

**CENTRAL UNIVERSITY OF RAJASTHAN  
SCHOOL OF HUMANITIES AND LANGUAGES  
DEPARTMENT OF LINGUISTICS  
Ph.D. COURSEWORK**

<b>COURSE STRUCTURE</b>			
	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>
<b>CORE COURSES</b>	8.0LIN01	RESEARCH METHODOLOGY IN LINGUISTICS	4
	8.0LINO3	PRACTICE BASED TEACHING IN LINGUISTICS	3
<b>(1 Course to be opted from the Electives)</b>			
<b>ELECTIVE</b>	8.0LIN20	ISSUES IN PHONETICS AND PHONOLOGY	4
	8.0LIN21	RESEARCH METHODS IN SYNTAX	
	8.0LIN22	SENTENCE PROCESSING	
	8.0LIN23	RESEARCH METHODS IN SIGN LANGUAGE STUDIES	
	8.0LIN24	TRENDS IN LANGUAGE DOCUMENTATION AND DESCRIPTION	
<b>Others</b>	MOOC	RESEARCH ETHICS	2
	EDU705	MOOC/ PEDAGOGY OF HIGHER EDUCATION	3
<b>Total: 16 Credits</b>			

# SYLLABUS

## 8.0LIN01 RESEARCH METHODOLOGY IN LINGUISTICS

### Core Course

#### Credits:4

The contact hours for the course shall not exceed 60. Adjustment of time to be made within the units as per requirement else 15hrs for each credit.

#### Objectives of the Course

The objective of the course is to enable students to

- construct research projects in linguistics by providing training in the state-of-the-art data collection, processing and analysing techniques
- correlate major research methods rather than focusing on narrow specializations fostering interdisciplinarity
- focus on shared methods such as sampling, experimental design, and constructing an argument

#### Learning outcomes

After completion of the course students will be able to:

- anticipate awareness of different ideological approaches to doing research which will have an impact on methods of research
- appraise insights into the issues which will make up the subject of research methods in linguistics
- devise broad research interest to specific research focus
- integrate 'doing research' with specific attention to language issues

#### Course Outline

##### Unit 1. Introduction

What is linguistics research?

Ethics in Linguistics Research

##### Unit 2. Research topics, questions and hypothesis

Choice and formulation of a research topic

Why do we need research questions?

Types of research questions

Research questions and linguistic data

Operationalizing research questions

Characteristics of a good hypothesis

### **Unit 3. Research Methods and Data Collection**

Quantitative, qualitative and mixed methods

Data Collection

Phonetic and phonological description

Grammatical description

Semantic and pragmatic description

### **Unit 4. Transcription Procedures and Documentation Styles**

Principles in transcription systems; category definition, accessibility, robustness, economy and adaptability

Documentation Styles; MLA, APA, Harvard

### **Unit 5. Research writing**

Abstract writing

Conference presentations

Research papers

Book chapters

Reviewing Papers/ Books

### **Unit 6. Bibliography**

Bibliography notes or secondary resources

Documentary notes or primary resources

Methodological notes or personal ideas and critics.

### **Essential Readings**

Litosseliti, L. (ed.) (2010). *Research Methods in Linguistics*. London: Continuum Books

Robert J . Podesva. Devyani Sharma.(2013) *Research Methods in Linguistics*. Cambridge University Press

### **Suggested Readings**

Creswell, J. W. (2003) *Research design: Qualitative, quantitative and mixed method*. 2nd Ed. California: Sage Publications, Inc.

Given, L. M. (ed.) (2008) *The Sage encyclopedia of qualitative research methods*. California: Sage Publications.

Kothari, C. R. (2004) *Research methodology: Methods & Techniques*. New Delhi: New Age International (P) Ltd.

Brian Paltridge, Aek Phakiti. (2015). *Research methods in applied Linguistics*,

## **8.0LIN02 ISSUES IN LANGUAGE AND LINGUISTICS**

### **Core Course**

#### **Credits:4**

The contact hours for the course shall not exceed 60. Adjustment of time to be made within the units as per requirement else 15hrs for each credit inclusive of sessional and tutorials.

#### **Course Objectives**

The course aims to transmit the ability to tackle the study of language and linguistic theories at various levels such as phonology, morphology, syntax and semantics by

- providing extensive knowledge of linguistic structure that exists in the literature to enable the student to describe a language
- Inductive and deductive approaches to language analysis
- Providing the relevant theoretical postulates governing the linguistic representation of human languages.
- Providing both the formal and functional attributes of human language.

#### **Learning Outcomes**

Upon completion of the course the students are expected to have a better understanding of language structure and would be able to

- Recognize the structural, formal and functional properties of language
- Analyze the main phonetic, phonological, morpho-syntactic and semantic structures of a language and to compare them to the cross-linguistically more frequent structures
- Understand the universal underpinnings of human language

#### **Course Outline**

##### **Unit 1: Linguistic Theories of Representation**

Structural perspective and Saussurean paradigm on language: language as an amalgamate of structures conditioned by phonology, morphology and syntax

Behavioral perspective and B.F. Skinner on Stimulus and Response Theory

Generative and Cognitive perspective on Language and Chomskyan Linguistic Theories

Functional perspective on Language and Dell Hymes: competence vs communicative competence

##### **Unit 2: Issues in Phonetics and Phonology**

Intelligibility and Contrast

Physiological base of Speech sounds: Air stream, Phonation, Oronasal

Voice qualities and Acoustic correlates: Spectrographic analysis in PRAAT

Formal vs Functional attributes of Speech sounds

Phonetics Phonology interface and Integrated Models

Phonological Theories of Representation: Linear vs Non-Linear paradigms

### **Unit 3: Issues in Morphology**

Basic concepts: word, lexeme and word form; morpheme, morph, allomorph; root, base and stem

Inflection and Derivation

Word formation processes in Languages with reference to Indian languages Compounding  
process in Indian languages

Basic issues in Distributed Morphology

### **Unit 4. Issues in Syntax and Semantics**

I- language and E- language

Tree structures and Phrase structure Grammar

Transformation Rules and Government and Binding Principles

Sense and Reference

Basic tenets of Formal Semantics

Whether grammar is independent of meaning or meaningful?

### **Unit 5. Issues in Sociolinguistics and sound change**

Language Variations

Language and Contemporary Theories on Gender studies

Language, Dialects and Socio-political aspirations

Language advantage and Language Attitude

Linguistic Landscape and Language Policies

## **Essential Reading**

Abbi, A. *Manual of Linguistic Fieldwork and Structures of Indian Languages*. Lincom Europa.

Frederick J. Newmeyer. 2005. *Possible and Probable Languages*. OUP

Frederick J. Newmeyer. 1998. *Language Form and Language Function*. MIT

Geoffrey Sampson. 2007. *The 'Language Instinct' Debate*, Continuum

Gussenhoven, Carlos and H Jacobs. 2011 (2nd Edition). *Understanding Phonology*. UK: OUP.

Ladefoged, Peter. 1993. *A Course in Phonetics* (3<sup>rd</sup> Edition), Harcourt Brace College Publishers.

Ladefoged, P. & Maddieson, I. 1996. *The Sounds of the World's Languages*. Wiley-Blackwell.

## **8.0LIN20 ISSUES IN PHONETICS AND PHONOLOGY**

### **Elective Course**

#### **Credits: 4**

The contact hours for the course shall not exceed 60. Adjustment of time to be made within the units as per requirement else 15hrs for each credit inclusive of sessional and tutorials.

#### **Course Objectives**

The course aims to transmit the ability to tackle the issues of Phonetics and Phonology by

- Providing extensive knowledge of Phonetics Science and Phonological theories that govern the representation of speech sounds in language
- Providing updated literature on the interface between Phonetics and Phonology
- Providing both the formal and functional perspectives to look at the alternations of speech sounds in language

#### **Learning Outcomes**

Upon completion of the course the students are expected to have a better understanding of language structure and would be able to

- Recognize the structural, formal and functional properties of speech sounds
- Analyze the main phonetic, phonological structures of a language and to compare them to the cross-linguistically more frequent structures
- Understand the universal underpinnings that govern the patterns of speech sounds
- Comprehend the issue of intelligibility, contrast both as segmental and suprasegmental levels

#### **Course Outline**

##### **Unit 1. Patterns of speech sounds**

Generative Rule based phonology; Abstract concrete hypothesis; Distinctive Feature and Redundancy rules; Nonlinear approach: Auto segmental and Metrical phonology; Lexical vs Post lexical stratum in phonology; Natural Phonology and phonetic base; Government and Dependency phonology and representation of speech sounds; Data analysis

##### **Unit 2. Optimality theory and representation of speech sounds**

Markedness theory in Phonology; Faithfulness and Markedness constraints; Richness of the base; Phonological processes and their representation in OT, Syllable and their representation in OT, Metrical structures and OT, Data analysis of Indian language in constraint-based approach

##### **Unit 3. Phonetics Phonology interfaces**

Strength theory in Phonology, Positional Faithfulness, Positional augmentation, P-map theory, Dispersion theory; Phonological theories and their acoustic correlates, Sociophonetics and Phonology

#### **Unit 4. Applied issues in Phonetics and Phonology**

Child Language phonology; Phonological acquisition; Clinical Phonetics and Phonology

Forensic Phonetics and Speaker Identification and other relevant areas

#### **Essential Readings**

Gussenhoven, Carlos and H Jacobs. 2011 (2nd Edition). *Understanding Phonology*. UK: OUP

Ladefoged, Peter Ladefoged, P. 1993. *A Course in Phonetics* (3<sup>rd</sup> Edition), Harcourt Brace College Publishers

#### **Suggested Readings**

Foley, J. 2008. *Foundation of Theoretical Phonology*. Cambridge: Cambridge University Press.

Ladefoged, P. & Maddieson, I. 1996. *The Sounds of the World's Languages*. Wiley-Blackwell

Goldsmith, J. (ed). 1999. *Phonological Theory: The Essential Readings*. Cambridge: Blackwell.

Goldsmith, J. (ed). 1995. *The Handbook of Phonological Theory*. Cambridge: Blackwell.

## **8.0LIN21 RESEARCH METHODS IN SYNTAX**

### **Elective Course**

**Credits: 4**

#### **Objective of the Course**

The objective of the course is to make the research scholar systematically resolve research problems by keeping in view the following factors.

- Methods for judging the grammaticality of language data.
- Reviewing some previous discoveries in order to chalk out a suitable syntactic analysis of the language studied
- An integrated approach of Inductivism and Deductivism

#### **Learning Objectives**

By the end of this course the students will be able to adopt the following skills-

- building and testing hypothesis in syntactic analysis
- judging the grammaticality of the language data
- adoption of typological analysis
- provide diagnostic tests as evidence in the analysis

#### **Course Outline**

##### **Unit1: Theoretical approaches to syntax**

Few of the following approaches depending upon the final goal of the scholar's thesis.

Comparative syntax

Principles and Parameters/Minimalism

Head-driven Phrase Structure Grammar

Lexical-functional Grammar

Role and Reference Grammar

Dependency Grammar

Morphosyntax

Construction Grammar

Categorial Grammar

##### **Unit2: Diagnostic tests as evidence**

Diagnostics in generative grammar

Some examples of linguistic diagnosis in generative grammar

### **Unit3: Judgements in syntactic analysis**

Problems while judging the grammaticality of data

Construction of experiments for better judgement of data

Methods for acceptability judgments

### **Unit4: Research methods in syntactic analysis**

Few of the following approaches depending upon the final goal of the scholar's thesis.

Typological analysis

Corpus linguistics

Research interviews

Participant observation

Corpus linguistics

Introspection

Experiments

Questionnaires

### **Essential Reading**

Podesva, R. J., & Sharma, D. (Eds.). (2014). *Research methods in linguistics*. Cambridge University Press.

Cheng, L. L. S., & Corver, N. (Eds.). (2013). *Diagnosing syntax* (Vol. 46). Oxford University Press.

### **Suggested Reading**

Carnie, A., Siddiqi, D., & Sato, Y. (Eds.). (2014). *The Routledge handbook of syntax*. Routledge.

Mac Whinney, B., & O'Grady, W. (Eds.). (2015). *The handbook of language emergence*. John Wiley & Sons.

Subbarao, K. V. and A. Saxena, 'Language Universals: Inductive or deductive?', in E. Bashir, M. Deshpande and P. E. Hook (eds.), *Select Papers from SALA 7* (Indiana: Indiana University Linguistic Club)

## **8.0LIN22 SENTENCE PROCESSING**

### **Elective Course**

#### **Credit:4**

The contact hours for the course shall not exceed 60. Adjustment of time to be made within the units as per requirement else 15hrs for each credit inclusive of sessional and tutorials.

#### **Objectives of the Course**

By the end of this course the students will be able to:

- Identify the key questions driving the field of Sentence Processing
- Understand the nuances of theoretical debates in the field
- Integrate insights from various subfields of Linguistics with those from Psycholinguistics to arrive at a fuller understanding of the cognitive mechanisms underlying sentence processing

#### **Learning Objectives**

Students would be able to:

- Critically analyze existing hypotheses regarding the parsing of linguistic structures
- Devise and test novel hypotheses about the parser and its interface with different modules of the grammar

#### **Course Outline**

##### **Unit 1. Sentence Production**

Encoding of the message

Planning linear constituents and hierarchical dependencies

##### **Unit 2. Sentence Comprehension**

Decoding of the message

Prediction and Integration

Incremental structure building

Role of Memory

##### **Unit 3. Intra-sentential and extra-sentential processing units**

Morphological Processing

Pragmatic Processing

## **Unit 4. Current Issues in Sentence Processing**

Syntactic Processing

Semantic Processing

Prosodic Processing

Grammar-Parser interaction

Impairment in sentence processing

### **Essential Readings**

Traxler, M., & Gernsbacher, M. A. (Eds.). (2011). *Handbook of psycholinguistics*. Elsevier.

Levelt, P., & Caramazza, A. (2007). *The Oxford handbook of psycholinguistics*. Oxford University Press, USA.

Spivey, M., Joanisse, M., & McRae, K. (Eds.). (2012). *The Cambridge handbook of psycholinguistics*. Cambridge University Press.

Fernández, E. M., Cairns, H. S., & Wiley, J. (Eds.). (2018). *The handbook of psycholinguistics*. John Wiley & Sons, Incorporated.

## **8.0LIN23 RESEARCH METHODS IN SIGN LANGUAGE STUDIES**

### **Elective Course**

**Credit:4**

#### **Objectives of the Course**

To enable students to:

- Know the ethical issues and extant research guidelines in the field of disability & rehabilitation.
- Understand the cultural, linguistic and social identity of the Deaf population
- Get an overview of Sign Language and Gesture studies
- Learn specific methodologies for collection and analysis of linguistic, psycholinguistic and neuropsychological data from Deaf population

#### **Learning Objectives**

By the end of this course the students will be able to:

- Explain key concepts, principles and ethical issues relating to disability, deafness and sign language
- Identify and apply appropriate methodologies of data collection from Deaf population.
- Formulate a research question and choose an appropriate research design for implementation.

#### **Course Outline**

##### **Unit 1. Ethical considerations in research with Persons with Disability**

Understanding Disability: Medical vs Social Model

Rights of Persons with Disabilities Act (RPwD) 2016

National Ethical Guidelines for Biomedical and Health-Related Research Involving Human Participants

##### **Unit 2. Research with Deaf Population**

Deafness as a Cultural Identity: Understanding the Deaf Community

Ethical Considerations

Understanding Sign Language and Gesture Studies

Good Practices & Knowledge Dissemination

##### **Unit 3. Collecting and Analyzing Sign Language Data**

Video Requirements and use of Annotation Software

Transcription and Notation Methods

Motion Capture, Movement Analysis Eye tracking and Reaction Times

#### **Unit 4. Collecting Linguistic Data on Sign Languages**

Sign Language Fieldwork

Studying the structure of signs

Documentary and corpus approach

Typological research in sign languages

Sociolinguistic Data collection

#### **Unit 5. Collecting Psycholinguistic and Cognitive Data on Sign Languages**

Research Methods in Psycholinguistic Investigations of Sign Language Processing

Methods in Bimodal Bilingualism Research: Experimental Studies

Studying Sign Language Acquisition

#### **Unit 6. Studying Sign Language Disorders: Collecting neuropsychological data**

Using and Developing Language and Cognitive Assessments with Deaf Signers

Overview of Functional Neuroimaging Techniques: FMRI, ERP, MEG and TMS for studying sign language processing

#### **Essential Reading**

Orfanidou, E., Woll, B., and Morgan, G. (2015). *Research methods in sign language studies: A Practical Guide*. Oxford: Wiley Blackwell.

#### **Suggested Reading**

Rights of Persons with Disabilities, Act (RPwD) 2016. Government of India

National Ethical Guidelines for Biomedical and Health Research Involving Human Participants. 2017. Indian Council of Medical Research.

Campbell, R., MacSweeney, M., and Waters, D. (2008). *Sign language and the brain: a review*. *Journal of Deaf Studies*. Educ. 13, 3–20.

Schembri, A., and Lucas, C. (2015). *Sociolinguistics and deaf communities*. Cambridge: Cambridge University Press.

Van Herreweghe, M., and Vermeerbergen, M. (2012). "Handling sign language data" in *Sign language. An international handbook*. eds. R. Pfau, M. Steinbach, and B. Woll (Berlin: Mouton de Gruyter), 1023–1045.

## **8.0LIN24 TRENDS IN LANGUAGE DOCUMENTATION AND DESCRIPTION**

### **Elective Course**

#### **Credits:4**

The contact hours for the course shall not exceed 60. Adjustment of time to be made within the units as per requirement else 15hrs for each credit inclusive of sessional and tutorials.

#### **Course Objectives**

The course aims at enabling students to:

- Devise on documentary and descriptive linguistics from fieldwork on a specific language to more collaborative and conservation approaches of lesser-known and less-described languages
- Facilitate discussion of theoretical, ideological, practical, and ethical factors in language documentation and description
- Assess issues and problems that often arise when working in this field

#### **Learning Objectives**

Upon completion of the course, the students will be able to:

- Formulate fieldwork, research, analysis, archiving and documentation of lesser-known and less-described languages using state-of the art speech and language technologies.
- Produce and publish monographs, grammars, grammatical sketches, dictionaries and lexicon, ethno-linguistic and theoretical descriptions, collection of oral and folk literature and scholarly books on endangered languages.

#### **Course Outline**

##### **Unit 1. Introduction to language documentation and description**

Difference between language documentation and language description

Components and skills required for documentation and description

Language documentation projects

Current and future concerns

Features of documentary linguistics

Language policy, planning and revitalisation

##### **Unit 2. Fieldwork preparation**

Methodology, participatory character, selection of language and area, informants and consultants

Bilingual and monolingual fieldwork

Preparing questionnaire, equipment handling, budgeting and luggage, Leipzig Glossing Rules

### **Unit 3. Data collection and analysis**

Elicitation and various methods, interview techniques with informants

Transcription of data, collection of word-list for making dictionary, narratives, folk songs, and others, glossing the data using Leipzig glossing rules

Collaboration, ethics and interdisciplinarity

### **Unit 4. Language description**

Demographic and ethnographic information

The name of the language, ethnology, demography, Genetic affiliation

Data analysis, morphology and syntax, semantics and social aspects

The sociolinguistic situation

Traditional morphological typology

Morphological processes

### **Unit 5. Data backup**

Making CDS, typing, digitizing data

### **Essential Reading**

Crowley, Terry & Nick Thieberger. 2007. *Field Linguistics: A Beginner's Guide*. Oxford: Oxford University Press.

Samarin, William J. 1967. *Field linguistics: A guide to linguistic field work*. New York: Holt, Rinehart & Winston.

### **Suggested Reading**

Abbi, Anvita. 2001. *A Manual of Linguistics Field Work and Indian Language Structures*.

Munich: Lincom Europa.

Austin, P.K. and Sallabank, J. eds. (2011) *Cambridge Handbook of Endangered Languages*. Cambridge: Cambridge University Press.

Chelliah, Shobhana L. and Willem J. de Reuse. 2011. Handbook of Descriptive Linguistic

Fieldwork. Heidelberg, London, New York. Springer.

Gippert, Jost, Nikolaus Himmelmann and Ulrike Mosel (eds) 2006. Essentials of Language Documentation. Berlin: Mouton. pp 67-86.

Grenoble, Lenore A., and Whaley, Lindsay J. (eds.) 1998. Endangered Languages: Language Loss and Community Response. Cambridge: Cambridge University Press.

Harrison, K. David. 2007. When Languages Die: The Extinction of the World's Languages and the Erosion of Human Knowledge. Oxford: Oxford University Press.

Himmelmann, Nikolaus P. 2006 Language documentation: What is it and what is it good for? In Gippert, Jost, Nikolaus P. Himmelmann and Ulrike Mosel (eds.) 2006. Essentials of language documentation (Trends in Linguistics. Studies and Monographs, 178.), 1-30. Berlin: Mouton de Gruyter.

Himmelmann, Nikolaus P. 2002. Documentary and descriptive linguistics (full version). In Osamu Sakiyama and Fubito Endo (eds.) Lectures on Endangered Languages: 5, 37-83. Kyoto: Endangered Languages of the Pacific Rim.

Nathan, David and Peter K. Austin. 2004. Reconceiving metadata: language documentation through thick and thin. In Peter K. Austin (ed.) Language Documentation and Description, Vol. 2, 179-187. London: School of Oriental and African Studies.

Nettle, Daniel and Suzanne Romaine 2000. Vanishing Voices. Oxford: OUP.

Thomason, Sarah G. 2015. Endangered Languages: An Introduction. Cambridge: Cambridge University Press

## 8.0LINO3 PRACTICE-BASED TEACHING IN LINGUISTICS

**Credits: 3** (About 60 hours of practical teaching sessions and additional preparatory work to support teaching)

### **Aim and Outline of the course:**

The course is designed for the research scholars in the continuation of the foundation course of Pedagogy for higher education. As per the expectation of National Education Policy 2020, researchers need to be professionally equipped along with conceptual knowledge and understanding of Pedagogy. Developing teaching skills during the PhD will be a good value addition to a scholar's profile and will help them develop essential pedagogical /teaching skills required for their professional life.

This course is a practice-based course where a scholar is expected to be formally involved in various aspects of delivering a course and will include formal teaching sessions under the guidance of a supervisor

**Learning Outcomes:** On completion of the course the participants will be able to:

- Prepare the Instructional plans for the given course
- Write Learning Outcomes for the planned learning event
- Design Learning Events as per the LO
- Deliver Lectures
- Formally speak in Public and make formal presentations
- Support the course instructors/teachers in various aspects of teaching, learning and assessment
- Give effective feedback and provide support to students

**Pre-requisites:** Successful completion of the course "Pedagogy for Higher Education"

### **Contents**

The course contents will depend on the teaching requirement of subject specific discipline. The participant expected to be involved in the whole cycle of delivery of a course for which the following is suggested.

- Developing Instructional Plans,
- Writing Learning Outcomes for each session
- Designing learning activities as per the Instructional Plan and LO
- Design Cooperative and Collaborative Activities for the students.
- Delivering Lectures and organizing Seminars
- Preparing Handouts/Learning Course Readers
- Moderating Panel Discussions, Facilitating Group Discussions
- Facilitating Practicals/Field Visits/Project work/Studio (as per the need)
- Assessment - developing rubrics, preparing question papers of different types, and assessing answer scripts with written feedback, preparing results etc (for one formative and one summative Assessment)
- Giving written and verbal feedback on presentations, assessment, reports etc (one- time only)
- Writing Project Review Report (2 Reports)
- Develop Open Educational Resources pool in the specific discipline

- Conduct Seminar/conference and group discussions for the students. (3 Seminars/conference and 2 group discussions)
- Writing and delivering formal public speeches like welcome notes, introducing speakers, vote of thanks etc. (2 in number from the mentioned activities)
- Mentoring and Counselling students (5 students only)

**Assessment:** This will be a non-graded course. The participant will be awarded 'S' for satisfactory performance and 'NS' for non-satisfactory performance on completion of around 60 hours of practical teaching which may be a mix of classroom lectures, formal seminars, facilitating laboratory/studio/field sessions.

**Note:**

1. The 60 hours of practical teaching and the work on associated activities should ideally be done in one semester. However, these may be spread over two semesters also.
2. The contents listed above are representative in nature and will be balanced by the supervisor in a manner that the scholar is able to accomplish the tasks without feeling overburdened. It is suggested that the department and guide/instructor may take 60% of those activities (specifically designing learning course/hangouts, Instructional plan and Assessment) and may decide about the remaining 40% of activities on their own. The teaching practice sessions may be spread over one or more courses.
3. The teaching practice should cover theoretical as well practical/studio classes. The allocation of the courses should be connected with the area of research being undertaken by the scholar and must be only a small part of a given course. It is not meant to replace the teaching load of the supervisor.