

CENTRAL UNIVERSITY OF PUNJAB, BATHINDA



Ph.D. Library and Information Sciences

Session - 2020

Library and Information Sciences

Programme Learning Outcomes

The programme focuses on Enhancing skills in advanced aspects of research methodology and application of web based technologies in the field of research and libraries.

- Analysing problems related to libraries and conducting research for their solutions.
- Developing scientific attitude in examining research problems at global level.

Course Structure of the Programme

Course Code	Course Title	Course Type	Credit Distribution			
			L	T	P	Total
LIS706	Research Methodology	Core Course	4	0	0	4
LIS707	ICT, Library Automation, Digital Library and Metric Studies in LIS (Practical)	Skill Based	0	0	4	2
LIS708	Research Competencies (Practical)	Skill Based	0	0	4	2
LIS710	Extension Project in LIS	Skill Based	0	0	8	4
LIS751	Research and Publication Ethics	Discipline	2	0	0	2
	Total		6	0	16	14

Course Title: RESEARCH METHODOLOGY
Course Code: LIS706

L	T	P	Credits
4	0	0	4

Learning Outcomes

After completion of the course the students will be able to

- Examine the different approaches to research and selecting an appropriate sampling design for a research study
- Documenting and disseminating research findings in Library and Information Science
- Apply the knowledge of intellectual property rights in the field of research

Course Content

Unit I

16 hours

1. Research approaches: Logical positivism, phenomenology, ethnography, and triangulation, quantitative, qualitative; types of research and their applications: according to purpose and method
2. Historical Research: Primary and secondary sources of information, external and internal criticism of the source
3. Descriptive Research: Assessment studies, evaluation studies, ex-post facto studies, replication and meta-analysis.
4. Experimental research: Types of experimental research designs: designing and developing appropriate experimental designs for research problems.

Unit II

12 hours

1. Process to select a problem and review of related literature
2. Sampling design: Selecting appropriate probability and non-probability sampling techniques for qualitative and quantitative research problems

Unit III

16 hours

1. Quantitative research methods and tools: Selection, types and application
2. Qualitative research methods and tools: Selection, types and application
3. Mixed Method: Meaning and characteristics, designs and their application

Unit IV

16 hours

1. Data analysis in quantitative & qualitative research: Content analysis, inductive, logical
2. Intellectual Property, intellectual property protection (IPP) and intellectual property rights (IPR), WTO (World Trade Organization), WIPO (World Intellectual Property Organization), GATT (General Agreement on Tariff and Trade), TRIPs (Trade Related Intellectual Property Rights), TRIMS

(Trade Related Investment Measures) and GATS (General Agreement on Trades in Services), Nuts and Bolts of Patenting, Technology Development/Transfer Commercialization Related Aspects, Ethics and Values in IP.

Suggested Readings

1. Best J.W. (1999). *Research in Education*. New Delhi: Prentice Hall of India Pvt. Ltd.
2. Bogdon, R., & Biklen, S. K. (2008). *Qualitative Research for Education: An Introduction to Theories and Practice*. New Delhi: PHI learning
3. Borg, W.R., & Gall, M.D. (1983). *Educational Research – An Introduction*. New York: Longman, Inc.
4. Chandra, S. S., & Sharma, R.K. (2010). *Research in education*. New Delhi: Atlantic Publishers and Distributers (P) LTD.
5. Christensen, L. (2007). *Experimental Methodology*. Boston: Allyn& Bacon.
6. Creswell, J. W. (2015). *Educational Research: Planning, Conducting and Evaluating Quantitative and qualitative Research*. Boston: Pearson Publications.
7. Curtis, W., Murphy, M., & Shields, S. (2013). *Research and Education*. New York & London: Routledge
8. EfratEfron, S., & Ravid, R. (2013). *Action Research in Education: A Practical Guide*, New York: Routledge
9. Egbert, J., & Sanden, S. (2013). *Foundations of Education Research: Understanding Theoretical Components*. New York: Routledge.
10. Fraenkel, J.R., & Wallen, N.E. (1996). *How to Design and Evaluate Research in Education*. New York: McGraw Hill.
11. Gordon, P. (1996). *A Guide to Educational Research*. New York: Routledge
12. Kaul, L. (1984). *Methodology of Educational Research*. New Delhi: Vikas Publications.
13. Kilkpatrick, D.L. (2005). *Evaluating training Programmes: The four Levels*. San Francisco: Brett-Kochler.
14. Kress, T. (2013). *Using Critical Research for Educational and Social Change*. New York & London: Routledge.
15. Lauren, B., Little, T. D., & Card, N. A. (2012). *Developmental Research Methods*. New York: The Guilford Press.
16. Martella, R. C., Nelson, J. R., Morgan, R. L., & Martella, N. E. (2013). *Understanding and Interpreting Educational Research*, New York: Routledge Guilford Press
17. Maykut, P., & Morehouse, R. (1994). *Beginning Qualitative Research- A Philosophic and Practical Guide*. London: The Falmer Press.
18. Miller, S. A. (2007). *Developmental Research Methods*. New Delhi: Sage Publications.

19. Opie, C. (2004). *Doing Educational Research: A Guide for First time researchers*. New Delhi: Vistar Publications.
20. Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*. C.A: Sage Publications.
21. Petscher, Y., Schatschneider, C., &Compton, D. L. (2013). *Applied Quantitative Analysis in Education and the Social Sciences*. New York & London: Routledge
22. Reason, P., & Bradbury, H. (Eds) (2006). *Handbook of action research: Concise paperback edition*. CA: Sage Publications.
23. Scott, D., & Usher, R. (1996). *Understanding Educational Research*. New York: Routledge.
24. Tolmie, A., McAteer, E., &Muijs, D. (2012). *Quantitative Methods in Educational and Social Research Using SPSS*. Maidenhead:Open University Press
25. Wellington, J. (2015). *Educational Research*. New Delhi: Bloomsbury Academic.
26. Weirsmas. W., & Stephen G. (2009). *Research methods in Education*. New York: Pearson Education

IQAC

Course Title: ICT, Library Automation, Digital Library and Metric Studies in LIS.

Course Code: LIS707

L	T	P	Credit
0	0	4	2

Learning Outcomes

After the Completion of course, the students will be able to:

- Develop skills for creating a fully-fledged library automation system.
- Design a digital repository for storing and preserving digital collections for future use.
- Explore the types of users, need for user studies and user education.
- Analyse various metric studies pertaining to LIS
- Evaluate the indicators used for assessing research impact.
- Create citation styles using open source reference management systems.

Unit - I: Computer Applications

16 hours

- Installation and Functions of Different Operating Systems: Windows & Linux.
- Applications of cloud based services: Google drive, one note and drop box.
- MS Office Applications: Word, Excel, PowerPoint and Access.

Unit – II: Library Automation and Digital Library

14 hours

- Installation and Creation of Databases: Import, Export, Hyperlinks and using XAMP (Apache, MySQL, PHP,)
- Installation and Working of Library automation software such as Koha and New Gen Lib.
- Installation and Working of Digital library software such as Dspace, Green Stone Digital library and e-prints.

Unit – III: Metric Studies in LIS

16 hours

- Collecting bibliographical data from citation and indexing databases (Web of Science and Scopus).
- Analyzing bibliographical data using software such as histcite, bibexcel etc
- Visualizing data using tools such as vos viewer, citespace, citeNet explorer etc.
- Calculation of Impact Factor for journals, h-index and g-index for authors and institutions.

Unit IV: Citation styles and Reference Management System

14 hours

- Creating Google Scholar Profile, ORCID ID, Research Gate and Microsoft Academic Search.

- Creating citation styles using Mendeley and zotero reference management system.
- Analyzing parametric and non-parametric data using SPSS.

Evaluation Criteria

Continuous Assessment: (50 Marks)

- Attendance: 10
- Practical Record: 25
- Mock Performance: 15

End Term Assessment: (50 Marks)

- Performance: 30
- Viva Voce: 20

Suggested Readings

1. George, D., & Mallery, P. (2016). *IBM SPSS statistics 23 step by step: A simple guide and reference*. Routledge.
2. Glänzel, W., Moed, H. F., Schmoch, U., & Thelwall, M. (Eds.). (2019). *Springer Handbook of Science and Technology Indicators*. Springer Nature.
3. Habraken, J. (2018). *Microsoft Office 2019 Inside Out*. Microsoft Press.
4. Lindsay, A. (2019). *Linux: 2019 NEW Easy User Manual to Learn the Linux Operating System and Linux Command Line*. Amazon Digital Services LLC - KDP
5. Meloni, J. C. (2008). *Sams teach yourself PHP, MySQL and Apache all in one*. Pearson Education India.
6. Mint, C. (2019). *Linux Beginners Guide: A Comprehensive and Updated Guide for Beginners to Learn Linux Operating System, Easy Installation and Configuration Including Tips and Essentials Principles*.
7. Mishra, V. (2016). *Basics of Library Automation, Koha Library Management Software and Data Migration: Challenges with Case Studies*. Ess Ess Publications.
8. Panek, W. (2016). *MCSA Microsoft Windows 10 Study Guide: Exam 70-697*. John Wiley & Sons.
9. Pears, R., & Shields, G. J. (2019). *Cite them right: the essential referencing guide*. Macmillan International Higher Education.
10. Pogue, D. (2019). *Windows 10 May 2019 Update: The Missing Manual: The Book That Should Have Been in the Box*. O'Reilly Media.
11. Poornima, G & Girish, R. (n.d). *Creating and Managing Institutional Repository Using DSpace: A Case Study Approach*. Educreation Publishing.

12. *Rajan, L. (2018). Google Cloud Platform Cookbook. Packt Publishing Limited.*
13. *Sharma, A. (2019). Koha for Beginners. Willford Press*
14. *Sirohi, S., & Gupta, A. (2010). Koha 3 Library Management System. Packt Publishing Ltd.*
15. *Witten, I. H., Bainbridge, D., & Nichols, D. M. (2009). How to build a digital library. Morgan Kaufmann.*
16. *Zhang, A., & Gourley, D. (2014). Creating digital collections: a practical guide. Elsevier.*

IQAC

Course Title: RESEARCH COMPETENCIES**Course Code: LIS708**

L	T	P	Credit
0	0	4	2

Learning outcomes:

After completion of the course the students will be able to

- Develop skill set for identifying research gaps and articulating research problems.
- Apply research methodologies based on need and circumstances.
- Synthesize information from diverse sources.

Course Content

- Identify research gaps on a selected research area
- Summarize the findings of different research studies
- Formulate research questions, objectives and hypothesis
- Select appropriate approach and design for different research topics
- Develop tools for research and standardise them
- Ascertain the methods involved in data collection
- Analyse quantitative and quantitative data using appropriate techniques
- Conduct action research

Evaluation Criteria

Continuous Assessment: (50 Marks)

- Attendance: 10
- Practical Record: 15
- Skill Assessment (Analysis of articles, abstract writing, preparing test items etc.):25

End Term Assessment: (50 Marks)

- Performance: 30
- Viva Voce: 20

Evaluation will be done by course coordinator and two members from the department, nominated by HOD

Suggested Readings

1. Anastasi, A. & Urbina, S. (2014). *Psychological Testing*. New Delhi: PHI learning Pvt. Ltd.
2. Gregory, R.J. (2014). *Psychological Testing: History, Principles and Applications*. New Delhi: Dorling Kindersley Pvt. Ltd.
3. Kline, P. (2015). *A Handbook of Test Construction: Introduction to Psychometric Design*. NY: Routledge.
4. Miller, Lovler., & McIntire. (2013). *Psychological Testing: A Practical Approach*. New Delhi: SAGE Publication India Pvt. Ltd.

5. Bel, J. (2004). *Doing Your Research Project*. Open University Press: Berkshire

Suggested Websites

http://library.victoria.ac.nz/ebooks/APA_APASStyleGuide.pdf

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Course Title: EXTENSION PROJECT IN LIS
Course Code: LIS710

L	T	P	Credit
0	0	8	4

The course aims at identifying local needs and issues involving research to solve problems for making a contribution to the local community.

Learning Outcomes

After completion of the course the students will be able to

- Establish a link between the community and profession
- Identify community needs, issues and aspirations
- Analyse and suggest solutions to problems of community
- Apply contribution of their professional learning to the society

Course Content

1. Identification of problem (within 4 weeks)
2. Submission of research proposal (5th -8th week)
3. Submission of research report (last week of semester)
4. Presentation of work
5. Submission of Paper for Publication

Evaluation Criteria

Content	Marks
Project proposal	20
Project work report	50
Submission of paper for publication	10
Viva Voce	20
Total	100

Course Title: RESEARCH AND PUBLICATION ETHICS
Course Code: LIS711

L	T	P	Credit
2	0	0	2

Learning Outcomes

After completion of the course the students will be able to

- Demonstrate Intellectual honesty and research integrity
- Judge publication ethics, authorship and contributor ship
- Identify thrust areas of global research and Open access publications and initiatives
- Analyse Research Metrics

Course content

Unit I Philosophy and Ethics

3 hours

- Introduction to Philosophy : definition, nature and scope, content, branches
- Ethics : definition, moral philosophy, nature of moral judgements and reactions

Unit II Scientific Conduct

5 hours

- Ethics with respect to science and research
- Intellectual honesty and research integrity
- Scientific misconducts : Falsification, Fabrication, and Plagiarism (FFP)
- Redundant publications : duplicate and overlapping publications, salami slicing
- Selective reporting and misrepresentation of data

Unit III: Publication ethics

7 hours

- Publication ethics : definition, introduction and importance
- Best practices/ standards setting initiatives and guidelines: COPE, WAME, etc.
- Conflicts of interest
- Publication misconduct : definition, concept, problems that lead to unethical behaviour and vice versa, types
- Violation of publication ethics, authorship and contributor ship
- Identification of publication misconduct, complaints and appeals
- Predatory publishers and journals

Unit IV Open Access Publishing

4 hours

- Open access publications and initiatives
- SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
- Software tool to identify predatory publication developed by SPPU

- Journal finder/journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

Unit V Publication Misconduct

4 hours

- Group Discussions: Subject specific ethical issues, FFP, authorship; conflicts of interest; complaints and appeals: examples and fraud from India and abroad
- Software tools: Use of plagiarism software like Turnitin Urkund and other open source software tools

Unit IV Databases and Research Metrics

7 hours

- Databases: Indexing databases; Citation database: Web of Science, Scopus etc.
- Research Metrics: Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score; Metrics : h-index, g-index, i10 index, almetrics

Suggested Readings

1. Best J.W. (1999). *Research in Education*. New Delhi: Prentice Hall of India Pvt. Ltd.
2. Bogdon, R., & Biklen, S. K. (2008). *Qualitative Research for Education: An Introduction to Theories and Practice*. New Delhi: PHI learning
3. Borg, W.R., & Gall, M.D. (1983). *Educational Research – An Introduction*. New York: Longman, Inc.
4. Chandra, S. S., & Sharma, R.K. (2010). *Research in education*. New Delhi: Atlantic Publishers and Distributers (P) LTD..
5. Creswell, J. W. (2015). *Educational Research: Planning, Conducting and Evaluating Quantitative and qualitative Research*. Boston: Pearson Publications.
6. Curtis, W., Murphy, M., & Shields, S. (2013). *Research and Education*. New York & London: Routledge
7. Gordon, P. (1996). *A Guide to Educational Research*. New York: Routledge
8. Kaul, L. (1984). *Methodology of Educational Research*. New Delhi: Vikas Publications.
9. Kilkpatrick, D.L. (2005). *Evaluating training Programmes: The four Levels*. San Francisco: Brett-Kochler.
10. Kress, T. (2013). *Using Critical Research for Educational and Social Change*. New York & London: Routledge.
11. Lauren, B., Little, T. D., & Card, N. A. (2012). *Developmental Research Methods*. New York: The Guilford Press.
12. Martella, R. C., Nelson, J. R., Morgan, R. L., & Martella, N. E. (2013). *Understanding*
13. Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*. C.A: Sage Publications.

14. Tolmie, A., McAteer, E., & Muijs, D. (2012). *Quantitative Methods in Educational and Social Research Using SPSS*. Maidenhead: Open University Press
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