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Text Based Language Identification UsingSupport Vector Machine

Nibeesh K, Indhuja K and P C Reghu Raj
Department of Computer Science and Engineering
Government Engineering College
Sreekrishnapuram, Palakkad, India

Abstract

Language identification is the process of determining in which natural language the given text is. It has widespread application in the field of Natural Language Processing, search engines, localization of systems etc. In this paper, we propose the use of support vector machines (SVM) for language identification of short texts that use same script Language in UNICODE. The proposed method, though simple, outperform for several languages.

Keywords—SVM, Language identification, NLP, Unicode, Dataset, Tokens

INTRODUCTION

Language Identification (LID) is defined as the task of identifying the language from a given document. Language identification is an important problem in Natural Language Processing (NLP). LID has been applied in a number of contexts including Cross Language Information Retrieval (CLIR) and machine translation. It may seem to be an elementary and simple issue for humans, but it is difficult for a machine, primarily because different scripts are made up of different shaped patterns to produce different character set.

As the world is getting increasingly interconnected, electronic libraries are becoming more pervasive and at the same time increasingly automated. The task of presenting a text in

any language as automatically translated text in any other language is important. Language identification is of special significance for a multi-lingual country like India, where the text portion of the document usually contains information in more than one language. Twenty two Indian languages have been given constitutional recognition and are considered major languages [14]. If we could segment multi-lingual documents language-wise, it would be very useful both for exploration of linguistic phenomena, such as code-switching and code mixing, and for computational processing of each segment as appropriate[11]. Language identification has traditionally been approachedusing character-level n-gramlanguage models. In this paper, we propose the use of support vectormachines (SVM) for the language identification of very short texts. Although theSVM is generally more accurate as a classifier, the additional computationalcomplexity of training this classifier may not be justified in light of the importance of using a high dimensional vector space. A document-processing system mayneed to determine the language of textual contents before performing tasks such astopic identification, stemming, searching, etc.

Support Vector Machine [15]

In machine learning, support vector machines are supervised learning models withassociated learning algorithms that analyze data and recognize patterns, used forclassification and regression analysis. Given a set of training examples, eachmarked as belonging to one of two categories, an SVM training algorithm builds amodel that assigns new examples into one category or the other, making it a non-probabilisticbinary linear classifier. An SVM model is a representation of theexamples as points in space, mapped so that the examples of the separatecategories are divided by a clear gap that is as wide as possible. New examples arethen mapped into that same space and predicted to belong to a

category based onwhich side of the gap they fall on. SVM is an important tool for patternrecognition.SVM uses a non-linear discriminant function that is able to generalize well, even in high dimensional feature space. The classifier maps input vectors to a higherdimensional space where a separating hyper-plane is constructed. The hyper-plane maximizes the margin between the two datasets. In real-world problems data canbe noisy and the classifier would usually over-fit the data. For such data, constrainson the classifiers is relaxed by introducing slack variables. This improves overall generalization.

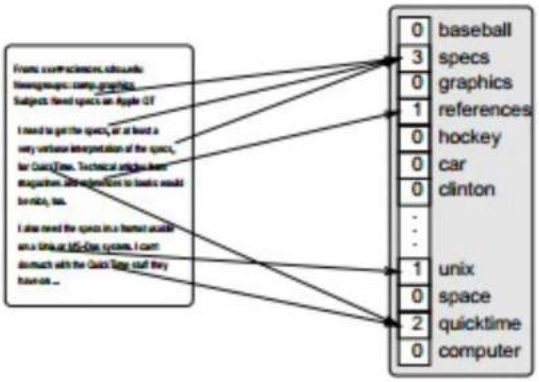

Fig 1.Represent document as feature vector [5]

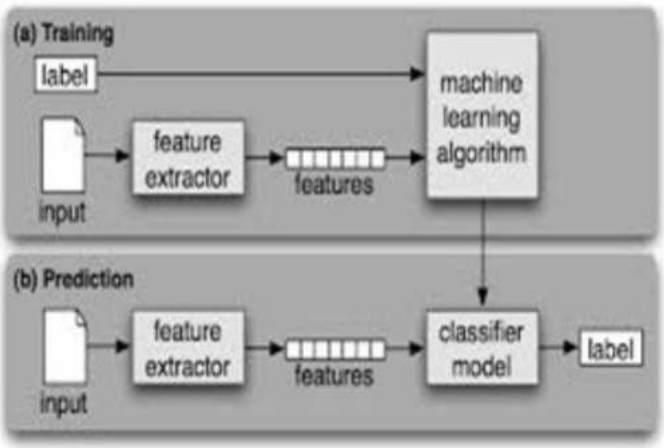

Fig 2.Supervised Classification [5]

UNICODE [13]

Unicode is a computing industry standard for the consistent encoding, representation and handling of text expressed in most of the world's writing systems. Unicode can be implemented by different character encodings. The mostcommonly used encodings are UTF-8. UTF-8 uses one byte for any ASCIIcharacters, all of which have the same code values in both UTF-8 and ASCIIencoding, and up to four bytes for other characters.

I. LITERATURE SURVEY

Language identification plays a very important role in speech and text relatedapplications. Lot of research has been carried out in this field and there has beensignificant progress in this area since last decade. There are many methods forlanguage identification. SVM based language identification seems to improve theperformance of language identification system.W. M. Campbell et.al work on "Language Recognition with Support VectorMachines"[1] uses Support vector machines (SVM) as a tool for discriminativeclassification of languages. The key aspect of applying SVM to speech is toprovide a SVM kernel which compares sequences of feature vectors–a sequencekernel. They propose the use of sequence kernels for language recognition. GerritReinier Botha work on " Text Based Language Identification for the SouthAfrican Languages",[2] compares different methods of language identification likeSVM, n grams, centroid method, Naive Bayes classifiers method, Markov methodetc. He found that a reduction in the feature space of the SVM results in asignificant decrease in performance accuracy. SVM outperforms all other modelswhen the feature space is high. H. Lodhi et.al paper on "Text Classification usingString Kernels"[3] showed that an SVM trained with n-gram statistics outperformsan SVM using kernel strings as features. Though it would be assumed that a kernelstring would capture more information of a language, it probably introducescomplexity into the SVM,

which has a negative impact on decision-making. Hongbinsuo et.al paper on "Automatic Language Identification withDiscriminative Language Characterization Based on SVM"[4] emphasize on identifying the language from a short utterance spoken by an unknown speaker.The mainstream approaches include parallel phone recognition languagemodeling, support vector machine and the general Gaussian mixture models(GMMs). Aditya Bhargava and Grzegorz Kondrak paper on " Languageidentification of names with SVM "[5] propose to count character n-gramoccurrences in the given name, for n up to some maximum length, and use thesecounts as the features in an SVM. They showed that applying SVMs with n-gramcounts as features outperforms the predominant approach based on languagemodels. Sanghamitra Mohanty and Basanta Kumar Swain paper on "LanguageIdentification using Support Vector Machine"[6] mentions language identification of 5 Indian languages like Oriya, Hindi, Indian English, Sanskrit and Nepali.

Language identification is carried out using Support Vector Machine with radialbasis function (RBF) kernel as pattern recognition classifier. Their studies indicate that the average accuracy of language identification in level of word domain is78.4 %. Yen Deng work on "Automatic language identification using supportvector machines and phonetic N-gram"[7] use the language model scores of phonesequences to do SVM training. They make use n-gram probabilities of thosephones to train SVM models.

II. PROPOSED SYSTEM

The proposed system will detect the language of the given text using SVM classification. For each language, the document collection is read, tokenized andfrequency of the tokens are computed after that intersection of tokens (words) are removed. The most frequent 100 tokens are selected for each language. Same way, for each language, 100 high frequency trigram are collected. After merging all theretrigrams again the frequency is

calculated. In these high frequent 50 and low frequenttrigram are also used as feature vector. System is trained using this vocabularyset. The Vocabulary set is saved in a file for test phase.The proposed system is good to identify the languages that have common script.In this system we have combined the features of Unique Word and Common frequent and infrequent trigram[10] to improve the accuracy of the existing system. We give high importance to unique word feature. This is achieved by setting the otherunique word feature value of the detected language to non-zero, if it is zero.

Language-Feature	Language-Detection Accuracy
Unique Word	100 %
Common Frequent Trigram	84.4 %[10]
Common Infrequent Trigram	92 %

The block diagram used for language identification is as shown below.

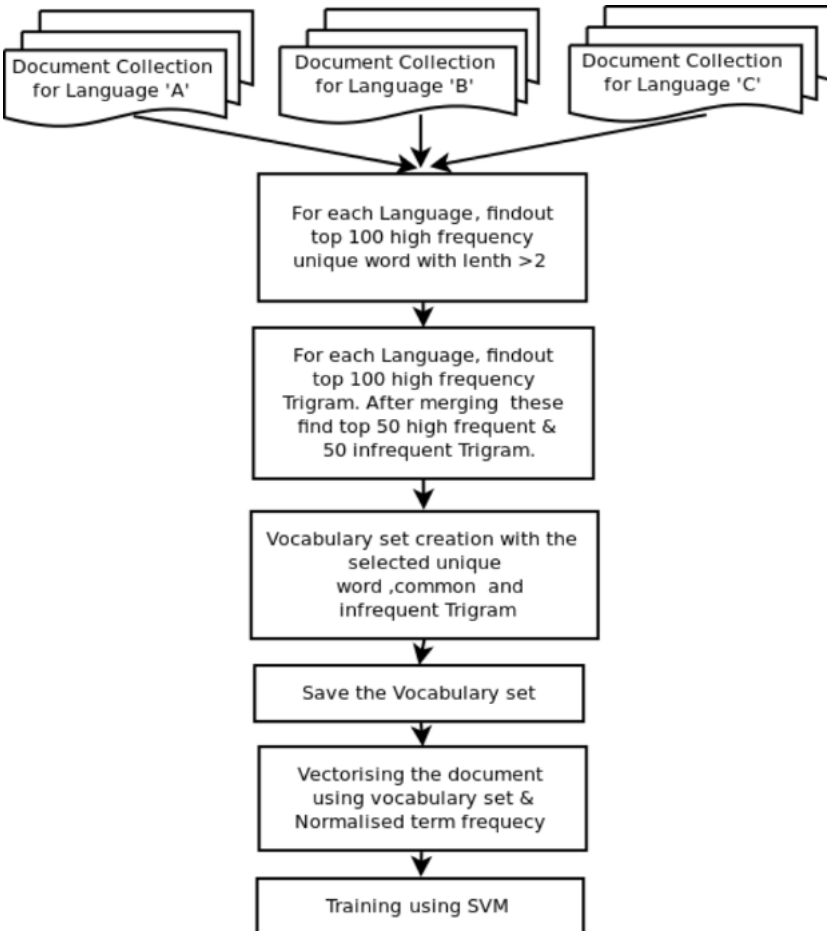

Fig 3. Training the System

The proposed Language identification system is trained and testing using SVM.For identifying the language in testing phase, vocabulary set is loaded and used tovector the text. Then feed the vocabulary set in to the learned model forlanguage identification. The system will output the predicted language.

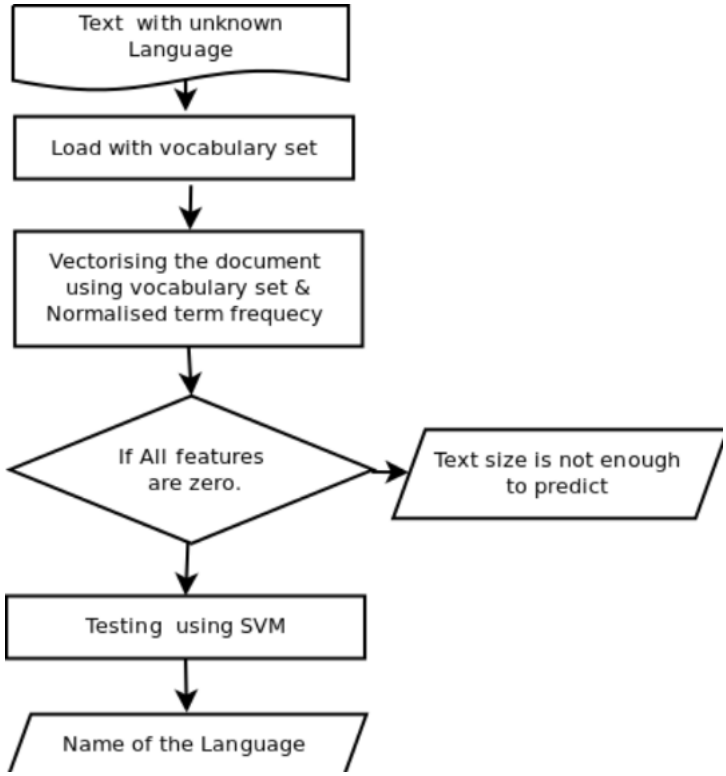

Fig 4. Testing the System

Result Evaluation

The accuracy for the proposed system is 100%. Some test text of size larger than50 for Bhojpuri is misclassified as Hindi in Google language-detection system [28-Feb-2014]. Some of the test result of the proposed system is shownbelow.

[Test for 0: Hindi, 1: Sanskrit, 2: Marathi, 3: Bhojpuri, 4: Nepali][Text size >50]

Text	1	2	3	4	5	6	7	8	9	10
Original	0	1	3	2	4	2	4	3	0	1
Output	0	1	3	2	4	2	4	3	0	1

[Test for 0: Arabic,1:rdu and 2:kashmiri with 100 features for each Language]

Text	1	2	3	4	5	6	7	8	9	10
Original	0	1	2	2	0	1	1	2	0	0
Output	0	1	2	2	0	1	1	2	0	0

[Test of 0:English ,1:French and 2:Spanish with 100 features for each Language]

Text	1	2	3	4	5	6	7	8	9	10
Original	1	0	2	1	0	2	2	1	0	1
Output	1	0	2	1	0	2	2	1	0	1

CONCLUSION

The system has 100% accuracy in the test cases that applied. The system is capableof detecting languages of same script, it should be trained and tested separatelyfor each scripts. The system can be scaled to identify many languages by using twostages of identification, one is UNICODE code based and the second is as proposed inthis paper.

VI. REFERENCE

[1] Kavi Narayana Murthy and G. Bharadwaja Kumar, Language Identification from Small Text Samples, *Journal of Quantitative Linguistics*, 2006

[2] Aditya Bhargava and Grzegorz Kondrak, Language identification of names with SVMs. *Annual Conference of the North American Chapter of the Association for Computational Linguistics*, pages 693–696, 2010

[3] J.P. Campbell, D.A. Reynolds, E. Singer, P.A. Torres-Carrasquillo, Support vector machines for speaker and language recognition. *ELSEVIER*, Volume 20, Pages 210–229, 2006

[4] Gerrit Reinier Botha, Text based language identification for the South African Languages. *Master's Dissertation, Department of electronic and computer Engineering*, April 9th 2008.

[5] Huma Lodhi , Text Classification Using String Kernels, *Journal of Machine Learning Research*, 2002.

[6] Hongbin Suo, Ping Lu, Yonghong Yan, Automatic Language Identification with Discriminative Language Characterization Based on SVM, *IEICE* , March 2008

[7] Sanghamitra Mohanthy and Basanta Kumar Swain, Language Identification using Support Vector Machine, *Desceco Center for Communication Development studies*, 2010

[8] Yan Deng, Automatic Language Identification using support vector machines and phonetic N-gram, *IEEE*, July 2008.

[9]Sreejith C, Indu M, P. C. Reghu Raj, N-gram based Algorithm for distinguishing between Hindi and Sanskrit texts*, IEEE Fourth International Conference on Computing, Communications and Networking Technologies* (ICCCNT), 2013

[10] Tomas Olverky, N-Gram Based Statistics Aimed at Language Identification, *Slovak University of Technology, M. Bieliková (Ed.)*, IIT.SRC , , pp. 1-7, April 27, 2005.

[11] Nibeesh K, Sreejith C , Dr P C Reghu Raj , Malayalam Text Classification for Efficient News Filtering using Support Vector Machine, *NATCON* 2014.

[12] http://scikit-learn.org/stable/modules/svm.html [Visited on 28 Feb 2014]

[13] http://en.wikipedia.org/wiki/Unicode [Visited on 28 Feb 2014]

[14]http://www.mapsofindia.com/culture/indianlanguages.html [Visited on23 Feb 2014]

[15]http://docs.opencv.org/doc/tutorials/ml/introduction_to_svm/introduction_to_svm.html [Visited on 10 Feb 2014]

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THE SCOPE OF FACILITIES MANAGEMENT AND ITS EFFECTIVENESS

Janaki PM

Department of Commerce, Mount Carmel College, Bangalore, India

Abstract: The facility management (FM) as an industry has emerged as one of the fastest growing sector over the decade. However, the scope and identity of Facility Management is still unclear. Facility Management is the multi-disciplinary kind of work that covers a wide range of various activities, responsibilities and knowledge. Facility management provides and manages a variety of support services in order to coordinate the organization functions to create working environment leading to the creation of employee value[1].

This research is made to understand the constituents of facilities management by studying the scope of work in IBM. An Attempt has been made to understand the extent of services that facility department undertakes and its effect on the employees perception and satisfaction towards the performance of the facilities team.

INTRODUCTION

The British Institute of Facilities Management defines it as 'The integration of multi-disciplinary activities within the built environment and the management of their impact upon people and the Workplace'[2].

The facility management (FM) as an industry has emerged as one of the fastest growing sector over the decade. Facility management is an interdisciplinary field primarily devoted to the maintenance and care of commercial or institutional buildings, such as hospitals, clinics, hotels, resorts, schools, office complexes, sports arenas or convention centre.

The term facility management is similar to property management although not exactly the same. Facilities management and property management, both manage the day to day operation of the property facilities such as cleaning, maintenance and security. Both the management duties are interlinked to bring about clarity between the two. Companies

prefer SLA (service level Agreement) to be signed by the outsourced Facility Management organizations[3]. SLA gives the list of facilities to be managed and clearly states the expected service required.

The property manager has an expanded role which includes leasing and marketing activities whereas the facility manager role focuses on existing tenants who usually are owner occupants. An important feature of facility management is that it takes account of human needs of its tenants in the use of buildings and other constructed facilities.

Facilities Management may deal with varied responsibilities like

- Long-range and annual facility planning
- Facility financial forecasting
- Real estate acquisition and/or disposal
- Work specifications, installation and space management
- Architectural and engineering planning and design
- New construction and/or renovation
- Maintenance and operations management
- Telecommunications integration, security and general administrative services[4].

From the above list, it is identified that some of functions taken up by the facilities team combines both property management and facility management. Thus the scope and identity of Facility Management is still unclear as evidenced by the definitions and issues which attempt to describe its scope. In fact, Facility Management is the multi-disciplinary kind of work that covers a wide range of various activities, responsibilities and knowledge. Moreover every phase of an organization seems to be trained into Facilities Management.

The scope of work shows the complexity of activities and the extent of services that a facility service providing company agrees to render the clients. It is at the liberty of the parties to decide upon the activities which needs to be included or excluded in the scope of work. Facility services are outsourced by the company to make sure services are rendered to the employees effectively. The purpose to study the scope of work of facilities management is to understand that facilities in a company portrays the working

environment of the employees which leads to the employee value creation and it is directly related to the goodwill of the company.

RESEARCH METHODOLOGY

Descriptive design is used for this research work. It includes survey and fact finding enquiries of different kinds. The data is collected through interview schedule and questionnaire. This included 20 questions directed to employees on issues related to facility operations and questionnaire on personal evaluation of the employees to assess his/her abilities to be knowledgeable about the facility management available at the source. It is the original source of data collected by the researcher. The primary data was collected by personally meeting and taking feedback from the existing employees, and through discussion with the facility executives.

Case study: IBM

For the above reason a case study on IBM is analyzed to understand the extent of services that facility department undertakes and the employees perception and satisfaction towards the performance of the facilities team.

International Business Machines (IBM) has outsourced its facilities Management to Jones Lang LaSalle (JLL), the service Agreement between the client and service provider is comprehensive, briefly listing

1. Procurement scope of work - Travel Expenses, Emergency, Business Control Plan / Audits / Quality, Supplier's Staffing Plan, Work Stoppage, Adding and Deleting Location, Variations to Scope of Work, Performance Measurement, Liquidated Damages (LD) for Critical Facilities, Facilities, Monthly Reporting Mechanism, Help Desk Centre, Computerized Maintenance Management System (CMMS), Site co-ordination and compliance, Landlord Interface, Compliance Certification, Space management, Building Structure and Fabric, Asset Management, Environmental management.

2.Critical site operations scope of work- High and Low Voltage Electrical Distribution, Uninterrupted Power Supply, Generators, Static Switches, Lighting, Fire Detection and Suppression Systems, Security System, Cleaning, including

under floor and specialist services, Fabric/Structure, Air Conditioning, Chilled Water Systems, Leak Detection Systems, Alarm Monitoring.

3. Handyman services- Electrical, Kitchen/Vending Equipment, Fire Systems, Plumbing and Patch/Paint.

For understanding the diversified work load of facilities management, it is always crucial to know its effectiveness. It portrays the working environment of the employees which leads to the employee value creation and it is directly related to the goodwill of the company.

RESULTS

Figure.1 shows to what extent employees are dependent and the level of expectation from the facilities management. The employees who agree that facilities is meant to create value for the business are those employees who expect excellent job from the facilities team, the employees who state facilities meant to create value to employees are those whose needs and requirements must be addressed at any cost and the remaining employees are those who say facilities create value only to the company, this group of employees inculde those whose relation with the facilities team is neutral.

Table 1: EMPLOYEES PERCEPTION OF FACILITIES MANAGEMENT

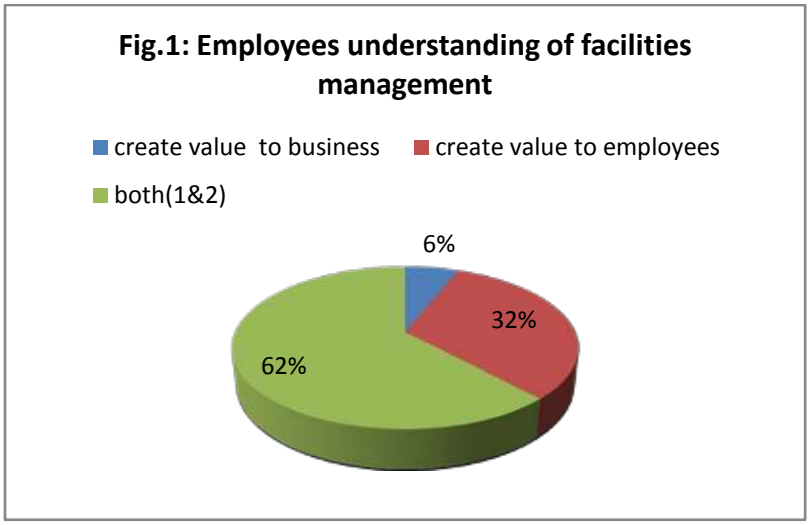


Figure.2 depicts that employees have no clue about the service provider, it can be due to the negligence of the emloyees who are not bothered about the provider but expect the right service. It can also be seen that facilities department in the office premises is looked as facilitators to the employees.

Table 2: EMPLOYEE KNOWLEDGE ABOUT THE SERVICE PROVIDER

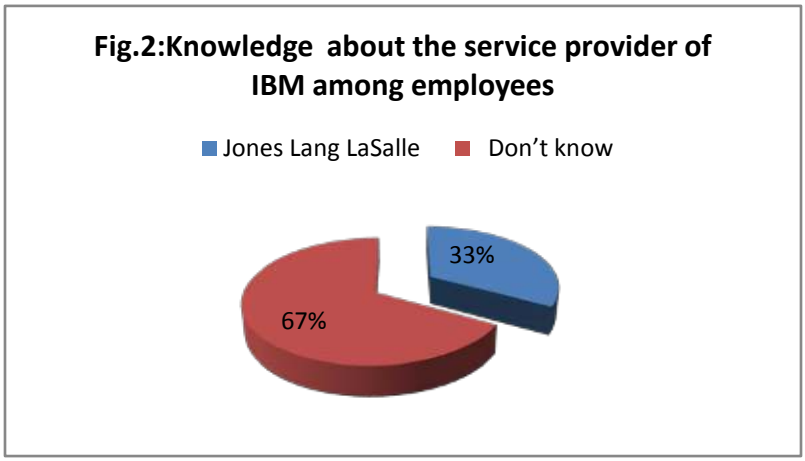
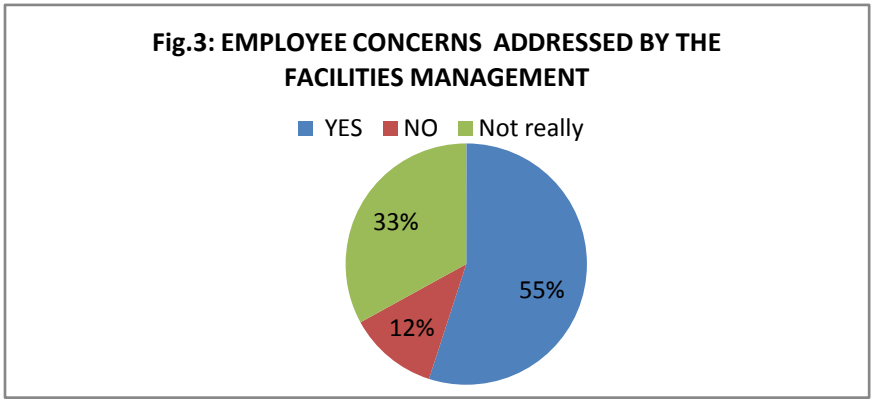


Figure.3 shows Employee satisfaction towards facilities service can well be understood. Employees in the organisation are satisfied with the facility services,but certain employees are dissatisfied with the performance of the facilities services. It can be due to

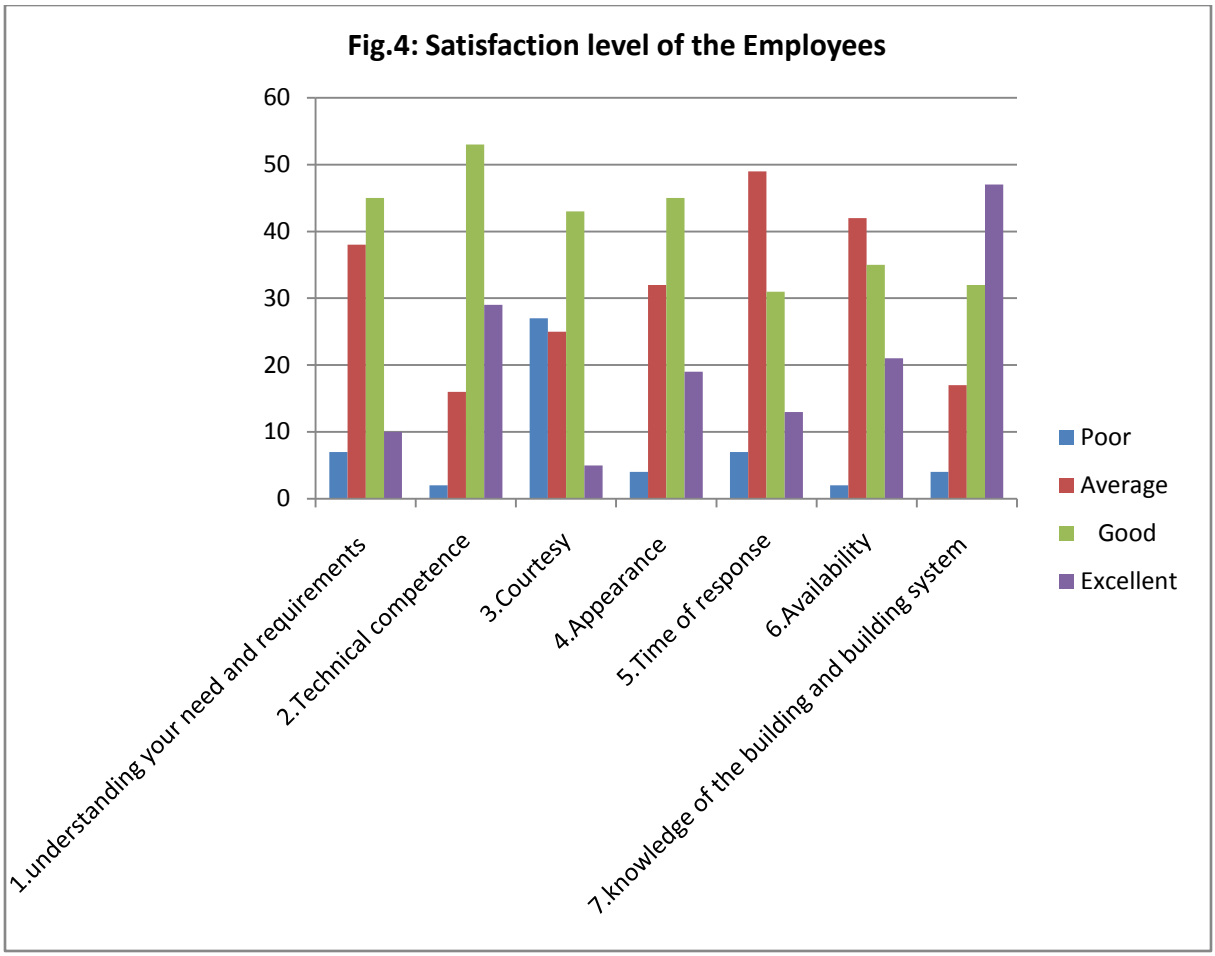
unaddressed facility issues and concerns, inadqueate services or undue behaviour of the facilities staff.

Table 3: EMPLOYEE CONCERNS ADDRESSED BY THE FACILITIES TEAM



The quailities of facilities team rated by the employees analysied in figure.4 depicts the level of satisfation by the employees. Knowledge of the building system and technical competence of the facilities is rated excellent and good by most of the employees, this shows that facilities team has a **good knowledge** and therortical background of the company. All other attributes are rated somewhere close to good and average,this shows that facilities team is trying their best to satisfy the employees with good services. Employees who have rated attributes to be poor are those who are much dissatisfied with the performance of the team especially, courtesy of the faciliites team is rated poor by many employees compared to other attributes, it can be due to **lack of patience or stress of the facilities staff.**

Table 4: EMPLOYEE SATISFACTION LEVEL WITH THE FACILITY TEAM



From the above case study it was understood that there is no set rule or a conceptual framework that states what needs to be included and excluded in the facility service agreement. It all depends on the agreeement between the service seeker and the provider. The overall performance of the facilities team depends on the facility staff commitiment towards the organization. The complex and diversified scope of work of facilities management team leads to the question whether the facilities departments are able to perform their duties to the expected level of the employees.

Sub contracting the facilities services should not be entertained, instead the service provider can recruit additional executives and train them in those activities. By doing this the cost of renewing the contract reduces. To improve the employee/facilities staff relationship, interactions through annual reports, monthly reviews, events, fests can be conducted. The effective interface can be established by placing signages and employee guides. The facility management team should be regularly trained. Daily base

staffs need to be given briefyings on the duties and can provide for daily rounds to check the general conditions of the workplace.

CONCULSION

Facilities Management is a fast growing industry, many companies today understand the importance of facilities provided in the organization, the quailty and suitability of workplace greatly affects the productivity of the employees.

The future scope of Facility Management services will increase at a rapid rate– in the view of Oliver John, Chief Executive of Citex, and in the different view of Fred Guscott, Chairman of the Faculty of Facility Management, RICS, will –'do less better'[5]. Both viewpoints are suitable. The scope of Facility Management operations and services will expand largely. To curtail the burden and for better performance In-house facility department should be imparted. This will lead to better understanding of its organisation and employees to implement facility operations effectively.

REFERENCES

1) Kubica.T. Aug 18 2010. How Facility can influence Employees, vendors and contractors and improve performance. Citibooks International Journals Publishing Company.
2) Earl. D. 2009. Stress Management tips for Help Desk professionals,Donna Earl and company Book publishers.
3) Scott.S.T. 2010. Facility Management Customer Service. Expense Management solution Book publishers.
4) Sharma.P. and Gupta.M, December 2009.Factors Determining Employee Satisfaction- A case study of public sector organization in Jammu region. Indian journal of management. 2: 33 to 38.
5) Prabowo.N. 2009. Workplace Organization and standardization. Productivity and Quality Management Consultants.

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REFERENCE SOURCES IN NON-PROFESSIONAL COLLEGE LIBRARIES OF MANGALORE CITY

Shobha N.K.
Librarian,Senior Scale
Mount Carmel College, Autonomous
58, Palace Road, Bangalore-560052

Abstract: The library assembles information from countless sources and places them for the benefit of the individual user. It sustains individual freedom of inquiry and opinion. At the same time it supports vastly expanded educational systems. This paper highlights the features and importance of reference sources. This study helps us to know the library collection especially reference collection in non-professional college libraries of Mangalore city.

Keywords: Reference sources, sources of information, non-professional colleges,

Introduction:

A library is a "reservoir for the intellectual resources for the academic community it serves with a growing emphasis in modern education."[1]. It is a social and an educational institution to meet the recreational, informative and inspirational needs of the modern society.

Dr. S. Radhakrishnan, a great Indian, a profound philosopher, a prominent author described the Academic Library as the 'Heart of the institution'.

Reference books

A reference book differs from an ordinary book in many respects. Reference books are considered as secondary sources of information. The term reference book is specific kind of publication which is consulted to locate only specific information as and when needed by the reader. A book on any particular subject, whether for advanced study or research or recreation is read thoroughly by a scholar, whereas, a reference tool like dictionary, encyclopedia, yearbooks or almanac is never read from first to last page.

It is a library book that may be used in the premises but not to be issued. Reference book is a fact finder used to find out precise information that is either as an overview for a summary.

Kinds of Reference books

- Dictionaries.
- Encyclopedias.
- Yearbooks, annuals, almanacs.
- Biographical sources.
- Geographical sources.
- Directories.
- handbooks and annuals.

- Bibliographies

Importance of Reference Collection

It is a well known fact that the entire success of reference librarian is largely depend upon the reference sources. The popularity of a library is based on rich and up-to date reference collection. The various sources are inevitable to provide efficient and effective reference service by reference librarian. Individual user's tastes may differ. It is the duty of librarian to meet all requirements to the maximum extent. Different types of reference sources will answer different types of questions. Therefore, it is essential to have an independent reference section with all varieties of reference sources.

Methodology of study

In order to collect relevant data Questionnaire method, Interview/discussion method, Observation method is used in the present study.

Scope and Limitations

The study has a very limited scope from the point of its depth of investigation, and the area covered in a stipulated period.

The study is confined to the Reference sources available in non-professional college libraries of Mangalore city, excluding professional colleges like Engineering, Medical, Dental, Pharmacy, Nursing, B. Ed., etc. The term reference source refers to a dictionary, encyclopedia, yearbook, bibliography, biography, directory, handbooks, manuals etc. An attempt has been made mainly to provide the information about the sources of reference collection.

Objectives of the study

The major objectives of the present study are:-

-To assess the existing reference sources collection in Non-professional college Libraries.

-To identify the strength and weakness of reference source collection in college libraries of Mangalore city.

-To give comparative view of various types of reference sources in the college libraries.

Hypothesis

- All the non-professional college libraries have good reference collection.
- All the reference books have been classified and catalogued.
- There is separate reference section in each college library.

Data analysis

There are 12 Non-professional colleges in the Mangalore city limits taken for the study.

Non-Professional Colleges

Table- 1

COLLEGE	No. of colleges	percentages
Aided	09	75%
Unaided	02	16.67%
Autonomous	01	8.33%
Total	12	100%

Table- 1 shows the number of colleges aided, unaided, autonomous.

Users- Enrollment of students

Library is composed of three basic factors: Users, Books and Staff. Use of a library means the use of books or recorded knowledge in any other form by the users. The needs and requirements of the users form the base for the compositions of library stock. It is the user and extent of use made by an individual that determines the quality and quantity of library resources. All the library activities centers around the users. In college libraries, students and teachers are considered as important categories of users. Figure - 1 reveals the student strength in the non-professional Colleges.

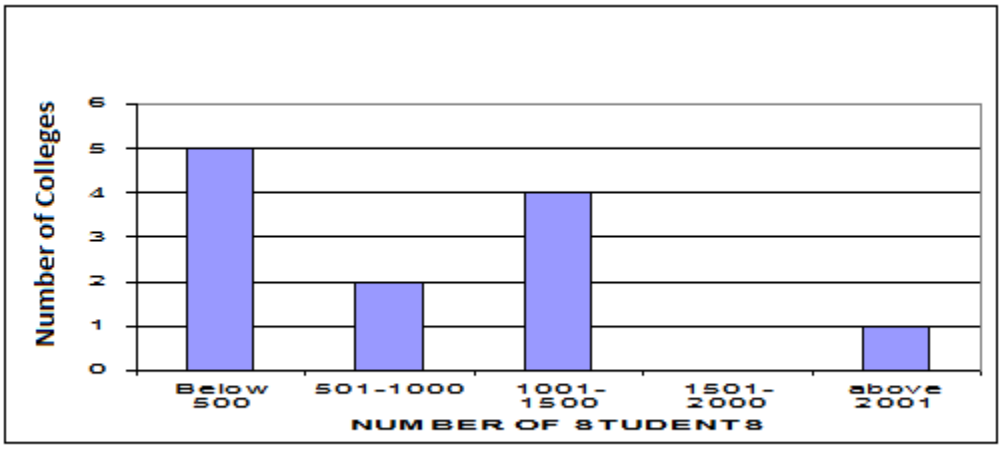

Fig 1. ENROLLMENT OF STUDENTS

Fig -1: Enrollment of Students

Establishment and Location of College Libraries

The first and foremost factor that governs the establishment of college library is its convenient location. Easy location, at the point which is near to the departments, class rooms and hostel which needs to be taken into consideration while establishing a college library. Tables 2 and 3 indicate that all college libraries are in close vicinity of college campus.

Table - 2: Establishment of College Libraries

Year of establishment	No. of college Libraries	Percentage
Before 1900	02	16.67%
1900-1950	01	8.33%
1951-1960	01	8.33%
1961-1970	01	8.33%
1971-1980	04	33.34%
After 1980	03	25.00%
Total	12	100

Table- 3: Location of Libraries

Location of the College libraries	No. of college Libraries	Percentage
Away from the college	-	-

Within the campus but separate building	03	25%
Within the campus but a portion of the college building	09	75%
Total	12	100%

Scheme of classification

Books are foundations of library and classification tend to enable a library to achieve its objective of serving its readers efficiently. The schemes of classification will be adopted keeping in view of the users.

There are number of schemes of classification used in different types of libraries. They are as follows:

Dewey decimal classification

Universal decimal classification

Colon classification

Library of congress classification

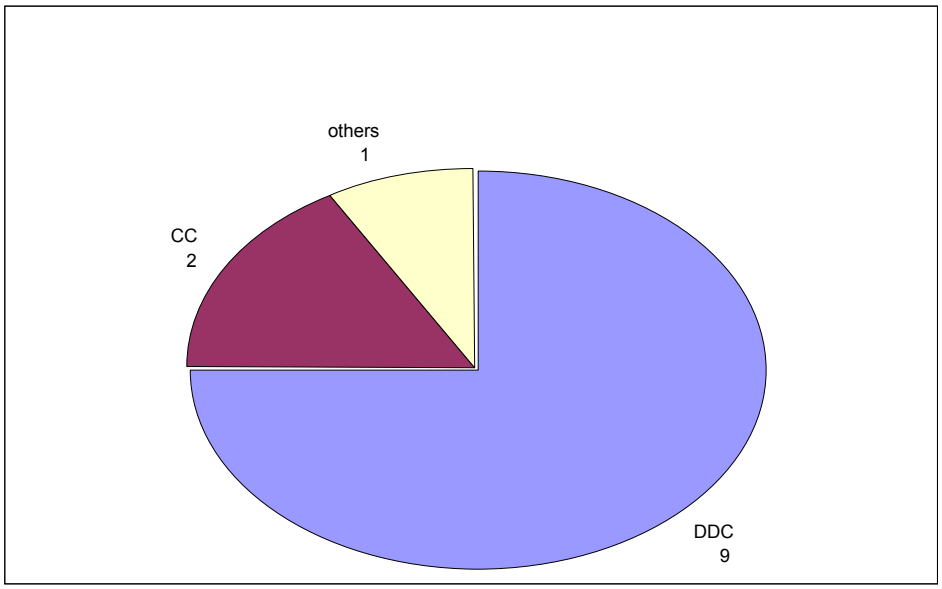

Fig 2: **SCHEME OF CLASSIFICATION**

Figure 2 indicates that majority of non-professional college libraries, make use of DDC scheme to classify library collections.

Library catalogue Code

No sound and good catalogue can be compiled without a good catalogue code. The entry arrangement and style must be done properly. A catalogue must be constructed not only on a scientific basis, but it should also achieve accuracy, consistency and uniformity. The following chart shows the use of code of catalogue in various college libraries under study.

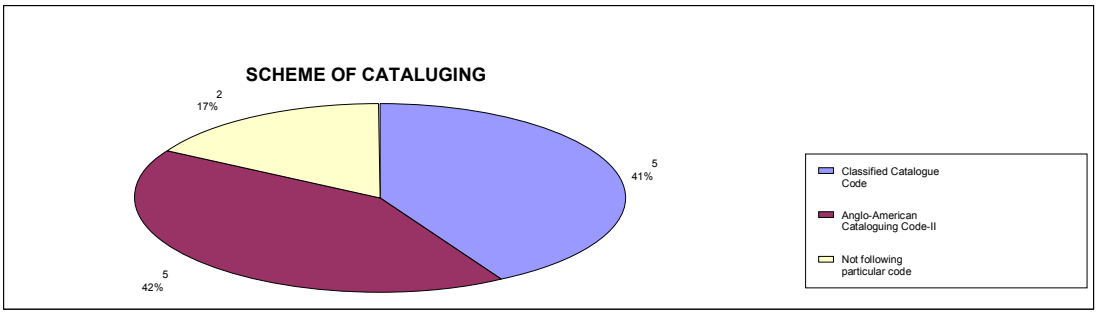

Fig 3: Code of Cataloguing

Almost all the college libraries have classified and catalogued their reference books which prove the second hypothesis.

Reference Section

There will be different sections for proper functioning of the library. There will be stack section, circulation section, reference section and periodical section. Reference section is the important section in a library. The possession of the right books and the knowledge of how to use them are essential to the success of a reference section. From the table below we can understand how many college libraries have separate section for reference collection.

The tables 4 -9 provide the overall picture of the reference tools available in different college libraries of Mangalore city.

Table - 4: Reference section

Reference section	No. of colleges	percentage

Separate section	04	33.33%
Combined with other section	08	66.67%
Total	12	100

Holdings of the library

Table - 5: Holdings of the library

Total holdings	No. of colleges	percentage
1-10000	02	16.67%
10001-20000	04	33.33%
20001-30000	02	16.67%
30001-40000	01	8.33%
40001-50000	-	-
50001-60000	-	-
60001-70000	02	16.67%
70001-80000	01	8.33%

Table 5 shows the total collection of the library.

Holdings of the Reference Collection

Table 6: Holdings of the reference collection

Total Reference Collection	No. of Colleges	percentage
1-1000	08	66.67%
1001-2000	02	16.67%
2001-3000	01	8.33%
3001-4000	-	-

4001-5000	01	8.33%

Comparison of Reference books with total collection

Table 7: Comparison of reference books with total collection

Percentage	No. of Colleges
0-5%	11
5-10%	01
Above 10%	00

There is average reference collection in college libraries compared to other collections. Thus, it is found that there is no balanced reference collection in college libraries.

Availability of different Reference sources

Table 8: Availability of different reference sources

Source	No. of Colleges	percentages
Dictionaries	12	100%
Encyclopedia	11	91.67%
Yearbook	12	100%
Gazetteer	08	66.67%
Atlases	11	91.67%
Guidebook	09	75.00%
Handbook	10	83.33%
Directories	10	83.33%

Biographies	10	83.33%
Bibliography	02	16.67%
Reports	10	83.33%

Source wise distribution of reference sources

Table 9: Source wise Distribution

Reference sources	Total no. of reference sources	Percentage
Dictionaries	1186	10.62%
Encyclopedias	1286	11.52%
Yearbooks	378	3.38%
Gazetteers	256	2.29%
Atlases	276	2.47%
Guidebooks	380	3.40%
Handbooks	533	4.77%
Biographies	5968	53.46%
Directories	204	1.82%
Bibliographies	109	0.97%
Reports	586	5.24%
Total	11162	100

Findings

1. Reference sources such as dictionaries, encyclopedias, biographies are adequate whereas there is insufficiency in sourcing directories, bibliographies, guidebooks and gazetteers.
2. Newly established college libraries collected very few reference sources. These libraries should give more importance to collection of reference sources.

3. Two libraries have not prepared catalogue for library resources including the reference sources.
4. One of the libraries has not classified the library resources including the reference sources.

Suggestions

1. The reference librarian should be taken as key member while acquiring the reference tools to the library. Because librarian will be having the direct access to the information sectors in the reference section. The librarian will have the authenticity to judge the right kind of reference source to be procured, for need based reference collection.
2. Special budget should be allocated for the purchase good number of reference books.
3. As the number of yearbooks and almanacs are limited, it becomes difficult to attend to reference query.
4. For newly established colleges it is necessary to have a library building and for the old colleges it is necessary to have a separate section, with well equipped furniture and well organized reference sources of all kinds.
5. Important current information sources should be acquired by college libraries as they contain up-to-date information.

Conclusion

In Mangalore city some of the non-professional college libraries are newly established and taking its own time to shape its various activities. However some college has rich collection of reference sources. These libraries need to have a special attention to establish a network for quick service and develop a good non-conventional sources. The libraries which are having very less reference sources can access these libraries for information sources for their clients. Whatever the library needs to have a special attention to develop a reference source collection without which it is not possible to provide an efficient reference service. In addition to this young enthusiastic and well experienced and knowledgeable persons should be made incharge for the reference section.

References:

1. Aggarwal, J.C., National policy on Education-1986 and Main recommendations of National Commissions on teachers. Delhi, Doaba House, 1986.

2. Cayne, Bernard., Ed. The Encyclopedia of Americana International Edition. New York, Americana Corporation, 1976. Vol. 14.

3. Chakrabarti, Bhubaneswar and Sengupt, Benoyendra., Fundamentals of Reference Service, Calcutta, The World Press, 1985.

4. Guha, B., Documentation and Information service, Techniques and systems. Calcutta, The world Press, 1983.

5. Issac, K.A., Library and Librarianship: A Basic Introduction. Madras, S.Vishwanathan, 1987.

6. Khan, M.A., The Principles and practice of Library Science. Newdelhi, Sarup and sons, 1996.

7. Prasher, R.G., Information and its Communication. Newdelhi, Medallion, 1991.

8. Rawat, P.P and Kumar, T., International Encyclopedia of Information Technology and Library Science. Newdelhi, Castle Books, 1992.

9. Sharma, J.B., Library Science concepts and Techniques. Delhi, Kanishka, 1995.

10. Sharma, J.S and Grover, D.S., Reference Service and Sources of Information. Delhi, ESS ESS, 1987.

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INVOLVEMENT OF POLYAMINES IN DROUGHT TOLERANCE OF FIELD BEAN

Myrene R. D'souza[1], Kokila S[2]., V. R. Devaraj[2]

[1]Department of Chemistry, Mount Carmel College, No. 58, Palace Road, Bangalore, India.

[2]Department of Biochemistry, Central College, Bangalore University, Bangalore, India.

For correspondence: myrene83@gmail.com

ABSTRACT

This study investigated whether polyamines (PAs) in Hyacinth bean (*Dolichos lablab*) plants are involved in drought resistance. *Dolichos lablab* HA-4 cultivars were subjected to drought stress for a period of eight days during the initial growth phase. The levels of diaminoputrescine (DAP), putrescine (Put), Spermidine (Spd) and Spermine (Spm) were estimated. Drought stress was also found to reduce dry and fresh weight, leaf surface area, root and shoot length and relative water content (RWC). The plant showed ability to rehydrate and grow upon re-watering, and the polyamines levels and RWC correlated with drought tolerance in the plants.

***Keywords*:** Hyacinth bean, putrescine, spermidine, spermine, relative water content

Abbreviations: DAP – diaminoputrescine, PA – polyamines, Put – putrescine, Spd – spermidine, Spm – spermine, RWC – relative water content.

INTRODUCTION

Polyamines, mainly putrescine (Put), spermidine (Spd) and spermine (Spm), are polycationic compounds of low molecular weight which accumulate under a variety of abiotic stress conditions[1]. They are regarded as plant growth regulators that are involved in a broad spectrum of physiological processes, such as embryogenesis, cell division, morphogenesis, and development[2]. They play an integral part in plant stress response either in free or conjugated form[3]. An increase in spermidine synthase activity and spermidine content in leaves of *Arabidopsis* has been found to be associated with tolerance to chilling, freezing, salinity, hyperosmosis, drought and paraquat toxicity[4]. Under stress, plants show specific reaction response in terms of polyamine fluctuation. Thus, changes in cellular

polyamines under stress provide clues on their possible implication in stress response; however there is no evidence for its role in counteracting stress. The purpose of this preliminary study was to investigate the changes in contents of free PAs in Field bean subjected to drought stress and upon rewatering.

MATERIALS AND METHODS

Plant material and chemicals

The seeds of *Dolichos lablab* (cv HA-4) were procured from National Seed Project, University of Agricultural Science, Bengaluru, India. Fine chemicals and reagents used in this study were purchased from Sigma-Aldrich, Bengaluru, India. All other chemicals were of analytical grade.

Growth conditions

Seeds of *Dolichos lablab* cultivar HA-4 were surface sterilized with 0.1% (w/v) mercuric chloride for 1 min, rinsed immediately with large volume of sterile distilled water and imbibed overnight in distilled water. The overnight-soaked seeds were sown in trays containing vermiculite and acid-washed sand (1:1 w/w) and irrigated daily with distilled water. The germination was carried out under natural greenhouse conditions; day/night temperature and relative humidity were: 30/25 °C and 75/70 % respectively. The average photoperiod was 12 h light/12 h dark.

Drought stress application and experimental design

Drought stress was induced by withholding water to seedlings, ten days after germination (DAG). Leaf and root samples were collected at 2, 4, 6 and 8 days after stress (DAS) and 5 days after re-watering (DAR) and frozen until further analysis. For determination of RWC, and fresh and dry weights, samples were used immediately after collection. The experimental design used was carried out at random factorial scheme, with 5 evaluation points (2, 4, 6, 8 DAS and 5 DAR) and done in triplicates. Seedlings watered twice daily were used as control.

Determination of Relative Water Content (RWC)

The relative water content was estimated using the equation: RWC = (FW-DW) X 100 / (TW-DW)[5]. Leaf discs of 10 mm diameter were weighed to determine the fresh weight (FW), soaked in distilled water at 25 ^{o}C for 4 h to determine the turgid weight (TW), then

oven dried at 80 °C for 24 h to determine the dry weight (DW). Similarly, entire shoot and root was taken for analysis and RWC was computed as before.

Polyamine analysis

Each 100 mg of tissue was homogenized with 1.0 ml 5% (w/v) cold perchloric acid using a cooled mortar and pestle. The homogenates were kept in an ice bath for 1 h, and then centrifuged at 15,000g for 30 min at 4°C, the supernatant was transferred to new plastic vials and were stored at -70°C for PA quantification[6].

RESULTS AND DISCUSSION

Plant growth and productivity are primarily dependent on the water availability, the insufficiency of which will have negative effects on plant growth, photosynthesis, solute transport and accumulation. The imposition of drought by withholding water for eight days and subsequent macroscopic observation of Field bean revealed increased damage in the form of wilted, chlorotic leaves, which appeared to recover after rewatering. The decrease in growth can be attributed to the reduced cell elongation resulting from decreased turgor, cell volume and cell growth[7]. The plant showed reduction in number of leaves and surface area of leaves as well as curling due to loss of turgidity. The stressed plants failed to grow the second pair of leaves even 8 DAS (Fig 1). Drastic reduction in fresh and dry weight of the plant was seen 4 DAS (Fig 2). Other physical features such as length of stem, root and leaves exhibited reduction with increasing time of drought stress. The effect was more pronounced in roots. The growth arrest seen in roots and leaves can be considered as a possible mechanism to preserve carbohydrates for sustained metabolism, prolonged energy supply, and for better recovery after stress relief[8].

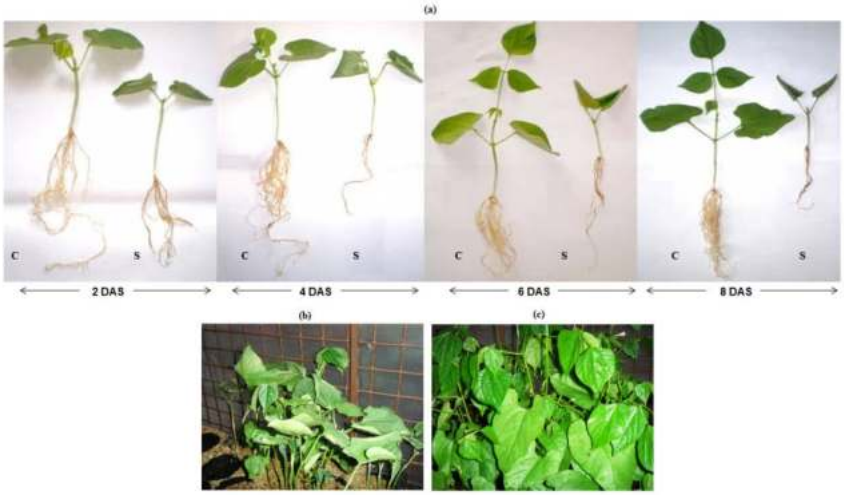

Fig 1: Effect of drought and rewatering in Field bean seedlings. (a): Morphological traits of control and stressed seedlings; (b): 6DAS; (c) 5 days after recovery.

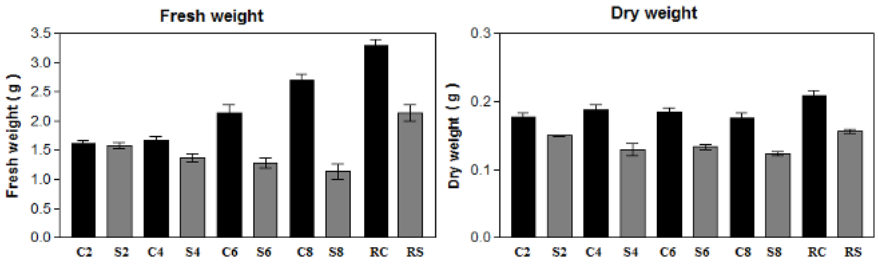

Fig 2: Fresh weight and dry weight of Field bean seedlings under 2, 4, 6 and 8 DAS. C2 to C8 controls, S2 to S8 stressed plants, RC (control for rewatered seedlings), RS (rewatered stressed seedlings).

Metabolic activity and leaf survival is determined by the relative water content (RWC) of the plant[9]. RWC in Field bean was found to decrease with increase in the time of exposure to drought stress. The RWC of roots showed a steeper decline when compared to RWC of leaves and stem (Fig 3). It is believed that retardation of root growth and the decrease in its activity[10] combined with stomatal closure caused by the accumulation of abscisic acid produced in roots and then accumulated in guard cells in response to water deficit are the causes of decrease in RWC[11]. However, on re-watering, the plants recovered fully in terms of RWC (Fig 3) illustrating the importance of plasticity in the leaf area for maintaining control over water use[12]. Despite the decline in RWC during drought, leaf growth resumed after the relieving of stress, thereby suggesting that the basic components of leaf growth were not completely damaged.

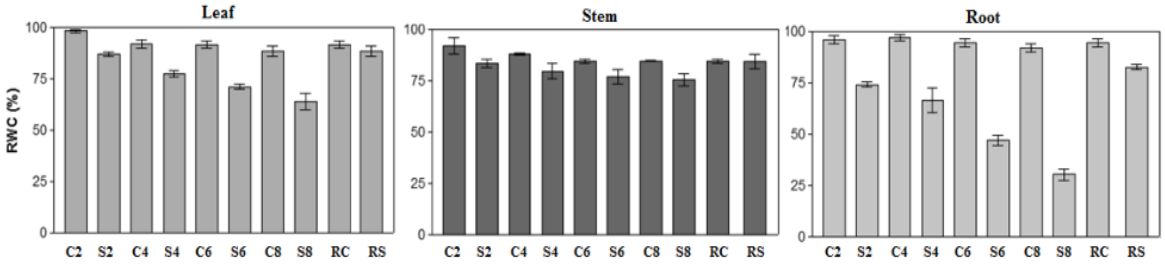

Fig 3: Relative water content (RWC) in leaf, stem and root tissue of Field bean seedlings under 2, 4, 6 and 8 DAS. C2 to C8 controls, S2 to S8 stressed plant, RC (control for rewatered seedlings), RS (rewatered stressed seedlings).

Polyamine (PA) metabolism has been reported to play an important role in drought tolerance[13-15]. Put, Spd and Spm began to rise 2DAS and peaked at 4DAS in Field bean, with Spd showing a more pronounced increase (Fig 4). Thereafter, PA levels began to decline significantly, which was accompanied by the accentuated stress injury. The enhancement of Spd levels indicates a possible role as a regulator in stress signalling pathways[4.] Increased levels of Put at an early stress stage provided better adaptation to drought stressed rice cultivars[15]. Spm is known to contribute to intrinsic gating and rectification of inward rectifier K^+ channels[16]. Under drought, elevated Spm content modulates the activities of certain ion channels and raises cytoplasmic Ca^{2+} concentrations, which inactivates the K^+ inward rectifier at the plasma membrane, thereby stimulating stomatal closure[14], declining transpiration rates, and helping to maintain turgor. Other functions of PAs involve protection of the plasma membrane against stress damage by maintaining membrane integrity[17], preventing activation of superoxide-generating NADPH oxidases[18] and inhibition of protease and RNase activity[19]. Increase in DAP levels upon stress (Fig 4) could be explained by the fact that Spm is oxidized to signaling molecules, H_2O_2 and DAP[20]. After subsequent re-watering, PA levels were found to decrease relative to control, while that of DAP, a product of PA metabolism was found to increase.

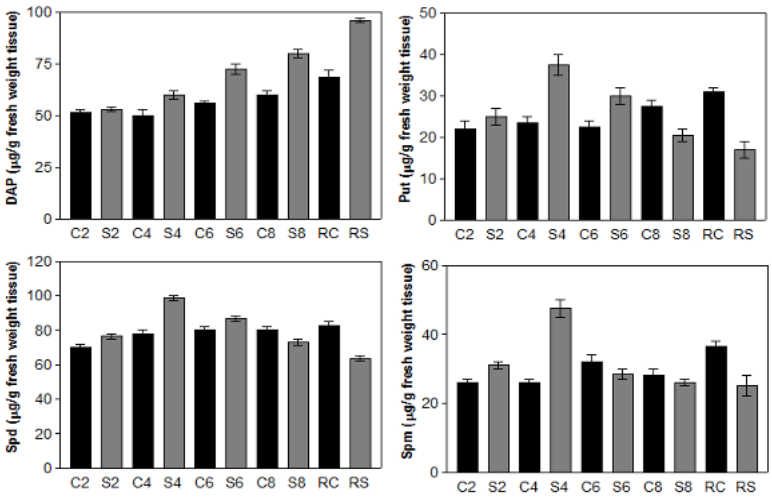

Fig 4: Levels of polyamines in leaves of Field bean seedlings under 2, 4, 6 and 8 DAS. C2 to C8 controls, S2 to S8 stressed plant, RC (control for rewatered seedlings), RS (rewatered stressed seedlings). Data plotted are mean ± SE of duplicates of three separate replicates, mean values were compared by one way ANOVA ($P \leq 0.05$).

SUMMARY

Plants are known to use more than one mechanism to adapt to unfavourable environmental conditions. For example, under drought stress, Field bean enhances drought tolerance through osmotic adjustment, restoration of oxidative balance and other metabolic and structural adaptations[21]. Despite the decline in RWC during drought, leaf growth resumed upon re-watering. This implies that the basic components of leaf growth were not completely damaged under drought stress possibly due to accumulation of compatible solutes and other stress response factors. The increased sensitivity as noted by the levels of various polyamines was reversed following re-watering indicating a great elasticity in the plant's capacity to cope with stress. Understanding how plants respond to episodic drought and watering pulse and the underlying mechanism could prove to be remarkably helpful towards the implementation of vegetation management practices during changes in climatic conditions common to tropical ecosystems.

REFERENCES

1. Krishnamurthy R. and Bhagwat K. A., (1989) Polyamines as modulators of salt tolerance in rice cultivars. *Plant Physiology*. 91: 500-504.

2. Liu J. H., Nada K., Honda C., Kitashiba H., Wen X. P., Pang X. M., and Moriguchi T., (2006) Polyamine biosynthesis of apple callus under salt stress: importance of the arginine decarboxylase pathway in stress response. *J. Exp. Bot.* 57: 2589-2599.

3. Alcázar R., Marco F., Cuevas J. C., Patron M., Ferrando A., Carrasco P., Tiburcio A. F., Altabella T., (2006) Involvement of polyamines in plant response to abiotic stress, *Biotechnol. Lett.* 28: 1867-1876.

4. Kasukabe Y., L. He, K. Nada, S. Misawa, I. Ihara and S. Tachibana. (2004) Over expression of spermidine synthase enhances tolerance to multiple environmental stresses and up-regulates the expression of various stress-regulated genes in transgenic *Arapidopsis thaliana*. *Plant Cell Physiol*. 45: 712-722.

5. Turner N. C., and Kramer P. J. (1980) *Adaptation of Plant To Water And High Temperature Stress*. Wiley, New York, 207-230.

6. Flores H. E. and A. W. Galston, (1982) Analysis of polyamines in higher plants by high performance liquid chromatography. *Plant Physiol*. 69: 701-706.

7. Hussain M., Malik M. A., Farooq M., Ashraf M. Y., and Cheema M. A. (2008) Improving drought tolerance by exogenous application of glycinebetaine and salicylic acid in sunflower. *J. Agron. Crop Sci*. 194: 193-199.

8. Mahajan S., and Tuteja N. (2005) Cold, salinity and drought stresses: An overview, *Arch. Biochem. Biophys.* 444: 139-158.

9. Nayyar H., and Gupta D. (2006). Differential sensitivity of C3 and C4 plants to water deficit stress: association with oxidative stress and antioxidants. *Environ. Exp. Bot*. 58: 106-113.

10. Tarumingkeng R. C., and Z. Coto. (2003) Effects of drought stress on growth and yield of soyabean. Kisman, Science Philosophy PPs 702, Term paper, Graduate School, Borgor Agricultural University (Institut Ppertanian Bogor).

11. Khan N. A., Samiullah, S. Singh and R. Nazar. (2007) Activities of antioxidative enzymes, sulphur assimilation, photosynthetic activity and growth of wheat (*Triticum aestivum*) cultivars differing in yield potential under cadmium stress. *J. Agro. Crop Sci.*, 193: 435-444.

12. Blum A., (1996) Crop responses to drought and the interpretation of adaptation. *Plant Growth Regul*. 20: 57-70.

13. Nayyar H., Kaur S., Smita, Kumar S., Singh K. J., and Dhir K. K. (2005) Involvement of polyamines in the contrasting sensitivity of chickpea (*Cicer arietinum* L.,) and soybean (*Glycine max* (L.) Merrill.) to water deficit stress. *Bot. Bull. Acad. Sin.,* 46: 333-338.

14. Yamaguchi K., Takahashi Y., Berberich T., Imai A., Takahashi T., Michael A., and Kusano T., (2007) A protective role for the polyamine spermine against drought stress in *Arabidopsis. Biochem. Biophys. Res. Comm.* 352: 486-490.

15. Yang S.H., Wang L.J., and Li S.H. (2007) Ultraviolet-B irradiation induced freezing tolerance in relation to antioxidant system in winter wheat (*Triticum aestivum* L.) leaves. *Environ. Exp. Bot.* 60: 300-330.

16. Oliver D., Baukrowitz T., and Fakler B. (2000) Polyamines as gating molecules of inward-rectifier K^+ channels. *Eur. J. Biochem.* 267: 5824-5829.

17. Roy P., K. Niyogi, D. N. Sengupta and B. Ghosh (2005) Spermidine treatment to rice seedlings recovers salinity stress-induced damage of plasma membrane and PM-bound H^+-ATPase in salt-tolerant and salt sensitive rice cultivars. *Plant Sci*. 168: 583-591.

18. Shen W., K. Nada and S. Tachibana (2000) Involvement of polyamines in the chilling tolerance of cucumber cultivars. *Plant Physiol*. 124: 431-439.

19. Bais H. P., and Ravishankar G. A., (2002) Role of polyamines in the ontogeny of plants and their biotechnological applications. *Plant Cell Tiss. Organ Cult.* 69: 1-34.

20. Kusano T., Yamaguchi K., Berberich T., and Takahashi Y. (2007) Advances in polyamine research in 2007. *J. Plant Res.,*120: 345-350.

21. Myrene R. D'souza and Devaraj V. R. (2011) Specific and non-specific responses of Hyacinth bean (*Dolichos lablab*) to drought stress. *Indian Journal of Biotechnology*, 10: 130-139.

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PILOT SURVEY TO RECORD THE LITTER FAUNA IN DIFFERENT ECOSYSTEMS OF TARALU ESTATE, BENGALURU

Dilip A.V, Mahesh B.L, Rohini G, H. Arpana, R. Chaithra, Avinash.K

and *M. Jayashankar

A Rocha India Taralu Field Study Centre, #257, Taralu Estate, Taralu Post, Uttarahalli, Bengaluru South Bengaluru- 560082

*Department of Entomology and Nematology, Indian Institute of Horticultural Research, Bangalore-560 089

* Correspondence:jay81zoology@gmail.com

Abstract

Litter fauna trapped using wet pitfall traps in different ecosystems in Taralu estate area are discussed. In this pilot survey, fauna belonging to ten orders belonging to three classes, Insecta (Hymenoptera, Coleoptera, Orthoptera, Diptera, Dermaptera, Hemiptera), Crustacea (Amphipoda and Isopoda) and Arachnida (Araneae and Opiliones) were recorded. The proportionate (frequency of taxa trapped) occurrence of the major taxa was in the order of: Hymenoptera >Coleoptera>Araneae>Orthoptera>Diptera>Amphipoda>Dermaptera>Hemiptera = Isopoda>Opiliones.

Key words: Litter, pitfall, Taralu, Bannerghatta.

Introduction

Soil ecosystem is dynamic with its versatile composition of organisms belonging to different taxonomic groups ranging from bacteria to earthworms. In terrestrial ecosystems, more than 50% of net primary production is returned to the soil via the decomposition of leaf litter, imparting major implications for present and future global carbon budgets[1, 2]. Any organism

inhabiting the soil during part or all of its life is called 'soil organism'. They play an essential role in decomposing organic matter, cycling nutrients and fertilising the soil. According to one estimate, one square meter of rich soil can harbour as many as 1,000,000,000 organisms[3] and75% of them are found in the top 5cm of soil. Based on size, soil biota is categorized into megafauna, mesofauna and microfauna[4].

The present study was undertaken to document the soil macro and mega-fauna of the litter zone in the vicinity of Taralu estate (10° 17'-10° 19' N; 76° 39'-76° 44' E) a small settlement in Bangalore South Taluk, Bangalore Urban district. The study area was selected for the following reasons,

a. Lack of scientific literature on soil organisms from the study area
b. Proximity to the Bannerghatta National Park

The Pitfall trapping is widely used in studies of seasonal occurrence, to examine spatial distribution patterns, to compare relative abundance in different micro-habitats, to study daily activity rhythms, and in community surveys[5]. They are excellent tools for detecting first activity and monitoring the season-long activity of walking and crawling soil and litter arthropods, especially those that are active at night[6].Such pitfall trap studies have been undertaken in different parts of India as well[7]. As the approach was a pilot survey the study was undertaken for a short duration and to extend further in future.

Materials and Methods

Study area

The study was carried out in cropland and adjacent uncultivated plots at Taralu estate of Bangalore South taluk adjoining the Bannerghatta National Park.

Sampling

Sampling was done during the summer season in the month of April 2014. The study was conducted for a period of four consecutive days viz., 3, 4, 5and 6th preceded by field survey. During the field survey specific sites to place the pitfall traps were identified. Subsequently, wet Pitfall traps were set randomly in six sites *viz*., areca plantation, mango orchard, sappota orchard, coconut plantation, tilled open land, and bamboo stretch. Plastic glasses having 6.5 cm diameter and 8.0 cm depth were placed in the soil in such a way that its opening remained parallel to the surface level. Ethanol (70%) was used as a preservative filling the bottom of the bowl. Traps were placed equi-distance from each other in each of the aforesaid sites.

The insects and spiders falling in the trap were collected the next morning and preserved in 70% ethyl alcohol with proper labeling of trap number and date for taxonomic evaluation. The fauna were collected the following day so as to account to all the trapped fauna because some trapped insects consume others and some also may fly out. The meteorological data was obtained from the GKVK, UAS Agrometerology department.

Data analysis

Cluster analysis (Unweighted pair-group average-UPGMA) based on the average distance between the taxa collected was done using Past version 3. The analysis was intended to group the taxa based on their frequency of trapping.

Results and Discussion

In the present study fauna belonging to ten orders included under three classes, Insecta (Hymenoptera, Coleoptera, Orthoptera, Diptera, Dermaptera, Hemiptera), Crustacea (Amphipoda and Isopoda) and Arachnida (Araneae and Opiliones) were recorded. The proportionate (frequency of taxa trapped) occurrence of the major taxa was in the order of: Hymenoptera >Coleoptera>Araneae>Orthoptera>Diptera>Amphipoda>Dermaptera>Hemiptera = Isopoda>Opiliones (Table 1 and figure 1). Although members belonging to eleven taxonomic orders were recorded overall during the present survey, the maximum number of taxa (9) trapped was in the coconut plantation site and the minimum was in the Bamboo stretch (5) (figure 1). Two prominent clusters were obtained based on the cluster analysis, that included the frequency

of the taxa trapped during the study period. Orthoptera, Aranea, Hymenoptera and Coleoptera form a cluster and Opiliones, Diptera, Dermaptera, Amphipoda, Hemiptera and Isopoda represent another cluster. The present findings are not compared with other data as it is a pilot study from the location. All the sites (managed) were well irrigated except the bamboo site (natural) hence the latter recorded lower trap catch. No rainfall was recorded during the sampling duration, the mean maximum and minimum temperatures were 34.5 and 18.4 ^{0}C respectively. The months of March, april and may are considered warmest in Bengaluru, with a tropical savanna climate with dry winters.

There is increasing research efforts devoted to understand the role of climate, litter quality and soil organisms on litter decomposition rates and carbon cycling globally. The present study is a miniscule attempt in this regard. Although the survey period and intensity followed in the present study are inadequate, they are first of the kind efforts reporting the ground borne fauna of the study area.

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References

1. Aerts, J. 2006. The freezer defrosting: global warming and litter decomposition rates in cold biomes. *J. Ecol*., **94**: 713–724.
2. Wardle, D.A., Bardgett, R.D., Klironomos, J.N., Set€al€a, H., van der Putten, W.H. and Wall, D.H. 2004. Ecological linkages between aboveground and belowground biota. *Science*., **304:** 1629–1633.
3. www.britannica.com/EBchecked/topic/552705/**soil-organism**
4. en.wikipedia.org/wiki/**Soil**_biology
5. www.animalethics.org.au › ... › Wildlife research
6. Curt L., R.R. Youngman, Kenner Love and Timothy Mize.2009. Using Pitfall Traps to Monitor Insect Activity. publication 444-416. Virginia Cooperative Extension. 4 pp.
7. Sabu T.K, Shiju R.T, Vinod K.V and Nithya, S. 2011. A comparison of the pitfall trap, Winkler extractor and Berlese funnel for sampling ground-dwelling arthropods in tropical montane cloud forests. *Journal of Insect Science.,* **11**(28):1-19

Table 1.Serialisation of litter fauna trapped consecutively in the selected sites

	Areca plantation				Mango orchard				Sappota orchard				Coconut plantation				Tilled open land				Bamboo stretch			
Orders/DOO	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Orthoptera	X	X	X	0	X	0	X	0	X	0	X	0	X	X	0	0	0	0	0	0	0	0	0	0
Araneae	X	X	X	0	X	X	x	0	X	X	0	X	X	0	X	0	X	0	0	0	0	0	0	0
Opiliones	0	0	0	0	0	0	x	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hymenoptera	X	X	0	0	X	X	X	0	X	X	X	0	X	X	X	0	X	X	0	0	X	X	0	0
Coleoptera	X	X	0	0	X	0	X	0	X	X	0	0	X	X	X	0	X	X	0	0	X	0	0	0
Diptera	X	0	0	0	X	0	0	0	0	0	0	0	X	X	0	0	X	X	0	0	0	0	0	0
Dermaptera	X	0	X	0	0	0	0	0	0	X	0	0	X	0	0	0	X	0	0	0	X	0	0	0
Dictyoptera	X	0	0	0	X	0	X	0	0	X	0	0	0	0	0	0	X	0	0	0	X	0	0	0
Amphipoda	0	0	0	0	X	0	0	0	0	X	0	0	X	X	0	0	X	0	0	0	0	X	0	0
Hemiptera	0	0	0	0	0	0	0	0	0	0	0	0	0	X	0	0	0	0	0	0	0	0	0	0
Isopoda	0	0	0	0	0	0	0	0	0	0	0	0	X	0	X	0	0	0	0	0	0	0	0	0

DOO= Day of observation, X= Recorded, 0=Not recorded

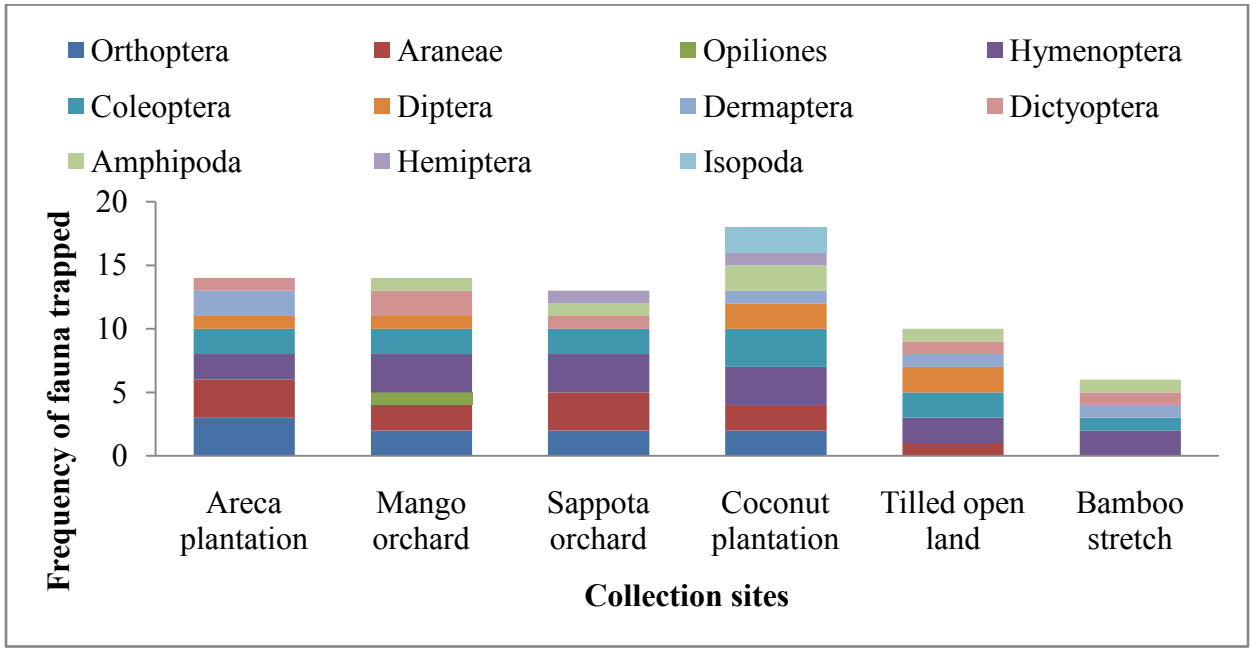
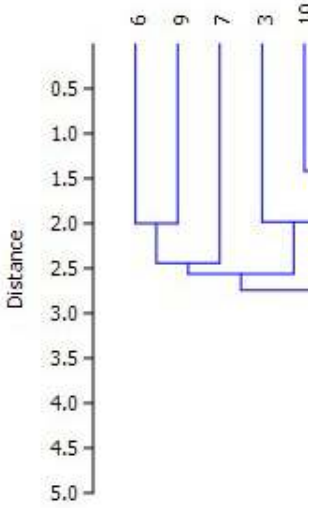


Figure 1. Frequency of trapped soil fauna (order level) in different sites



Sl.no	Taxa (Orders)
1	Orthoptera
2	Araneae
3	Opiliones
4	Hymenoptera
5	Coleoptera
6	Diptera
7	Dermaptera
8	Dictyoptera
9	Amphipoda
10	Hemiptera
11	Isopoda

Figure 2. Cluster analysis based on frequency of the taxa trapped in different sites in the study area.

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STUDY OF STIGMA AND QUALITY OF LIFE IN PEOPLE LIVING WITH HIV/AIDS

Lakshmi Arun and Ravikumar M.B[1]
Mount Carmel College, Department of Psychology, Bangalore. (lachiarun@gmail.com)
ART counsellor, District hospital Ramnagar[1] (rkravi777@gmail.com)

ABSTRACT

A convenient sample of 120 persons living with HIV/AIDS in the age group of 20-40 years was studied. Data were analyzed to find out the level of stigma and QOL among men and women PLWHA. Findings indicated that there is no significant difference in level of of stigma and quality of life between men and women.

Key words: Stigma, quality of life, people with HIV/AIDS

INTRODUCTION

According to UNAIDS global report (2009), it is estimated that there are 3.33crore people worldwide and according to National Aids Control Organization (NACO) report 2010, India has 22.7 lakh HIV-infected persons, the third highest in the world after South Africa and Nigeria. In Karnataka, as per State Aids Prevention Society (KSAPS) Consolidated ART report July 2012, the scenario of Karnataka state is 2.23 lakh adult. People living with HIV/AIDS (PLWHA) suffer physically, mentally, psychologically and even from economic criteria. Such persons are most of the times discriminated on the basis of stigma attached to the means of acquiring HIV and they may be ill-treated and isolated from family members and face discrimination from society, which affect quality of life in PLWHA[1] . Stigma can be described as an attribute or quality which significantly 'discredits' an individual in the eyes of others. HIV-related stigma refers to all unfavourable attitudes, beliefs, and policies directed towards people perceived to have HIV/AIDS as well as towards their loved ones, close associates, social groups, and communities.

Quality of life relates both to adequacy of material circumstances and to personal feelings about these circumstances. It includes overall subjective feelings of well being that are closely related

to morale, happiness and satisfaction. Further as health is generally cited as one of the most important determinants of overall quality of life, it has been suggested that quality of life may be uniquely affected by specific disease process such as AIDS[2].

Various studies have linked HIV/AIDS stigma and QOL. They reported that the overwhelming stigma of living with a disease such as HIV has a significant negative impact on quality of life[3]. The perception of HIV stigma had significantly negative impact upon quality of life for a broad sample of people living with HIV infection[4]. Internalizing stigma was found to have a highly significant negative correlation with QOL in the psychological domain and a significant negative correlation in the environmental domain. Individuals are vulnerable to feelings of self-hatred[5]. However, none of the studies from Karnataka have explored on Stigma, and QOL in PLWHA. Hence the objectives of the study was to

1. Study the level of stigma among men and women PLWHA.
2. Study the level of QOL among men and women PLWHA.

Hypotheses

1. Women living with HIV/AIDS have significantly higher stigma than men.
2. Women living with HIV/AIDS have significantly lower quality of life than men.

METHOD

Participants

The participant group consisted of total 120 PLWHA and among them 60 were men with HIV/AIDS and 60 were women. Participants were selected from ART Centre, Krishnarajendra Hospital, and Mysore. Their age ranged from 20 to 40 years and the purposive sampling method was used for the study.

Measures

1. Personal information schedule (PIS): This was developed by investigator and it included identification data and their socio economic status.

2. HIV Stigma scale: This scale consists of 40 items with four factors-personalized stigma, disclosure concerns, negative self image, and concern with public attitudes towards people living with HIV[6]. Psychometric properties of the scale were found to be satisfactory.

3. HIV targeted Quality of life instrument: This consists of 34 items with nine dimensions-overall function, life satisfaction, health worries, financial worries, medication worries, HIV mastery, disclosure worries, provide trust, sexual function[7]. Psychometric properties of the scale were found to be satisfactory.

PROCEDURE

The participants were given appropriate instructions and administered the HAT-QOL instrument and HIV stigma scale to PLWHA till we got 120 participants. They were also asked to give their socio-demographic details in the personal information schedule. They had to indicate their responses in the answer sheets given to them. Whenever they had doubt in understanding items, the test administrator clarified their doubts in their local language. The participants responded to the inventory on an average of 45-60 minutes approximately. Then the data was scored and statistically analysed by using t-test.

RESULT AND DISCUSSION

The stigma for men and women living with HIV/AIDS is provided in Table No 1. Personalized stigma of Men living with HIV/AIDS (58.45± 5.896) and Women living with HIV/AIDS (60.35±5.716) indicated no significant difference. It can be said that no differences were facing personalized stigma comparing with men and women living with HIV/AIDS. Disclosure concern stigma for men living with HIV/AIDS (31.92± 3.641) and women living with HIV/AIDS (32.93. ±3.677) indicated no significant difference. It can be said that no differences were facing disclosure concern stigma comparing with men and women living with HIV/AIDS. Negative self image stigma of men living with HIV/AIDS (37.65±7.140) and women living with HIV/AIDS (38.63± 6.815) indicated no significant difference. It can be said that no differences were facing negative self image stigma comparing with men and women living with HIV/AIDS. Stigma for Public attitudes of men living with HIV/AIDS (63.63±3.728) and women living with HIV/AIDS (65.02± 5.037) indicated no significant difference. It can be said that no differences were found in facing stigma for public attitudes between men and women living with HIV/AIDS.

Table No. 1: **Stigma** of Men and Women living with HIV/AIDS.

Variables	Gender	N	Mean	SD	t value	P value
S1: Personalized stigma	Men	60	58.45	5.896	-1.792	.076
	Women	60	60.35	5.716		
S2: Disclosure concern	Men	60	31.92	3.614	-1.527	.129
	Women	60	32.93	3.677		
S3: Negative self image	Men	60	37.65	7.140	-.772	.442
	Women	60	38.63	6.815		
S4 : Public attitudes	Men	60	63.63	3.728	-1.710	.090
	Women	60	65.02	5.037		
Overall Stigma	Men	60	191.87	17.518	-1.558	.122
	Women	60	196.88	17.755		

Stigma for men living with HIV/AIDS (191.87±17.52) was slightly less than what was a experienced with the women having HIV/AIDS (196.88±17.755). It can be said that no differences were facing overall stigma comparing with men and women living with HIV/AIDS It was found that there was the impact of stigma on medication adherence among HIV-positive adolescent and young adult women; result revealed that HIV-infected adolescent women experience HIV stigma and poor adherence over time[8, 9]. The above studies support the hypothesis but not the present results. The formulated $\mathbf{H_1}$ that is, women living with HIV/AIDS have significantly higher stigma than men, was not accepted.

Table No 2. Presents the quality of life for men and women living with HIV/AIDS. Quality of life for Overall function of men living with HIV/AIDS (14.55±2.919) and women living with HIV/AIDS (15.32±2.931) indicated no significant difference. It can be said that no differences were observed in quality of life for overall function between men and women living with HIV/AIDS. Quality of life for life satisfaction of men living with HIV/AIDS (10.77± 1.986) and women living with HIV/AIDS (11.33±1.791) had no significant difference. It can be said that no differences were in Quality of life for life satisfaction for men and women living with HIV/AIDS. Quality of life for health worries of men living with HIV/AIDS (10.67±1.963) and

of women living with HIV/AIDS (10.93±1.528) indicated no significant difference. It can be said that there was no differences for quality of life for health worries between men and women living with HIV/AIDS. Quality of life for financial worries of men living with HIV/AIDS (8.00± 1.966) and women living with HIV/AIDS (8.63±2.075) indicated no significant difference. It can be said that no differences for quality of life for financial worries was there between the two groups. Medication worries of men living with HIV/AIDS (11.62±2.263) and women living with HIV/AIDS (11.80±1.990) indicated no significant difference. It can be said that no differences with respect to quality of life for medication worries with men and women living with HIV/AIDS. Quality of life for HIV mastery of men living with HIV/AIDS (4.92± 1.357) and women living with HIV/AIDS (5.00±1.450) indicated no significant difference. It can be said that no differences were in quality of life for HIV mastery compared with men and women living with HIV/AIDS. Quality of life for disclosure worries of men living with HIV/AIDS (11.78± 2.366) and women living with HIV/AIDS (11.95±1.943) showed no significant difference. It can be said that no differences were found in quality of life for disclosure worries between men and women living with HIV/AIDS. It was the same with reference to Quality of life that provide trust of men and women with HIV/AIDS that indicated no significant difference. Quality of life for sexual function of men and women also showed no significant difference.

Total quality of life of men and women indicated no significant difference. It can be said that no differences were seen in total quality of life of men and women living with HIV/AIDS.

Table No. 2: **Quality of life** of Men and Women living with HIV/AIDS.

Variables	Gender	N	Mean	SD	t value	P value
Q1 Overall function	Men	60	14.55	2.919	-1.435	.154
	Women	60	15.32	2.931		
Q2 life satisfaction	Men	60	10.77	1.986	-1.641	.103
	Women	60	11.33	1.791		
Q3 health worries	Men	60	10.67	1.963	-.830	.408
	Women	60	10.93	1.528		
Q4 financial worries	Men	60	8.00	1.966	-1.716	.089

	Women	60	8.63	2.075		
Q5 medication worries	Men	60	11.62	2.263	-.471	.638
	Women	60	11.80	1.990		
Q6 HIV mastery	Men	60	4.92	1.357	-.325	.746
	Women	60	5.00	1.450		
Q7 Disclosure worries	Men	60	11.78	2.366	-.422	.674
	Women	60	11.95	1.943		
Q8 Provide trust	Men	60	7.07	1.483	-1.746	.083
	Women	60	7.57	1.651		
Q9 Sexual function	Men	60	4.92	.907	-.390	.697
	Women	60	4.98	.965		
Overall Quality of life	Men	60	84.30	13.448	-1.437	.153
	Women	60	87.58	11.512		

Total quality of life of men and women indicated no significant difference. It can be said that no differences were seen in total quality of life of men and women living with HIV/AIDS. The earlier assessed study on the QOL of PLWHA attending antiretroviral (ARV) clinics in Kogi State in north central Nigeria, revealed that women showed a higher QOL score compared to men in virtually all domains and a significantly higher level on the independence domain[10]. Similar results were reported with lower QOL for women QOL scores than for men despite having less advanced disease[11].

The above studies support the hypothesis but not our results. The formulated $\mathbf{H_2}$ that is, Women living with HIV/AIDS have significantly lower quality of life than men, was not accepted.

This may be due to globalization and exposure which reflects equal degree of stigma among men and women with HIV. It is clearly indicated in the present study which suggests that gendering of stigma and QOL is more complex and context specific.

CONCLUSIONS

1. There is no significant difference between men and women with level of stigma.

2. There is no significant difference between men and women with level of QOL.

REFERENCES

1. Henderson, C. and Thornicroft, G. (2009). Stigma and discrimination in mental illness: Time to Change. *Lancet.* 373 (9679): 1928 – 1930
2. Wachtel, T., Piette, J., Mor, V., Stein, M., Fleishman, J. and Carpenter, C. (1992). Quality of life in persons with human immunodeficiency virus infection: measurement by the Medical Outcomes Study instrument. *Annals of Internal Medicine.* 116: 166-167.
3. Beer, L., Fagan, J. L., Valverde, E., Bertolli J.(2009) Never in Care Project. AIDS Patient Care STDS. 23:785-792.
4. Holzemer, W. L., Human, S., Arudo, J. and Rosa, M. E. (2007). Exploring HIV stigma and quality of life for persons living with HIV infection. School of Nursing, University of California-San Francisco, CA, USA. *Journal of Association nurses care in AIDS CARE.* 58(6):541-51.
5. Thomas BE, Rehman F, Suryanarayanan D, Josephine K, Dilip M, Dorairaj VS, Swaminathan S (2005*).* How stigmatizing is stigma in the life of people living with HIV: a study on HIV positive individuals from Chennai, South India. *AIDS Care.* 17:795-801.
6. www.hawaii.edu/hivandaids/HIV%20Stigma%20Scale.pdf
7. Holmes WC, Shea JA (1998). A new HIV/AIDS-targeted quality of life (HAT-QoL) instrument: Development, reliability, and validity. *Medical Care*. 36(2):138–154.
8. Martinez, J., Harper , G., Carleton, R. A., Hosek, S., Bojan, K., Glum, G. and Ellen, J. (2012). The impact of stigma on medication adherence among HIV-positive adolescent and young adult females and the moderating effects of coping and satisfaction with health care*. AIDS Patient Care STDS*. 26: 108-115
9. Van Hollen, C. (2010). HIV/AIDS and the gendering of stigma in Tamil Nadu, South India. *Culture, Medicine and Psychiatry.* 34: 633-657.
10. Fatiregun, A. A., Mofolorunsho, K. C. and Osagbemi, K. G. (2009). Quality Of Life Of People Living with HIV/AIDS in Kogi State, Nigeria. *Benin Journal of Postgraduate Medicine.* 11: 21-27

11. Nirmal, B., Divya,K.R., Dorairaj, V.S. and Venkateswaran, K. (2008). Quality of life in HIV/AIDS patients: A cross sectional study in South India. *Indian journal of sexually transmitted diseases*. 29:15-17

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The Power of Intervention by the Local Government in Tourism

Alice Mathew

Department of Political Science

Mount Carmel College, Bangalore

Introduction

Most of the literature available on tourism says the urge in man to travel either for business or for leisure has become very strong[1]. Tourism has many direct and indirect benefits for the economy. Employment is generated not only in the service sectors directly linked to tourism but also in retail, construction, manufacturing and telecommunication[2]. Higher percentage of women and young people are employed by the small and medium sized enterprises that comprise much of the industry[3]. Technological advances are making travel easier than ever before and increasing number of people are travelling annually to consume more varied tourism 'products' from far-flung destinations.

In India the importance of tourism had been recognized even before the Second World War. The intervention of war, however, put a stop to the tourism promotion activities of the Government. The first conscious and organized efforts to promote tourism in India was made in the year 1945, when a committee was set up by the Government of India under the chairmanship of Sir John Sargent, the then Educational Advisor to the Government of India. The main objective of the committee was to encourage and

develop internal and external tourism by all possible means. The committee was of the opinion that successful steps in the promotion of tourism would result in a substantial addition, both direct and indirect to India's revenue.

When properly organized, every aspect of business could benefit greatly by influx of tourists. The committee provided the groundwork and the foundation for the establishment of tourist organizations in the country soon after independence. Since Independence, India has made major efforts to boost tourism, as seen in its various Five-Year plans[4].

Problems Linked to Promotion of Tourism

Though tourism appears to be a major contributor of growth, it does not mean that everything is fine with this industry. Like any other industry, tourism has its problems. Several forms of exploitation take place in the name of tourism. Inmany States, the Land Acquisition Act is used to appropriate land from the poor and marginalized farmers in the name of dubious "public Interest". Thus land is forcefully taken away and is handed over to hotel chains and other tourism service suppliers often at throwaway prices[5]. Shacks and small restaurants which provided a source of livelihood for local people are being taken away by big hotels. Both these instances show that the government carries forward its programme without consulting the people of the region.

The most affected section is the local community who are not consulted and is not a part of the development. The entire decision making process, from the formulation of the structure, functions and the utilization of human resources to the financial administration of tourism development, is

determined by the political parties at the centre, the bureaucracy and the private sector rather than by the local communities.

Intervention in Tourism Sector by the Local Government

Thus the question to be explored is whether there is possibility to intervene in the tourism sector. Explorations need to be on the possibilities of people's interventions and the systems by which the people express their voice. One such possibility would be to look into the Panchayati Raj system, with special reference to the 73rdand 74th Amendments. The paper will also try to see whether there are lacunae in the system and whether the given guidelines are capable of addressing the new economic challenges and therefore, the political challenges.

Since 1993, local government in India, both rural and urban, has become constitutionalized in the sense that it is enshrined in the constitution of India like the two upper levels of government, namely the Centre and the States. It makes India the fifth country to enshrine the local government in the Constitution after Germany, Japan, Brazil and Nigeria[6]. The Local Government has thus become subordinate to the Centre and the State, which exercise control and supervision over it.

The 73rd and 74th Amendment Act of Constitution has given Panchayats such powers and authority as to enable them to function as institutions of self-government. It is an act of Political and administrative decentralization, thus releasing the local population from control by politicians and bureaucracy. The amendment has made an attempt to make the local bodies more broad based to rescue them from possible domination by the socially and economically dominant feudal lords.

Reflective essay

The 73rd Amendment has brought revolutionary changes. It has granted Panchayats a constitutional status, thus treating it at par with the Centre and the State governments. The Act has given autonomy to the Panchayats to prepare plans. This is for their execution for economic development and social justice in relation to 29 subjects listed in the XI Schedule of the Constitution. It has also given the Panchayats the authority to levy, collect and appropriate taxes, duties, tolls and fees. The Act also allows the transfer of taxes, duties, tolls and fees collected by the States to Panchayats.

This Act extends Panchayats to the tribal areas of eight States, namely Andhra Pradesh, Bihar, Gujarat, Himachal Pradesh, Maharashtra, Madhya Pradesh, Orissa and Rajasthan. This came into force on 24th December, 1996. Except Rajasthan and Bihar, all States have passed laws to give effect to the provisions contained in the Act of 1996. Under the Act, Gram Sabha has been vested with powers for ownership of minor forest produce, approval of development plans, selection of beneficiaries under various programmes, consultation on land acquisition, manage minor water bodies, control mineral leases, regulate/prohibit sale of intoxicants, prevent alienation of land and restore unlawfully alienated land of STs, manage village markets, control institutions and functionaries in all social sectors.

Similar to the provision under the 73rd Amendment, provisions exist in the 74th Amendment Act, 1993 of the Constitution on "Muncipalities" applicable to urban areas. Provision in schedule XI A is very similar to the provision in schedule XI especially with regard to reservation of seats inFinance Commission and Election Commission.

Thus the 73rd and 74thAmendments have armed the Panchayats with institutional, financial and legislative powers. In that sense, these two Amendments have been the most revolutionary measures taken to empower Panchayats.

The tourism industry is very dependent on the Panchayats because they use the resources which fall within the Panchayats' territorial area. Hence it becomes obligatory on them to take permission and consent prior to making use of them. For example, if the tourism industry requires Panchayat land when it establishes a hotel in a village, it needs the Panchayat's permission. Similarly, planning and management of minor water bodies in scheduled area, water supply for industrial and commercial purposes, roads, culverts, bridges, ferries, waterways and other means of communications, rural electrification, including distribution of electricity , solid waste management, health and sanitation, including hospitals, primary health centres and dispensaries, are some of the rights and powers of the Panchayats. For making use of these resources it is compulsory for the tourism industry to take the permission of the Panchayats.

Panchayats revenue sources mainly comprise of house tax, property tax, vehicle tax, entertainment surcharge, and fee for licensing the industries including tourism industry. When other sources of revenue are limited they look for these sources as mandatory for developmental functions assigned to them. This has invariably forced the Panchayats to issue licences for some unwanted and hazardous industries to tide over the financial crisis in the absence of revenue support in the form of subsidies from the state exchequer and consolidated fund.

Suppression of Role ofPanchayat in Tourism Development

Purely for monetary benefits, Panchayats allow industries like tourism to come up in their region. While granting permission, the Panchayats too have certain expectations. The Panchayats expect the tourism industry to pay tax when they occupy their land. They further expect other socio-economic benefits as the industry displaces people and privatizes their major source of livelihood and other naturally acquired scenic beauty. The Panchayats also expect proper management of

land use in a way that it is not detrimental to the environment and preserves and conserves the natural resources and heritage. Since the hotel industry depends on the same source for water that the Panchayats depend on, the Panchayats expect beforehand to be informed about the source, and the volume of requirement, as they do not want to be deprived of the basic source and facilities, which belong to them. As far as forests and usage of mineral resources are concerned, the state accepts the rights for communities over minor forest produce and minor minerals. When opening the minor forests to the tourism industry, the locals expect to retain full ownership of the natural products such as bamboo, gum, honey, coir, fruits, and herbal medicines from the forest resources. But it is widely seen that the locals do not have access to the forests and its products once an industry is set up.

Though the above are the expectations of the Panchayats, it becomes the duty of the tourism industry to follow these guidelines when setting up a project. But it is widely seen that whenever tourism projects come up in an area, the locals are not involved or consulted, mainly on the pretext that they are not qualified enough and lack expertise and know-how. Some menial jobs are given to them and outsiders occupy all high profile prestigious and sophisticated jobs. In most cases it is seen that land is forcibly taken away by the States and given away to big hotel chains, e.g. Goa, where shacks were removed and big hotels were set up in their place.

Apart from the above expectations, the right to information makes it obligatory for any industry like tourism to inform beforehand to the Panchayat about any project, from its initial stage to its completion. The Panchayats have a right to know about the master plan, budget and plan outlay of a project. The Panchayats ought to know what role they are going to play from its planning stage to the implementation and monitoring. The Panchayats also expect economic benefit, employment opportunities and some vocational training and education for its people to get

familiarized with the latest technology and development. They expect the tourism sectorto keep in mind the uniqueness of the local tradition and culture.

Even though the tourism policy talks about encouraging people's participation and developing necessary synergies and co-ordination at Central, State and District levels in order to develop tourism, it has left no space for it. It is highly capital, technology and efficiency intensivefocusing on high spending tourists who want five-star accommodation. It talks about adopting new sophisticated technologies, talks about encouraging foreign investments to maintain high quality standards in services and encouraging big highways. Each of these in no way involves the local community. The policies of the government more or less cater to the expectations of the hotel industry. It is more in tune with the liberalization process. It favours easy access to multinational corporations thus further reducing the chances of the Panchayats to intervene in the tourism sector. It fails to address the issue of removing regional imbalances.

The international trade agreement, General Agreement on Tariffs and Trade (GATT), does not accommodate local aspirations and overrides the powers enjoyed by them. Under GATT, providers of travel and tour related services try to expand their business in destination countries and thus compete with local providers who are in no way able to put up a fight with the foreign providers. Technology transfer is expensive and involves crores of rupees, putting the developing countries at a disadvantage. Under the requirement of national treatment, domestic and foreign suppliers are placed equally and that puts the locals at a disadvantage. Subsidies and tax benefits, which are major incentives for development of domestic industries, will have to be shared with the foreign suppliers. In other words it takes away the right of selective promotion enjoyed by the domestic industries. It also promotes further concentration and integration. Highways and

oversized high-end airports may be far from the reach and needs of the local communities who may wish to participate in the benefits of tourism.

Thus the economic priorities and tourism policy of the government is more in consonance with the international agreements and in no way accommodates the local community. If the consensus is in favour of giving maximum benefits of development to the people and in favour of greater participation and involvement of the local people, it is time to take a hard look at our policy framework. The Planning Commission has acknowledged that after all these years of State programmes, the pauperization and disintegration of tribal communities continues. The State Acts should endow the Panchayats with all powers- legislative, executive and judiciary so as to enable them to function as units of self- government and decide their own destiny without any intervention from above. However in reality states adopt very sceptical attitude towards the Panchayats and they are seen as extended administrative structures rather than as units of self-government.

Most of the State Governments have not shown much vision in enacting new Panchayati Raj laws. Part of the fault lies in the system and part in the immediate social environment but mostly with the controlling state government. Inadequacy of funds for local bodies and creation of parallel structures to take over the mandatory powers of the Panchayats have been a chronic problem before all local government bodies. Though the States have accepted the 73rd and 74th Amendments in letter rather than in spirit, in many State Acts, civil servants are indirectly given powers over the elected body thus making the devolution of powers and functions to the Panchayats meaningless.

The bureaucracy and politicians still enjoy financial and economic power vis-à-vis the elected representatives at the Panchayat level. To maintain such a position, the argument they put

forward is that in most of the villages and districts, the feudal elements and land owning sections are still dominant and that their chances of misusing political and economic power are high. There is also the argument that the voices of not so qualified Scheduled Castes, Scheduled Tribes, women and other marginalized sections may not carry the same weight while deciding important matters even if they occupy important positions in the Panchayat Raj institutions. These are the flimsy grounds that bureaucrats use to wield power.

The above arguments only go to prove that there has been reluctance on part of the state level politicians to recognize the importance of local governance, their autonomy, their powers and their area of functioning. Ministers, MLA's and senior political leaders are more worried that the power they enjoyed so far will wane if Panchayats and Muncipalities become powerful.

This leads us to probe into the issue of federalism and look into the question of what makes the states behave in this manner. There is no doubt that the federal structure of the Constitution has miserably failed to distribute powers equitably to the states and the Panchayats. The Sarkaria Commission recommendations, which favour state autonomy, need to be thoroughly implemented and practised. When States enjoy autonomy, it will automatically lead to the devolution of power to the local governments.

This will embolden the Panchayats, as they know what is good for the development of their region. Decentralization should be practiced in true spirit. Apart from this, the right to information should be followed by every State to maintain transparency and prevent any kind of exploitation.

There are instances that have showed that in spite of limitations, Panchayats have demonstrated a crucial role in challenging the autocratic nature of the State and bureaucracy and have challenged the liberalization process. Often, when MNC's initiate a project, they show no concern for the

life, culture, environment and long term effect of industrial waste on natural resources such as water and soil.

Thapar-Dupont did not get permission from the Keri village Panchayat in Goa to start work on a hotel project and was issued a show cause notice. Though the company went on an appeal against the Panchayat's order, it had to submit to the Panchayat, as the Keri village Panchayat stood firm. If Panchayats have the power in deciding cases, the Panchayats can effectively protect their community resources.[6]

The Balco case and the Enron issue again go to prove that the Panchayats can assert their rights over domain of resources and services whenever their rights are taken away unconstitutionally. The power to sanction and issue licenses for all projects coming up in their jurisdiction should be vested with Panchayats. Monitoring of all projects and the power to terminate them for non-fulfillment of obligations should be handled directly by the communities concerned, perhaps in the form of prevailing self-government institutions like Panchayats. Experience shows that asking an administration that is cut off from the people to enforce regulations ensures nothing but graft, inefficiency and resounding failure. [7]

From experiences it is also seen that some Panchayats are proactively expanding the space even within the available spectrum and have been effectively addressing multi-faceted issues including livelihood, employment generation, and effective use of local resources and protecting the environmental resources.

The need of the hour is for bottom line planning to be done according to local specificities, effective and meaningful participation of locals in the decision making process, control over resources by local bodies for equitable and sustainable use of such resources, and

implementation for development programmes and monitoring the extent of implementation by them. In a nutshell, all powers and functions to implement and monitor the plans, including the executive, legislature and judicial spheres must lie with local bodies. Panchayats have scope to expand their domain of governance and effectively assert their rights in deciding their own development[8].

Whenever projects, like in tourism, come up in a local area, Panchayats have the potential to exercise their Constitutional powers to question the paradigm of development.

References

1) Rojek,C. and Urry, J. (2003). Touring Cultures: Transformation of travel and theory, Taylor and Francis Group, London, pp. 1-2.
2) Nickeon, D. (2007). Human Resource Management for Hospitality and tourism industries. Publ. Elsevier Linacre House, Jordan Hill, Oxford OX28DP, Uk, ed. 7.pp. 6.
3) Ibid pp. 6.
4) Mishra, M. and PrabhatKumar : Emergence of Tourism in the Sustainable growth of India: An Empirical Analysis, Abhinav, National Monthly Journal of Research in Commerce and Management. Journal of Research in Commerce and Management, 1-164.
5) "*Compilations on Tourism Policy- Principles and guidelines for sustainability: Kerala exploring Future Frontiers in Tourism Development",* Department of Tourism, Kerala, Park View, Thiruvanandapuram, Equations, Bangalore July 2000. pp. 87-88.
6) "*Du Pont: Spinning its wheels in India, "Multinational Monitor"*, March 1995, Publ: Essential Information. pp. 3-4

7) "Du Pont: Spinning its wheels in India," Multinational Monitor, March 1995, Publ: Essential Information. pp.3-4

8) "Compilations on Tourism Policy- Principles and guidelines for sustainability:Kerala exploring Future Frontiers in Tourism Development", Department of Tourism, Kerala, Park View, Thiruvanandapuram, Equations, Bangalore, July 2000. pp. 87-90

9) Bhatia,A.K.(1996). *Tourism Development: Principles and Practises*. Publ: Sterling Publishers Private Limited, New Delhi.

10) Sharma, B. D. (1995)*Whither Tribal Areas? Constitutional Amendments and Afte*r.Publ. SahayogPustakKutir.

11) BasuDas,D.(1998) *Introduction to the Constitution of India*.Publ.Prentice Hall of India Private Limited, New Delhi.

12) Sharma, B. D. (1995)*Globalisation: The Tribal Encounter.* Publ.Har-Anand Publications, New Delhi.

13) Seth,P. (2000) *Successful Tourism Management: Fundamentals of Tourism*.Publ.Sterling Publishers Private Limited, New Delhi.

14) Tourism Policy of India: An Explanatory Study, Equations, Bangalore, 1995

15) Mukarji,N.(1993,1,May). 'The Third Stratum", Economic and Political Weekly.Pp. 859-862

16) Singh, R.(1996).*Panchayati Raj Manual: A Socio- Historical-cum-Legal Perspective* Anmol Publications, New Delhi.pp. 81- 112

17) Edward, M.(2000).*Panchayati Raj Institutions and Role of NGOs*. Publ. Indian Social Institute, New Delhi.

18) Mathur, S. N.(1997).*Nyaya Panchayats as instruments of Justice*. Publ. Institute for Social Sciences, New Delhi. pp. 25-78.

19) Nickeon, D (2007). *Human Resourse Management for Hospitality and tourism industries*. Publ. Elsevier Linacre House, Jordan Hill, Oxford OX28DP, Uk, edpp. 2-7

20) Mishra, M. and Kumar,P. (2012) Emergence of Tourism in the Sustainable growth of India: An Empirical Analysis, Issue no. August 8, 2012, Abhinav, Journal of Research in Commerce and Management.161- 167.

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STONE TOOLS

Manisha A.R

Mount Carmel College

Stone tools were among the earliest objects discovered and studies by archaeologists

Timeline

2.5 million years ago	15000 years ago	11000 years ago
Paleolithic	Mesolithic	Neolithic
Lower Paleolithic age (Stone tool development began here)		Agricultural based life
Middle Paleolithic age		
Upper Paleolithic age		

Stone tools are made by taking a stone and knocking off flakes in order to model the stone into a tool.

STONE TOOLS

Thus tool can be of two kinds:

Flake tools: when the flakes that chipped off were used as tool

Core tools: when the core itself (from which the flakes are removed) is used as a tool.

Both these tools were common across ancient societies. However as time flake tools became more common and widely used as the technique for flaking improved over time.



Core tool





Flake tool

STONE TOOLS

Types of stone tools



A chopper: Since it appears to be lacking any sharp edges its function is to scrape or butcher meat or perhaps crack bones.



A hand axe made from chert (a)



Hand axe made from chert (b)



A closer view of the sharp edges. Their size and indentations indicate that they are both core tools.

Knives and Scrapers

These appear to be more specialized tools which are a lot more flat and smaller in size. Nearly all of them appear to be made from flakes rather than the core.





Resembles a blade, it is not very narrow and edges are not sharp

STONE TOOLS



Flake tools

Sources

- Beginner's Guide to Stone tools

http://weber.ucsd.edu/~dkjordan/arch/tools.html

- British Museum

http://www.britishmuseum.org

- Museum of Anthropology

http://anthromuseum.missouri.edu

- Essential humanities

http://www.essential-humanities.net

Images: Manisha A R ; Stone tools: History Department of Mount Carmel College ; Production source of stone tools: Gilund, Rajasthan

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THE NUTRITIONAL STATUS AND LIPID PROFILE OF STRESSED SOFTWARE PROFESSIONALS (20-30 YEARS)

NISHITA. R. SHETH AND MARY REGI

School of Continuing Education, Indira Gandhi National Open University, *IGNOU* New Delhi STUDY CENTRE AT DEPARTMENT OF NUTRITION AND DIETETICS, MOUNT CARMEL COLLEGE, BANGALORE

Study was carried out in a software company in Bangalore keeping in mind the long erratic working hours in the field coupled with work pressure and peer pressure. The effect of stress on the nutritional status and on the lipid profile of the individuals was determined**.** The subjects were selected using simple random sampling. They were required to fill in a stress questionnaire and a structured nutrition questionnaire. Based on their scores of the stress questionnaire, they were categorized under four stresses of categories-usually relaxed, average, serious and high level anxiety. Anthropometric details were collected on family and personal medical details and dietary patterns. For the sub-sample, 13 individuals from the high level anxiety group of stress were chosen and were put through a 24 hour dietary recall and lipid analysis**.** Fifty six percent of the subjects were found to be in the normal stress category. The lipid analysis carried out for the sub-sample showed that five individuals had very high total serum cholesterol. The overall intake of all the nutrients except for iron was found to be higher than the recommended daily allowance for the kind of lifestyle. The hypothesis "Stress affects nutritional status of individuals" was accepted as positive correlation was seen between the nutrient intake of the subsample and the level of stress. The hypothesis "Stress affects serum cholesterol total values" was accepted because the cholesterol levels (Of the respondents of the High Level Anxiety group) were high and this was in tune with other studies (As stress increases, cholesterol levels also increase).

Keywords: Stress, Cholesterol level, Lipid profile, Anthropometry

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Cyclic Redundancy Code

Sini Jacob and Vidya.M, Shalini B.C and Soumya

A cyclic redundancy check (CRC) is an error-detecting code commonly used in digital networks and storage devices to detect accidental changes to raw data. Blocks of data entering these systems get a short check value attached, based on the remainder of a polynomial division of their contents; on retrieval the calculation is repeated, and corrective action can be taken against presumed data corruption if the check values do not match.

This project deals with design and computation of cyclic redundancy code for Ethernet applications. Cyclic redundancy code ensures data integrity for high speed serial link such as fiber channel and hence these codes are used for high speed communication systems. Generally designing of CRC has two methods of implementation: Serial implementation takes more number of clock cycles to give the output and Parallel implementation consumes one clock cycle and increase the overall speed, therefore parallel implementation is preferred.

The CRC algorithm is designed using very high speed integrated circuit hardware description language (VHDL) code is written in Xilinx I.S.E 7.1i version,synthesized on Xilinx synthesistool(XST) and implemented on Spartan FPGA device.

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SPEAKER IDENTIFICATION AND VERIFICATION USING VECTOR QUANTIZATION AND MEL-FREQUENCY CEPSTRAL COEFFICIENTS

Shilna Sasheendran, Spoorthy M J, Shalini B C and Upendra Raju A

In the study of speaker recognition, Mel Frequency Cepstral Coefficient (MFCC) method is the best and most popular which is used to feature extraction. Further vector quantization technique is used to minimize the amount of data to be handled in recent years. In this project, the Speaker Recognition using Mel Frequency Cepstral coefficients and vector Quantization for the word “zero” is obtained. The experimental results are analyzed with the help of MATLAB and a Speaker Recognition System was hence built.

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DESIGN AND IMPLEMENTATION OF DIFFERENT HIGH SPEED MULTIPLIERS USING VHDL

Sandhya and Shilpashree.S, Upendra Raju A and Uma.V

A Multiplier is one of the key hardware blocks in most digital and high performance systems such as digital signal processing and microprocessors etc. Here area and speed are usually conflicting constraints so the improving speed results mostly in larger areas.so here we try to find out the best that trade off solution among both of them.

We first designed and implemented Ripple Carry Adder,Carry Look Ahead Adder,Carry Save Adders and their performance comparison is done to choose optimum adder for our multiplier. As a second step we have designed Binary multipler,Arraymultiplier,Wallace Tree multiplier followed by Booth multiplier(Radix-2 & Radix-4) and Pipelined multiplier and have compared the speed and power consumption in them.

While comparing adders we found that Ripple Caary Adder had a smaller area ahile having lesser speed in contrast Carry Look Ahead adder have high speed by reducing the amount of time .Also found that delay in Carry Save Adder is reduced hence they are faster.

Binary multiplier,Arraymultiplier,Wallace Tree multiplier with Carry Save Adder ,Booth multiplier(Radix-2 & Radix-4) and Pipelined multiplier are designed and their performance is analysed.

Different recoding schemes and their corresponding partial product schemes are designed and their performance comparision is done with respect to delay time ,area occupied and power consumed.

The outcome of the this work helps to work helps to make a proper choice of multiplier as well as adder to meet the requirements of design of a digital system,with the best possible trade off between speed and power.