

**Ministry of Education  
Department of Higher Education  
Sagaing University of Education**

**Sagaing University of Education  
Research Journal**

**Vol. 10, No.1**

**August, 2019**

## Some Medicinal Plants Found In Sagaing University Of Education Campus

Moe Moe Lwin<sup>1</sup>, Nwe` Nwe` Yi<sup>2</sup> and San San Wai<sup>3</sup>

### Abstract

Some medicinal plants commonly found in Sagaing University of Education Campus were collected and studied. The outstanding features of 8 collected species belonging to 7 genera and 5 families of medicinal plants are identified and briefly described with photographs. Parts used, folk uses and their uses in literatures have been recorded and presented in this paper.

**Key word:** Medicinal values, Folk uses, Uses in literatures

### Introduction

Health is the main important factor for man. Plants have been used as medicine and diet for many centuries. There are several thousands of drug yielding plants all over the world. Traditional medicine is to apply readily available fruits, leaves, roots, barks, etc., to cure diseases. The plants from which wonderful chemical compounds can be extracted are able to cure several diseases and become popular in medicinal world.

In this paper, some medicinal plants growing in Sagaing University of Education Campus is observed, and the description of their presented with photo illustrations of the plants.

### Material and Methods

The species were collected from Sagaing University of Education Campus.. Eight species belonging to 7 genera of 5 families were collected. Colored photographs were taken. Taxonomic identification of collected species were carried out. The medicinal uses of collected plants were presented by using the various literature or references.

**Scientific name:** *Plumeria rubra* L.

**Family** : Apocynaceae

**Myanmar name** : Ta- yok- sa-ga-ani

**English name** : Pagoda tree

**Part used** : Roots and flowers

**Flowering period** : Almost throughout the year

### Outstanding Characters

Small tree, rich in milky latex; stems and branches terete, with rough bark. Leaves simple, spirally arranged. Inflorescences terminal, pedunculate corymbiform cymes. Flowers bisexual, red or pale pink, fragrant. Fruits follicular. Seeds many, oblongoid, winged.

---

<sup>1</sup>Lecturer, Department of Biology, Sagaing University of Education

<sup>2</sup>Professor, Department of Biology, Sagaing University of Education

<sup>3</sup>Lecturer, Department of Biology, Sagaing University of Education

### Literature Uses

The decoction of bark, 11 g. of No.23, traditional medicine and lemon juice are used together as remedy for diabetes. Uses in other diseases are counterirritant, purgative, diuretic, snake bites, leprosy, asthma, constipation, fever, rheumatic, pains, carminative, laxative, paralysis, malaria (L.D.Kapoor,2001).

### Folk Uses

Milky latex of the stem and branches is used as a purgative. The bark is rubbed on a stone slab and the pure liquid of it is useful as eye-drops for the relief of malaria. Decoction of barks is used for arthritis. The salad of flower is given for earache and tinnitus.

|                         |                        |
|-------------------------|------------------------|
| <b>Scientific name</b>  | : <i>Aloe vera</i> L.  |
| <b>Family</b>           | : Asphodelaceae        |
| <b>Myanmar name</b>     | : Sha-zaung-let-pat    |
| <b>English name</b>     | : Aloe                 |
| <b>Part used</b>        | : Leaves               |
| <b>Flowering period</b> | : November to February |

### Outstanding Characters

Perennial, rhizomatous, succulent shrubby herbs with a short stem. Leaves simple, succulent and thick, densely rosulate or alternate. Inflorescences terminal, scapose racemes with numerous flowers subtended by deltoid bracts. Flowers orange, bisexual, slightly zygomorphic. Fruit loculicidal capsule. Seeds many.

### Literature Uses

The plant has been used as purgative. Its cathartic action is probably because it promotes of the lower bowels. It is used to treat wounds and burns. The sap from the fresh leaves is used to treat sun burns, rashes and X-ray burns. In Tahiti, Cook Islands, Tonga and Samoa, the plant is used in treating cuts, burns and internal oilments such as stomachache (W.H.O, 1998).

### Folk Uses

The leaf gel or peeled leaves are eaten as a medicine for hepatitis. The juice is very effective to cure fever, asthma and skin diseases. The concentration juice from this plant is applied lightly for gonglioma and heat boils. Aloe is an effective skin lotion for sun burns, leprosy and other skin diseases.

|                         |   |
|-------------------------|---|
| <b>Scientific name</b>  | : <i>Leucaena leucocephala</i> (Lam.) DC.Wit. |
| <b>Family</b>           | : Fabaceae                                    |
| <b>Myanmar name</b>     | : Bowzagaing; A wai ya                        |
| <b>English name</b>     | : Lead tree                                   |
| <b>Part used</b>        | : Leaves, barks, roots, fruits and seeds      |
| <b>Flowering period</b> | : Nearly throughout the year                  |

### Outstanding Characters

Perennial small trees; stems and branches terete, glabrous. Leaves bipinnately compound. Inflorescences pedunculate glomerules, aggregated up to 3 in the leaf-axil or in

terminal racemes. Flowers white or creamy white, bisexual, actinomorphic, hypogynous. Pods linear, dehiscent. Seeds narrowly ovate, compressed.

### Literature Uses

The bark is used as a liniment applied to cure body's ache and pain. The decoction of bark and root is used in the preparation of medicine which is taken as a prevention against abortion. The seeds are used as one of the ingredients in the preparation of a lotion which is applied externally to cure ache and pain and anasarca. When young leaves and crusts of the fruits are boiled and used as a vegetable dish, to cure rheumatic complaints in males. (A-shin-na-ga-thein, 1973).

### Folk Uses

The paste of the bark rubbed on a stone slab with a little salt is taken as a painkiller. The bark is also used as a liniment to cure itchiness, scabies and dropsy. The boiled tender fruits are eaten for dizziness. The leaves are boiled and taken to remedy for jaundice and yellow fever. The boiled leaves are eaten as a salad.

**Scientific name:** *Senna siamea* (Lam.) Irwin & Barneby.

|                         |                                   |
|-------------------------|-----------------------------------|
| <b>Family</b>           | : Fabaceae                        |
| <b>Myanmar name</b>     | : Mazali                          |
| <b>English name</b>     | : Thailand shower; Siamese Cassia |
| <b>Part used</b>        | : The whole plant                 |
| <b>Flowering period</b> | : June to December                |

### Outstanding Characters

Perennial trees; stems and branches terete, glabrous. Leaves unipinnately compound, paripinnate, alternate; stipules subulate. Inflorescences terminal and axillary panicle corymbose raceme. Flowers yellow, bisexual, zygomorphic. Pods linear-oblongoid, dehiscent. Seeds ovate, flattened.

### Literature Uses

A decoction of the leaves, the flowers, the roots or the wood may be used. In India, the leaves are taken as purgative, while leaf decoctions are used as an expectorant in bronchitis and dyspnea, as an astringent, a mouth wash and a wash in case of eczema (de Padua, et al., 1999).

### Folk Uses

The flowers are boiled and the decoction is taken orally to treat sore-throat and cough. The salad of buds can cure insomnia. To cure sore-eyes, the bark is rubbed on a stone slab and the paste is used as eye-drops and is applied around the eyes.

|                         |                                |
|-------------------------|--------------------------------|
| <b>Scientific name</b>  | : <i>Senna tora</i> (L.) Roxb. |
| <b>Family</b>           | : Fabaceae                     |
| <b>Myanmar name</b>     | : Dangywe                      |
| <b>English name</b>     | : Foetid cassia                |
| <b>Part used</b>        | : Roots, leaves and seeds      |
| <b>Flowering period</b> | : September to February        |

### Outstanding Characters

Annual erect, fetid herbs to undershrubs. Leaves unipinnately compound, alternate; stipules linear-subulate. Inflorescences axillary, biflorous cymes. Flowers yellow, bisexual, zygomorphic. Pods dehiscent, linear. Seeds obliquely cylindrical.

### Literature Uses

A decoction of the leaves may be used as a purgative, vermifuge. The leaves and seeds are used in the treatment of ringworm and scabies, as a diuretic and antipuretic. Pounded leaves are smeared on the head of restless children. Seeds are used as a laxative, and roasted seeds are employed to treat insomnia, hypertension and ophthalmia. The leaves were cooked and eaten or the seeds are crushed with lime-juice and extract is rubbed on the effective parts it cures eruption and other skin diseases (de Padau et. al., 1999).

### Folk Uses

To cure infantile retention of urine, the roots are ground on a stone slab and the paste is applied on an area above the pubic bone or pelvis. The paste is also taken orally to have a sound sleep. It is also good for heart, and it removes anxiety as well.

**Scientific name:** *Tamarindus indica* L.

**Family** : Fabaceae

**Myanmar name** : Ma-gyi

**English name** : Tamarind tree

**Part used** : Leaves, fruits, and bark

**Flowering period** : May to August

### Outstanding Characters

Perennial, large, spreading tree, bark grayish-brown. Leaves unipinnate-compound, paripinnate, alternate; stipules minute. Inflorescences axillary or terminal, few-flowered raceme. Flowers yellow, bisexual, zygomorphic. Pods oblong, indehiscent. Seeds orbicular to slightly rhomboid.

### Literature Uses

Pulp of the ripe fruits as well as a poultice of the leaves is applied externally to inflammatory swelling to relieve pain. Poultice flower is useful in inflammatory affection of conjunctivitis. Decoction of the leaves is used as a gargle in throat affections and also used as a wash for indolent ulcers, promotes healthy action. The ash is given for urinary discharges and gonorrhoea. The ripe fruit is appetizing laxative, tonic to the heart, anthelmintic, and heals wounds and fractures. The seeds are useful in ulcers (WHO,1998).

### Folk Uses

The juice of the tamarind leaves is taken orally a teaspoonful twice a day and cures scalding urine. The paste of the ripe fruits is used for purgative, tonic and to enhance appetite. The bark is used for rheumatic, urinary diseases, xanthoderma and abdominal colic. The grain of the seed can relieve diarrhea and dysentery.

- Scientific name** : *Tinospora cordifolia* (Willd.) Hook.  
**Family** : Menispermaceae  
**Myanmar name** : Sindon-ma-nwe  
**English name** : Heart leaved moon seed  
**Part used** : Stems  
**Flowering period** : January to February

#### Outstanding Characters

Perennial lianas. stems cylindric, glabrous. Leaves simple, alternate; exstipulate. Inflorescences axillary racemes. Flowers greenish-yellow, unisexual, actinomorphic. Fruit drupaceous, red when ripe: Seeds ovoid.

#### Literature Uses

The starch obtained from the roots and stems of the plant is useful in diarrhea and dysentery, it is also a nutrient. The fresh plant is more efficacious than the dried plant. The plant is commonly used in rheumatism, urinary diseases, dyspepsia, general debility syphilis, skin diseases, bronchitis, spermatorrhea, and impotence. In gonorrhoea, cough and chronic fever the juice of the fresh plant is administered in doses of 56 to 112 ml with long pepper and honey (de Padua et. al. 1999).

#### Folk Uses

To use as an antidote, the whole plant is boiled to remain 1/3 volume and it must be taken orally. If it is boiled to be 1/4 volume, it relieves chronic arthritis. The stem is used in the preparation of medicine for paralysis, inflamed joints, menstrual related diseases, otalgia and urinary disorders.

- Scientific name** : *Moringa oleifera* Lam.  
**Family** : Moringaceae  
**Myanmar name** : Dan-da-lun  
**English name** : Drum-stick; Horse-radish  
**Part used** : Barks, leaves and fruits  
**Flowering period** : January to March

#### Outstanding Characters

Perennial, not woody trees; bark corkly, Leaves tripinnately compound, imparipinnate, alternate, exstipulate. Inflorescences axillary or terminal raceme. Flowers creamy-white, bisexual, zygomorphic. Fruit elongate, longitudinally ribbed. Seeds winged, trigonous.

#### Literature Uses

The leaves are tasty, cooking; remove all kinds of excessive pain; useful in eye diseases, dicroough, asthma. The bark of the stem is diuretic and antiscorbutic asthma, cough and similar disorders. The fresh root of a young tree is given in intermittent fever, epilepsy, hysteria, chronic rheumatism, gout, dropsy and enlargement of liver, spleen. The tender pods are anthelmintic, also given in disease of the liver, spleen and articular pains (L.D.Kapoor, 2001).

#### Folk Uses

The decoction of leaves is used for reducing hypertension. The expressed juice of roots is taken after mixing with the expressed juice of ginger to cure asthma. After the roots had been crushed, it was put on infected area to cure swellings. The powdered seeds is put into ears for ear related diseases such as tinnitus and otalgia.

### **Discussion and Conclusion**

In Myanmar being rich in a variety of plants, people have totally depended on plant resources for their survival, mainly food and medicine, for a long time. Therefore, this study was conducted on plants which have traditional medicinal values.

In traditional medicine, Sin-don-ma-new and Ma-gyi are useful for the preparation of medicine for diarrhea and dysentery. Sha-zaung-let-pat and Dan-gywe are good for curing various skin diseases. For otalgia (earache) and tinnitus, Sin-don-ma-new, Ta-yok-sa-ga and Dan-da-lun are used. Me-za-li can cure eczema. A-wai-ya (baw-za-gaing) is applied to itchiness and scabies. Ta-yok-sa-ga and Sin-don-ma-new can relieve arthritis.

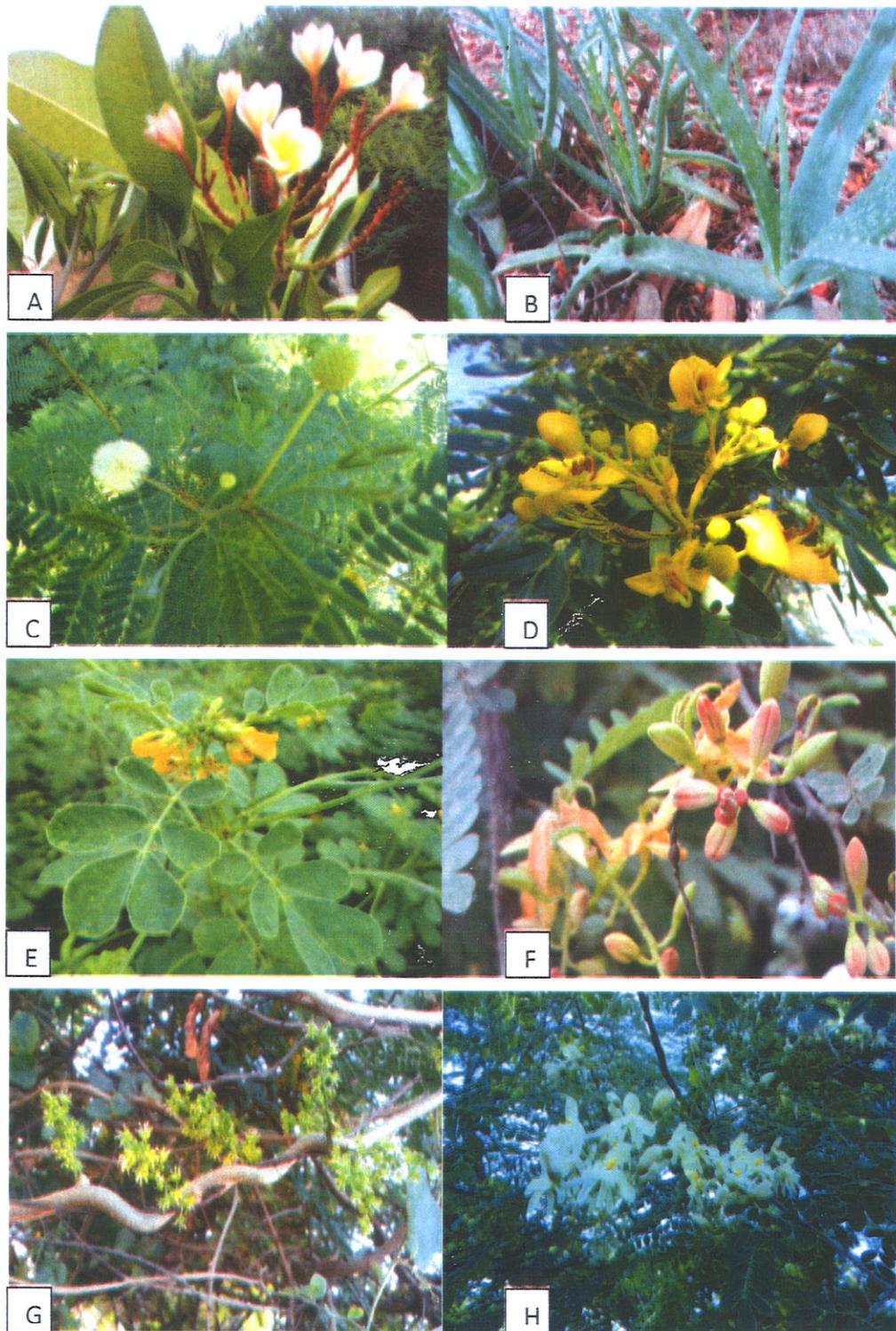
There are a variety and many medicinal plants in Sagaing University of Education Campus but only eight species were studied. Though it is not a perfect research paper, it is hoped that this paper can contribute to the better further studies concerning medicinal plants.

### **Acknowledgements**

We would like to express my gratitude and heartfelt thanks to Dr. Saw Pyone Naing, Rector, Sagaing University of Education, and Dr. Myat Myat Thaw, Pro-rector, Sagaing University of Education, for their permission to conduct this research project. We are deeply indebted to Dr. Nwe' Nwe' Yi, Professor and Head, Department of Biology, Sagaing University of Education, for providing all the research facilities and helpful opinions concerning this work.

### **References**

- de Padua, L. S.1999. Plant Resources of South-east Asia 12 (1) Medicinal and Poisonous Plants. Bogor,Indonesia.
- Hundley, J. H. and Chit Ko Ko (1961). List of tree, shrubs, herbs and principles of climbers of Burma. Suptr. Govt. Printing and Study, Rangoon.
- Kapoor, L. D. (2000). Handbook of ayurvedic medicinal plants.
- Shin-na-ga-thein (1968 – 1973). Pon Pya Say Abidan, Vol I to IV, Mingala Printing Press, Rangoon.
- World Health Organization (1998). Medicinal Plants in the South Pacific. WHO Regional Publications, Western Pacific Series No. 19.



1. A. *Plumeria rubra* L.
- C. *Leucaena leucocephala* (Lam.) DC.Wit.
- E. *Senna tora* (L.) Roxb.
- G. *Tinospora cordifolia* (Willd.)Hook.

- B. *Aloe vera* L.
- D. *Senna siamea* (Lam.) Irwin & Barneby.
- F. *Tamarindus indica* L.
- H. *Moringa olerifera* Lam.

|   |     |
|---|-----|
| 17. ကုန်းဘောင်ခေတ် ဟန်ချင်းနှင့် ဗုံကြီးသံကဗျာများမှ ကောက်ဖိုက်သမလေးတို့၏ ဘဝကို သရုပ်ပေါ်လွင်စေသော အရေးအဖွဲ့များလေ့လာချက် နှင်းအိဖြူ  | 193 |
| 18. <b>A Study of the Impact of MERP on Improving Learners' Writing Skill</b><br><i>Win Lwin Oo</i>   | 207 |
| 19. <b>The Effect of Reading Strategies on Promoting Learners' Reading Comprehension</b><br><i>Kaung Myat</i>   | 217 |
| 20. <b>An Analysis on Vegetation Cover Changes in Pakokku Township Using Geographic Information System</b><br><i>Nu Nu Lwin, Khin Lay Yu and Myo Myo Win</i>  | 225 |
| 21. <b>Spatial Analysis of Monasteries in Loikaw</b><br><i>Moe Thida and Elizabeth Aye</i>  | 231 |
| 22. <b>Deforestation and Politics of Myanmar in the Second Half of the Nineteenth Century</b><br><i>Soe Aung</i>  | 241 |
| 23. <b>A Study on the production of "Yaung Sin Chel" jade and Jewellery Enterprise</b><br><i>Yay Pyar Oo and Aye Mya Mya Lin</i>  | 245 |
| 24. <b>Applications of Zinc Oxide Nanoparticles from <i>Spirulina Platensis</i></b><br><i>Myat Myat Thaw</i>  | 259 |
| 25. <b>Determination of Phytate Content, Elemental Analysis and Some Physicochemical Properties From Pollen, Seeds and rhizome of <i>Nelumbo Nucifera Gaertn</i></b><br><i>Kathy Myint Thu</i>  | 267 |
| 26. <b>Some Nutritional Composition and Biological Properties of <i>Ipomoea batatas</i> (L.) Lam. (Shwe-kanzunoot)</b><br><i>Suu Suu Win, Nyunt Nyunt Than and Kathy Myint Thu</i>  | 277 |
| 27. <b>Investigation on the Chemical Constituents of Extracted Essential Oil, Mineral Contents And Antimicrobial Activity from the Leaves of <i>Ocimum sanctum</i> Linn. (Holy Basil)</b><br><i>Nyunt Nyunt Than, Suu Suu Win and Kathy Myint Thu</i> | 287 |
| 28. <b>Determination of Radon Concentration of Soil Samples in Nyaung Done Township, Ayeyarwaddy Division</b><br><i>Yee Yee Aung and Thant Zin Oo</i>   | 297 |
| 29. <b>Generating of PWM Signal Using Microcontroller</b><br><i>Myint Myint Maw and Min Soe Tun</i>   | 303 |
| 30. <b>Some Wild Medicinal Plants Grown In Mandalay District, Mandalay Region</b><br><i>Nwe' Nwe' Yi, San San Wai and Moe Moe Lwin</i>  | 309 |
| 31. <b>Some Medicinal Plants Found In Sagaing University of Education Campus</b><br><i>Moe Moe Lwin, Nwe' Nwe' Yi and San San Wai</i>   | 313 |
| 32. <b>Taxonomic Study on Some Species of Fabaceae Found in Min Wun Hill Near the Eastern Part of Sagaing University of Education</b><br><i>San San Wai, Nwe' Nwe' Yi and Moe Moe Lwin</i>  | 321 |

## Contents

|   |     |
|---|-----|
| 1. <b>Exploring Teachers' Sense of Their Professional Identity at Selected Education Colleges in Upper Myanmar</b><br><i>Zin Nwe Than and Yoon Shwe Yee Htun</i>                    | 1   |
| 2. <b>Relationship between School Environment and Teachers' Job Performance</b><br><i>Lwin Lwin Than and Thwe Thwe</i>  | 17  |
| 3. <b>An Exploratory Study on Psychological Temperament and Personality Traits of Grade 9 Students in Maharaungmyae Township</b><br><i>Aye Aye San and Aye Aye Khant</i>            | 27  |
| 4. <b>A Study on Interest in Natural Sciences and Out-of-school Experiences of Grade 10 Students in Sintgaing Township</b><br><i>San San Aye and May Thuzar Tun</i>                 | 35  |
| 5. <b>The Role of Identity Styles in Psychological Well-Being of Grade 9 Students in Pakokku Township</b><br><i>Ohmmar Win and Cho Mi Mi Ko</i>                                     | 45  |
| 6. <b>Family History Knowledge and Identity Development of Higher Education Institution Students</b><br><i>Ohmmar Tin</i>   | 59  |
| 7. <b>A Study on Prosocial Behaviour of Pre-service Teachers from Loikaw Education College</b><br><i>Toe Toe and Ohnmar Tin</i>   | 75  |
| 8. <b>Psychological Resilience and Psychological Well-being of Teachers in Salin Township</b><br><i>Myo Ko Aung and Thet Hmu Pyae Sone</i>  | 85  |
| 9. <b>A Study on Career Self-Efficacy and Teaching Behaviour of Senior Assistant Teachers in PyinOo Lwin Township</b><br><i>Khin Khin Thant and Thae Phyu Phyu Nyein</i>            | 97  |
| 10. <b>The Effectiveness of Cooperative Learning in Teaching Chemistry at the Basic Education High School Level</b><br><i>San San Maw and Su Yi Myat</i>                            | 107 |
| 11. <b>A Study of the Teachers' Attitudes towards Inclusive Education</b><br><i>Khin Thant Zin and May Yamin Khant</i>  | 115 |
| 12. <b>A Study on the Factors Influencing Choice of Teaching Profession of Pre-service Teachers in Sagaing University of Education</b><br><i>Htay Lwin and Aye Moe Thandar Aung</i> | 133 |
| 13. <b>A Study of the Difficulties of Grade Eight Students in Learning Geometry</b><br><i>Soe Soe Thein and Hnin Ei Khaing</i>  | 145 |
| 14. <b>An Investigation into the Perceptions of Pre-service Teachers on Effective Teaching Methods for Large Classes</b><br><i>Zin Myat Myat Lwin</i>                               | 159 |
| 15. စာပေတို့တွင်တွေ့ရသော ဝေါဟာရစံသွေ့ခြင်း လေ့လာချက်<br>မေတ္တယံဦး   | 167 |
| 16. ဝိသေသသုံး စကားလုံးအသုံးနှင့် ယေဘုယျသုံး စကားလုံးအသုံး လေ့လာချက်<br>အေးခိုင်စိုး   | 177 |