A weak negative correlation was obtained between marks secured in exams and duration of social media use. Whatsapp and Youtube were the most popular social media apps according to the study. Thus, social media usage has a negative impact on academic performance of the students.

## 1.3: Research Gap

After the review of relevant literatures, it has been observed that there is lack of theoretical framework and empirical examination in time management. Empirical research on areas of time management is less as time management has been considered as a fad and researchers do not hold it in high esteem for undergoing research (Macan, 1994). Many studies have been conducted on time management behaviour with respect to academic performance. Many studies have also been conducted on time management in the field of medical science. But so far not much literature has been found on the comparative study of time management behaviour between medical and engineering students especially on the context of North East India. In Manipur, medical and engineering streams are one of the most preferred streams. Unfortunately, sometimes some medical and engineering students give up their studies as evident from news reports: 50 per cent rise in number of engineering dropouts in Chennai (Dec 21, 2016, Times of India). There may be certain reasons for dropouts and time can also be one factor. Many literatures have supported that time management can increase academic performance. As such this study is aimed at investigating the time management behaviour of medical and engineering students of Manipur as a comparative study between the two streams.

### 1.4: Significance and Scope of the Study

Education plays an important role in the personal, social and economic wellness of people in this competitive world. Time management concept is a tool to help in better organisation of time (Koch, 1998). With the onset of social networking much of the valuable time can be utilised fully or can go wasted. In order to take full advantage of technology, a proper management of time is required. Often students complain about shortage of time during preparations for examinations and during examinations. This is because students face problems in making effective use of allocated time. If the students manage their time effectively their academic success will also increase (Karakose, 2015). Time is something

that cannot be stored or purchased. Britton and Tesser (1991) opined that 67 per cent of undergraduate students identified time management as their most pressing problem. Thus, helping the students in developing awareness about the benefits of time management and imparting time management skills will improve their academic and life achievements.

To ease the problem of time shortage, time management can be recommended. Courses involving rigorous curriculum like those of medical and engineering courses can put a lot of pressure to students. The present study is confined to medical and engineering students of Manipur. Based on the research implications, generalisation about the time management behaviour of the students in medical and engineering streams can be done. The conducted study has come up with a suggestive model on how to improve the time management skills of students and others. Therefore, this study tried to focus on time management behaviour of medical students (JNIMS and RIMS) and also the engineering students (MIT, NIT, IIIT, NIELIT, CIPET, Government Polytechnic and Manipur Technical University) of Manipur. It also aimed to find out the study habit of the selected students. Variables like gender, place of accommodation, percentage of marks obtained in last exam passed, social media usage etc. have been used for the study.

## 1.5: Research Design

### 1.5.1: Statement of the problem

Medical and engineering students are loaded with a rigorous curriculum and the number of drop outs in medical and engineering colleges are also increasing due to a variety of reasons. Academic stress is one of the reasons and it can be reduced with proper time management. Academic stress can become dangerous as it can cause depression. Depression can even lead a student to commit suicide. Suicidal ideation is highest in first professional year and lowest in third professional year among medical students (Goyal *et al*., 2012). According to Government reports, over

2000 students dropped out of IITs and NITs in the last three years (India Today, 6 August, 2015). Therefore, students need to plan their activities wisely and manage their time. Different students have their different preferred time. The present study investigated the time management behaviour of the medical and engineering students in Manipur. Misutilisation of time can lead to failure in the long run. This study is therefore designed to investigate how efficiently the students manage their time. It focuses on how they spend their time for academic and social purposes. The study tried to point out different ways of time usage by the medical and engineering students and its relationship with their academic achievements, study habit and social media influence; so as to come up with a good model of time management.

### 1.5.2: Objectives of the study

With regard to the selected institutions, the objectives of the study are as follow:

1. To study and compare the time management behaviour of medical and engineering students
2. To compare the time management behaviour of male and female students
3. To study the relationship between time management behaviour and academic performance of the students
4. To investigate the relationship between time management behaviour and study habit of the students
5. To investigate the relationship between time management behaviour and social media interest of the students
6. To design a time management model for students

### 1.5.3: Hypotheses of the study

1. $H_a$: There is a significant difference in time management behaviour between medical and engineering students

2. $H_a$: There is a significant difference in time management behaviour between male and female students

3. $H_a$: There is a significant relationship between time management behaviour and academic performance

4. $H_a$: There is a significant relationship between time management behaviour and study habit of the students

5. $H_a$: There is a significant relationship between time management behaviour and social media interest of the students

### 1.5.4: Research Methodology

The research undertaken is diagnostic in nature. A comparative study has been conducted between medical and engineering students.

#### 1.5.4.1: Population of the study

The population of the study is the medical students of JNIMS and RIMS and the engineering students of MIT, NIT, IIIT, NIELIT, CIPET, Government Polytechnic and Manipur Technical University. The engineering students include those undergoing B.Tech and Diploma in Engineering. The total population is 3640.

#### 1.5.4.2: Sampling

To collect data proportionately from the students of the selected institutions, stratified random sampling has been done. From the total population of 3640 students, 520 samples havel be taken for data analysis. 260 samples have been taken from medical students and another 260 samples have been taken from engineering students. A sample size

of 520 has been obtained by using the following sample size determination formula:

Sample size= $[\{z^2 \times p(1-p)\}/e^2] \div [1 + \{(z^2 \times p(1-p))/e^2 N\}]$

Where z = z-score

e = margin of error

N = Total population

For calculation of the sample size, 95 % confidence level has been assumed with corresponding z- score = 1.96, the margin of error, e = 4 % = 0.04 and p = 50 % = 0.5, assuming an intermediate value.

Using the following simple proportionate formula, the sampling has been determined:

Strata allocation size= $(n \div N) \times n_1$

Where N = Total population

n = Total number of samples to be taken

$n_1$ = Population size of each strata/ institution

**1.5.4.3: Data collection**

For the conducted research, primary as well as secondary data have been utilised. Journals, annual reports of the concerned institutions, books etc. have be used for secondary data collection. Primary data have been collected using structured questionnaire based on standard questionnaires and relevant literatures; and has been designed to determine the time management behaviour of students.

**1.5.4.4: Data analysis**

To analyse data and test hypotheses, appropriate statistical tools like mean, standard deviation, frequency and percentage, independent sample

t- test, one- way ANOVA, Pearson's Correlation, Chi square test and regression analysis have been adopted to analyse the data and test hypotheses. SPSS has been used to enter data collected through the distributed questionnaire. Cronbach's Alpha test has been used to test reliability and normality plots have been used. The research results are based on the values obtained by using the mentioned statistical tools.

### 1.6: Limitations of the study

As the study has employed a paper based questionnaire with self reporting by respondents to collect primary data, it could call for a biased reporting. An in- depth duration and pattern of social media/ internet usage was not studied. The study is quantitative in nature however addition of a qualitative analysis should have been conducted to explore more aspects of time management behaviour.

### 1.7: Chapterisation

1. Introduction

Chapter 1 introduces the importance of time management behaviour. Literature review, research gap, significance and scope the study, research design and limitations of the study are described in this chapter.

2. Time Management

Chapter 2 describes the significance of time management as a tool. It describes the various time management models and theories. A discussion on time management models and theories has been included in this chapter.

3. Higher and technical education in Manipur

This chapter is a descriptive presentation about the importance of the Department of Higher Education (Ministry of Education, Government of India) and the Department of Technical Education, Manipur. A brief

description has been written about the universities of Manipur. The profile of the selected institutions presented in this chapter.

4. Quantitative Data Analysis

Chapter 4 highlights the dependent and independent variables associated with the study. Respondents' profile; data analysis and interpretation; hypotheses testing and regression analysis of time management behaviour are the components of the chapter.

5. Conclusion and Suggestions

Chapter 5 represents the findings, conclusion and suggestions of the study.

**1.8: Some major findings**

1. From the collected data it is observed that more number of girls undergo medical study and more number of boys undergo engineering.

2. Maximum number of respondents has mark scores in between 70-80%.

3. The time management behaviour score of maximum number of students fall between 60- 70%. TMB score of 60 percent and above is considered acceptable and 80 percent and above as good according to Dr. Jon Warner (2002). 48.3% of the respondents have 60- 70% TMB score, 25.4% of the respondents have 70- 80% TMB score and 5.4% of the respondents have 80% and above TMB score. Thus, only 5.4% of the respondents are good at time management and the remaining percentage of respondents need to improve their time management skill. Engineering students have higher TMB score as compared to engineering students.

4. Only a small number of respondents (4.8%) are found to be engaged in part time jobs.

5. Most of the medical students are found to stay at hostels. A majority of 75.76% of the respondents stay at hostel, 5% stay at rent and 19.23% stay at home. 95 engineering students stay at home and only 5 medical students stay at home. 24 engineering students stay at rent and only 2 medical students stay at rent.

6. Majority of the respondents are interested in Whatsapp followed by Youtube, Instagram, Facebook, Gaming, Other apps, Twitter and Likee.

7. Majority of the respondents use facebook every day, where the number of engineering students exceeds the number of medical students in terms of daily facebook usage.

8. The number of medical students exceeds the number of engineering students in terms of daily Instagram usage. Majority of the respondents use Instagram every day. Hence, this photo sharing app is more popular among medical students.

9. A high number of students use Whatsapp every day. More number of medical students use Whatsapp more than the number of engineering students.

10. Majority of the respondents i.e., 85.19 % do not use Twitter.

11. Majority of the respondents (90.57%) use Youtube everyday and almost an equal number of medical and engineering students use Youtube every day.

12. 92.88% of the respondents do not use Likee App.

13. Almost half of the respondents are not engaged in gaming with 31.92% of them playing games every day.

14. Majority of the respondents (92.88%) are not engaged in any other apps which are not mentioned in the study.

15. Less than 40% of the respondents are in agreement with the statements ‘I use internet (or social media) only for educational purposes’ and ‘My attention gets shifted to ads or other sites while browsing for educational materials’.

16. The Cronbach’s Alpha test of reliability for time management behaviour (TMB) showed an Alpha value 0.799 indicating reliability of all the 25 items included in the TMB scale.
17. To test reliability of study habit (SH) scale, Cronbach’s Alpha was again conducted and the Alpha value 0.702 was obtained. It indicates that the scale is reliable.
18. A one- way ANOVA was conducted to study the relationship between TMB and place of accommodation. The F value was found to be 16.459 with significant p- value 0.001, which is less than 0.05. It can thus be assumed that there is a significant relationship between TMB and place of accommodation.
19. To study the relationship between study habit and place of accommodation, one – way ANOVA was conducted. The F- value was found to be 16.672 with significant p- value 0.001, which is less than 0.05. Hence it can be assumed that there is a significant relationship between study habit and place of accommodation.
20. Normality test of time management behaviour has been conducted using Histogram and Normal Q- Q plot along with test of symmetry using boxplot method. The data were found to be normally distributed as indicated by the bell curve of the Histogram and alignment of data along a straight line in Normal Q- Q plot. The boxes on each side of the boxplot were also found to be symmetrical.
21. The normality test of study habit showed that the histogram is approximately bell curved and the data are aligned almost in a straight line in the Normal Q- Q plot; thereby indicating a normal distribution of data. The boxes on each side of the line of symmetry

are almost symmetrical. Hence, it indicates that the data are symmetrical.

22. To compare the time management behaviour of medical and engineering students, an independent sample t- test was conducted. As evident in hypothesis 1, the mean score of TMB for medical students is 63.766 and that of engineering student is 68.151. The p value at Levene's test is found to be 0.001, which is less than 0.05. This indicates that the t- test is significant. It is clearly evident that medical and engineering students have a significant difference in TMB with t- value (460.907)= 0.001. Hence, the TMB of medical and engineering students are different.
23. Hypothesis 2 shows the relationship between TMB and gender of the respondents. The mean TMB score of male (67.554) and female (64.423) differ by a value 3.131. From the test it is clear that male and female students have significant difference in time management behaviour with t- value (518)= 0.001 and Sig. (2- tailed) = 0.001 at 95% confidence level.
24. Chi square test has been conducted to find the association between TMB and academic performance. The value of test statistics is 63.659 with degrees of freedom 16 and the statistics is based on 5x5 crosstabulation. The corresponding p- value is 0.001, which is less than 0.05. It can be concluded that there is an association between TMB and academic performance. Hence, there is a significant relationship between TMB and academic performance.
25. The study found a significant relationship between TMB and SH. It is evident from the Pearson's correlation value (r) = 0.521, significant at 0.01 level as shown in hypothesis 4. The p- value is also found to be 0, which is less than 0.05 indicating statistical significance of the test. It can thus be assumed that good time management skill leads to better academic performance.
26. A positive correlation is found between TMB and the statement 'I use internet (or social media) only for educational purposes'. The

Pearson's correlation value (r) is found to be 0.306 significant at 0.01 level. The significant p- value= 0, which is less than 0.05. This value denotes statistical significance. It signifies that the respondents who are good at time management use social media or internet mostly for educational purposes.

27. A weak positive correlation is found between TMB and the statement 'My attention gets shifted to ads or other sites while browsing for educational materials'. The Pearson's correlation value (r) = 0.12 significant at 0.01 level. The significant p- value is 0.006, which is less than 0.05. The p- value denotes statistical significance. Hence, the respondents who are good at TMB also sometimes get their attention shifted to other sites or ads while browsing for educational materials.
28. A significant relationship between time management behaviour and social media interest of students is observed as being shown in hypothesis 5.
29. Regression analysis of TMB shows that all the seven factors (no procrastination, stay fit, continuous self check, self planning, self confidence, self grooming and no lowly feeling) are statistically significant as Sig. $t < 0.05$. The adjusted R square is found to be 0.997, which implies that 99.7 percent of the variations in TMB can be explained by the constants. The standard error of estimates is 0.45109 and it is the measure of variation of the observation made around the computed regression line.
30. The beta value of TMB with respect to the seven constants: no procrastination, stay fit, continuous self check, self planning, self confidence, self grooming and no lowly feeling are respectively $\beta= 0.248$, $\beta= 0.163$, $\beta= 0.322$, $\beta= 0.154$, $\beta= 0.175$, $\beta= 0.312$ and $\beta= 0.168$.

## 1.9: Conclusion

Time management is a key to success. Different people have different habit and so is their view on better management of time. Yet an important point to consider is that we should consider time as a resource that cannot be changed, stored or purchased. Prior planning and prioritising important and urgent tasks can contribute to time management. Complaining about time shortage is not a solution but an effective and efficient utilisation of time is a wise option. In this competitive world, planning and proper time management should start from elementary level till the last. Effective time management provides opportunities to devote more time to self grooming, family and friends. It is an act of directing that involves self recognition and familiarising our own personal traits first. Developing the habit of checking if all the tasks are completed on time or not, can help in building time management skill and lead to success. People are nowadays quite involved in digital world, which can lead to time wastage if not managed properly. It is thus important to develop time management models compatible to the digital natives. Time management enables better planning ahead in near future and have better control over completion of projects on time.

One should inculcate the habit of checking if all the objectives have been accomplished within the estimated time or not. The models of time management which had been developed so far are more or less similar to one another. It is high time to develop advanced theories of time management along with models that would be best compatible to today's fast growing technology where most people are found to be much indulged in internet, social media, online activities, digital gaming etc. such activities are mostly a factor to waste time among the new generation. To make ample room for productive result, one should follow techniques to manage time effectively. It will give time to enjoy social interactions. Time management can improve prediction about time taken to complete a work and also it can enable the capability to make planning

ahead in future. New time management models and theories should be designed in a way to focus on how to improve management skills and reduce psychological stress resulted from untimely completion of responsibilities or tasks.

This research has been conducted only on the medical and engineering students of Manipur. Therefore generalising the research results on all the college and university students of Manipur would not be a wise decision. The results might get contradictory points when the entire student population of all the colleges and universities of Manipur is considered instead of only medical and engineering students of Manipur. Had the entire student population be covered in the study, more accurate and generalised results might be observed.

In this research, time management has been studied with respect to study habit, academic performance and social media interest. Many more dimensions like family influence, social and cultural perspectives, peer influence etc. can be added and can further explore the influence of such dimensions on time management behaviour of a selected population. Strong theoretical framework and empirical examination of time management is a need and further research should aim at developing better theoretical frameworks and time management models.

**1.10: Suggestions**

The findings of the study suggests that many students are poor in time management skill therefore teachers and educators can identify this weakness and extend guidance. Institutions should take active role in shaping a better time management skill of students. It is advisable that students prepare a daily or weekly to- do list, priorities activities and never wait for the last minute to accomplish a task. Procrastination is a bad habit and it should be best avoided. Students should develop self confidence and keep lowly feelings away. To understand poor habits and improve performance, self monitoring should be practiced. Moreover,

maintaining a good health is of utmost important to make good decisions and move ahead. Hence, a continuous practice and continuous self check of time management behaviour is a prerequisite to academic success.

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