APPENDIX 1
INFORMATION LITERACY COMPETENCY STANDARDS FOR HIGHER EDUCATION

Association of College and Research Libraries Information Literacy Competency Standards for Higher Education

Standard One
The information literate student determines the nature and extent of the information needed.

Performance Indicators:
1. The information literate student defines and articulates the need for information.
   Outcomes Include:
   a. Confers with instructors and participates in class discussions, peer, workgroups, and electronic discussions to identify a research topic, or other information need
   b. Develops a thesis statement and formulates questions based on the information need
   c. Explores general information sources to increase familiarity with the topic
   d. Defines or modifies the information need to achieve a manageable focus
   e. Identifies key concepts and terms that describe the information need
   f. Recognizes that existing information can be combined with original thought, experimentation, and/or analysis to produce new information

2. The information literate student identifies a variety of types and formats of potential sources for information.
   Outcomes Include:
   a. Knows how information is formally and informally produced, organized, and disseminated
   b. Recognizes that knowledge can be organized into disciplines that influence the way information is accessed
   c. Identifies the value and differences of potential resources in a variety of formats (e.g., multimedia, database, website, data set, audio/visual, book)
d. Identifies the purpose and audience of potential resources (e.g. popular vs. scholarly, current vs. historical)
e. Differentiates between primary and secondary sources, recognizing how their use and importance vary with each discipline
f. Realizes that information may need to be constructed with raw data from primary sources.

3. The information literate student considers the costs and benefits of acquiring the needed information.

Outcomes Include:

a. Determines the availability of needed information and makes decisions on broadening the information seeking process beyond local resources (e.g., interlibrary loan; using resources at other locations; obtaining images, videos, text, or sound)
b. Considers the feasibility of acquiring a new language or skill (e.g. foreign or discipline-based) in order to gather needed information and to understand its context
c. Defines a realistic overall plan and timeline to acquire the needed information

4. The information literate student reevaluates the nature and extent of the information need.

Outcomes Include:

a. Reviews the initial information need to clarify, revise, or refine the question
b. Describes criteria used to make information decisions and choices

Standard Two

The information literate student accesses needed information effectively and efficiently.

Performance Indicators:

1. The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.

Outcomes Include:

a. Identifies appropriate investigative methods (e.g., laboratory experiment, simulation, fieldwork)
b. Investigates benefits and applicability of various investigative methods
c. Investigates the scope, content, and organization of information retrieval systems
d. Selects efficient and effective approaches for accessing the information needed from the investigative method or information retrieval system

2. The information literate student constructs and implements effectively designed search strategies.

**Outcomes Include:**

a. Develops a research plan appropriate to the investigative method
b. Identifies keywords, synonyms and related terms for the information needed
c. Selects controlled vocabulary specific to the discipline or information retrieval source
d. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books)
e. Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameters
f. Implements the search using investigative protocols appropriate to the discipline

3. The information literate student retrieves information online or in person using a variety of methods.

**Outcomes Include:**

a. Uses various search systems to retrieve information in a variety of formats
b. Uses various classification schemes and other systems (e.g., call number systems or indexes) to locate information resources within the library or to identify specific sites for physical exploration
c. Uses specialized online or in person services available at the institution to retrieve information needed (e.g., interlibrary loan/document delivery, professional associations, institutional research offices, community resources, experts and practitioners)
d. Uses surveys, letters, interviews, and other forms of inquiry to retrieve primary information
4. The information literate student refines the search strategy if necessary.

**Outcomes Include:**

a. Assesses the quantity, quality, and relevance of the search results to determine whether alternative information retrieval systems or investigative methods should be utilized
b. Identifies gaps in the information retrieved and determines if the search strategy should be revised
c. Repeats the search using the revised strategy as necessary

5. The information literate student extracts, records, and manages the information and its sources.

**Outcomes Include:**

a. Selects among various technologies the most appropriate one for the task of extracting the needed information (e.g., copy/paste software functions, photocopier, scanner, audio/visual equipment, or exploratory instruments)
b. Creates a system for organizing the information
c. Differentiates between the types of sources cited and understands the elements and correct syntax of a citation for a wide range of resources
d. Records all pertinent citation information for future reference

5. Uses various technologies to manage the information selected and organized

**Standard Three**

The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

**Performance Indicators:**

1. The information literate student summarizes the main ideas to be extracted from the information gathered.

**Outcomes Include:**

a. Reads the text and selects main ideas
b. Restates textual concepts in his/her own words and selects data accurately
c. Identifies verbatim material that can be then appropriately quoted

2. The information literate student articulates and applies initial criteria for evaluating both the information and its sources.

Outcomes Include:
- a. Examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias
- b. Analyzes the structure and logic of supporting arguments or methods
- c. Recognizes prejudice, deception, or manipulation
- d. Recognizes the cultural, physical, or other context within which the information was created and understands the impact of context on interpreting the information

3. The information literate student synthesizes main ideas to construct new concepts.

Outcomes Include:
- a. Recognizes interrelationships among concepts and combines them into potentially useful primary statements with supporting evidence
- b. Extends initial synthesis, when possible, at a higher level of abstraction to construct new hypotheses that may require additional information
- c. Utilizes computer and other technologies (e.g. spreadsheets, databases, multimedia, and audio or visual equipment) for studying the interaction of ideas and other phenomena

4. The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.

Outcomes Include:
- a. Determines whether information satisfies the research or other information need
- b. Uses consciously selected criteria to determine whether the information contradicts or verifies information used from other sources
- c. Draws conclusions based upon information gathered
- d. Tests theories with discipline-appropriate techniques (e.g., simulators, experiments)
e. Determines probable accuracy by questioning the source of the data, the limitations of the information gathering tools or strategies, and the reasonableness of the conclusions.

f. Integrates new information with previous information or knowledge.

g. Selects information that provides evidence for the topic.

5. The information literate student determines whether the new knowledge has an impact on the individual’s value system and takes steps to reconcile differences.

Outcomes Include:

a. Investigates differing viewpoints encountered in the literature.

b. Determines whether to incorporate or reject viewpoints encountered.

6. The information literate student validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners.

Outcomes Include:

a. Participates in classroom and other discussions.

b. Participates in class-sponsored electronic communication forums designed to encourage discourse on the topic (e.g., email, bulletin boards, chat rooms).

c. Seeks expert opinion through a variety of mechanisms (e.g., interviews, email, listservs).

7. The information literate student determines whether the initial query should be revised.

Outcomes Include:

a. Determines if original information need has been satisfied or if additional information is needed.

b. Reviews search strategy and incorporates additional concepts as necessary.

c. Reviews information retrieval sources used and expands to include others as needed.
Standard Four
The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

Performance Indicators:

1. The information literate student applies new and prior information to the planning and creation of a particular product or performance.

   Outcomes Include:
   a. Organizes the content in a manner that supports the purposes and format of the product or performance (e.g. outlines, drafts, storyboards)
   b. Articulates knowledge and skills transferred from prior experiences to planning and creating the product or performance
   c. Integrates the new and prior information, including quotations and paraphrasings, in a manner that supports the purposes of the product or performance
   d. Manipulates digital text, images, and data, as needed, transferring them from their original locations and formats to a new context

2. The information literate student revises the development process for the product or performance.

   Outcomes Include:
   a. Maintains a journal or log of activities related to the information seeking, evaluating, and communicating process
   b. Reflects on past successes, failures, and alternative strategies

3. The information literate student communicates the product or performance effectively to others.

   Outcomes Include:
   a. Chooses a communication medium and format that best supports the purposes of the product or performance and the intended audience
b. Uses a range of information technology applications in creating the product or performance
c. Incorporates principles of design and communication
d. Communicates clearly and with a style that supports the purposes of the intended audience

**Standard Five**
The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

**Performance Indicators:**
1. The information literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology.

**Outcomes Include:**
a. Identifies and discusses issues related to privacy and security in both the print and electronic environments
b. Identifies and discusses issues related to free vs. fee-based access to information
c. Identifies and discusses issues related to censorship and freedom of speech
d. Demonstrates an understanding of intellectual property, copyright, and fair use of copyrighted material

2. The information literate student follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources.

**Outcomes Include:**
a. Participates in electronic discussions following accepted practices (e.g. "Netiquette")
b. Uses approved passwords and other forms of ID for access to information resources
c. Complies with institutional policies on access to information resources
d. Preserves the integrity of information resources, equipment, systems and facilities
e. Legally obtains, stores, and disseminates text, data, images, or sounds
f. Demonstrates an understanding of what constitutes plagiarism and does not represent work attributable to others as his/her own
g. Demonstrates an understanding of institutional policies related to human subjects research

3. The information literate student acknowledges the use of information sources in communicating the product or performance.

Outcomes Include:

a. Selects an appropriate documentation style and uses it consistently to cite sources
b. Posts permission granted notices, as needed, for copyrighted material

Standard 4 - "The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose." This standard has several performance indicators and performance outcomes, none of which are included in the questionnaire, as one expects that classroom faculty in courses requiring research papers/projects would be requiring and evaluating these.
APPENDIX 2
INFORMATION LITERACY QUESTIONNAIRE

Roll no ______

Instructions:
This questionnaire covers a variety of topics concerning how you look for information for research assignments or projects. The goal of this questionnaire is to help to assess information literacy skills of B Ed students so that tutorial can be developed which will match their needs.
Please read the items carefully.
Please tick only one best option.
Please don’t leave any question as it will not be counted data collection.
Please do not guess.

The following questions will help us to know more about experience doing research. Please tick your answers

1. Gender
   a. Male
   b. Female

2. Age
   a) 18-25
   b) 26-36
   c) 37-47
   d) Above 48

3. Last degree completed
   Bachelor’s Program______________
   Master’s Program______________
4) Have you ever had instruction in using library resources?
   Yes / No
   If yes, state the place
   a) In school
   b) In another college
   c) In this college
   d) Any other place please specify -----------------------------------

5. Do you use the library to locate resources such as books, dissertations, journal article videos etc.?
   a) Always
   b) Mostly
   c) Sometimes
   d) Rarely
   e) No

6. Overall, how would you rate your library research skills?
   a) Excellent
   b) Good
   c) Average
   d) Poor

7. Do you find exactly what you want for your Individual research project by using Web search engines, such as Google or Yahoo?
   a) Yes
   b) No

8. As a part of your curriculum were you asked to prepare a research assignment or research project during your undergraduate or post graduate program?
   a) Yes
   b) No
9. When doing research have you framed a research question which your research will answer?
   a) Yes
   b) No

10. You search library’s catalog to know
    a. information about books, videos, journal articles and other non-print items in the library.
    b. Information about newspapers in library
    c. information about the college’s courses.
    d. answers a. and b
    e. All of the above

11. You have framed a research question for your research. During your research you find that you are not getting enough data. Can your research question be revised?
    a) Yes
    b) No
    c) Don’t Know
    d) Any other please specify____________________

12. In which of the following situation will you search for information?
    a. discuss current issues
    b. plan a vacation
    c. write a report
    d. buying a house
    e. answers a., b, c and d.
13. You need to research an aspect of the topic “education in public schools.” Which one of the following would be an appropriate research question?
   a. Does bilingual education help children attending public schools?
   b. Should all school children receive mid day meals?
   c. Should states require standardized testing for religious schools?
   d. Do labor unions help teachers keep their jobs?
   e. Don’t Know

14. When starting an Individual research based project on a topic, what do you need to consider?
   a. Whether you need to use primary sources like original letters, manuscripts, interviews speeches etc.
   b. How much information you will need like number of books, journals, reports to be referred
   c. Whether there are any restrictions regarding the size of the sample to be used, standardized tool to be used.
   d. All of the above
   e. Don’t know

15. You found that the topic which you have selected for your Individual Research Project is very broad. How would you narrow your subject/topic to make it manageable?
   a. Ask a teacher to help narrow your topic.
   b. Use a computer database for journal articles and look for key words in the title.
   c. Read an encyclopaedic article and look for the subtopics.
   d. All of the above.
   e. Don’t Know
16. The first thing you will do when you start working on your Individual research Project?
   a) Start writing your paper immediately to make sure you find enough materials early on.
   b) Formulate your research question and start writing your essay
   c) Get more familiar with your topic by consulting various reference materials
   d) Try and find some good articles.
   e. Don’t Know

17. As you are not familiar with the topic, so you decide to read a brief history and summary about it. Which of the following sources will you use?
   a. a book on the topic
   b. a general encyclopedia
   c. an article on the topic
   d. a database
   e) Any other please specify _______________

18. For your Individual Research based project you are supposed to refer to articles written by exerts in the field or which are scholarly in nature. Which would be the right scholarly source to be referred to?
   a. Journal of Educational Research
   b. India Today
   c. Indian Express
   d. Films
   e) Any other please specify _______________

19. Which of the following helps identify a popular magazine
   a. Usually published quarterly (4 times a year)
   b. Articles are in-depth and often have a bibliography
   c. Articles are written for the general public
   d. Don’t know
   e. Any other please specify _______________
20. As you are searching for information on your topic you find that you are getting reference material or information on your topic. What will you do?
   a) Selecting appropriate topic keywords using synonyms if necessary.
   b) Taking notes from the article sources you consult
   c) Being aware of being “too specific” in your search strategy
   d) None of the above
   e) Don’t know

21. In the initial stages of your research, you find this paragraph:
   Many studies have shown that the more corporal punishment is used in someone's childhood, the greater the probability that the adult will be physically violent. Physical violence to children can become a way of life. Moreover, family violence cuts across all socio-economic groups.
   The above paragraph provides relevant information for which of the following topics?
   a. increase in adult violence
   b. physical punishment of children
   c. relationship between physical punishment of children and adult violence
   d. violence and class differences
   e. Any other please specify _________________

22. For your research your teacher has asked you to find all the document about “Usha Rao”. To check the availability of this you will search in catalogue under
   a. by title
   b. By publisher
   c. By Subject
   d. By Author
   e. Don’t Know
23. You need to borrow the above mentioned book which is available in the library. To find this book on the shelves in the library you need
a. ISBN number
b. Call number
c. Title to find it alphabetically
d. To browse the shelves until you find what you are looking for
e. Don’t Know

24. What is your BEST option if a book (NOT your text book) or journal article is not available in this library?
a. Order it from the author
b. Purchase it in the bookstore
c. Submit an Interlibrary Loan (ILL) request
d. Forget about getting it
e. Don’t know

25. When is the best time during research to record the citation details like author, title etc. for a source?
a) The first time you access a source you might want to use
b) After you have finished writing the section of the paper that uses information from a particular source
c) When your teacher asks for proof that you did not plagiarize the information in the paper.
d) When you are getting ready to print your final draft
e. Any other please specify____________________

26. You need to find information for the following assignment: “The effect of family relations on the academic results of primary school student?” Which combination of words will you use to search for information?
a. Family relations, academic results, primary school
b. Family relations, academic results,
c. effect, family relations, academic results
d. effect, family relations, academic results, primary school
e. Don’t Know
27. Which of the following is the best way of choosing a keywords/search term to carry out your search?
   a) Write out a few detailed sentences about your topic.
   b) Create a list of related keywords and phrases
   c) Discuss for list of synonyms for your keywords
   d) All of the above
   e. Don’t know

28. Select the set that best represents synonyms and related terms for the concept "college students."
   a. colleges, universities, affiliated colleges…
   b. Gen X, students, undergraduates…
   c. Graduate students, freshmen, sophomores...
   d. University, adult learners, educational attendees
   e. Don’t know

29. When searching in a database, the use of Boolean operators like AND, OR , NOT can be useful in narrowing and widening your search results?
   a. True
   b. False

30. While researching on “Learning Disability”, you find that it also sometimes called learning disorder and learning impairment. You decide to look for information on the subject in a research database and to save time you write a search statement that includes all three terms. Which of the following is the best example to use when you have fairly synonymous terms and it does not matter which of the term is found in the record?
   a) Learning disorder and Learning Disability and learning impairment
   b) Learning disorder or Learning Disability or learning impairment
   c) Learning disorder and Learning Disability or learning impairment
   d) None of the above
   e. Don’t Know
31. You are using a research database like ERIC that uses an asterisk (*) as its truncation symbol. When you type in learn* you would retrieve records that contained which of the following words?
   a. examine, peruse, learn, reading
   b. peruse, read, reader, learning
   c. learn, learner, learned, learning
   d. read, reader, reading, reapply
   e. Don’t Know

32. For your sociology assignment you need to find information about the legal status of learning disabilities in California. Which of the Subjects listed should you search to find related Information about the legal status of learning disabilities in California?
   a. Law – California
   b. California – Social Policy
   c. Learning Disabilities
   e. Don’t Know

33. You have to write a reference for the magazine article you have found from an online database. Which of the following includes the most complete list of citation details that are typically required for a citation for a magazine article from a database?
   a. author, title of article, magazine's title, date of publication, pages, name of the database.
   b. author, title of article, magazine's title, magazine publisher, date of publication, pages, name of the database, URL
   c. author, title of article, magazine’s title, date of publication, pages, name of database, URL
   d. author, title of article, magazine’s title, date of publication, pages, name of database, date of access, URL
   e. Don’t Know
34. When you are writing a research project and you read an article on your topic in which of the following instance would you write a reference in your paper?
   a) When you copy a whole paragraph
   b) When you quote one sentence from the article.
   c) When you write it over in your own words
   d. answers a., b, and c
   e. answers a and b

35. Which of the following usually requires a password because it does not allow free access for all Web users?
   a. library online catalog
   b. periodical databases, like UGC Infonet or EBSCOhost
   c. Yahoo! Web directories
   d. bookstores’ Web sites
   e. None of the above

36. You are at your home computer and have just connected to an online periodical database to find articles for an English assignment. The image of the screen below is what you see when you connect.
This database is new to you. You’ve done a search and got no results. What should you do?

a. quit and try another database
b. email the ERIC for assistance
c. click “Help”
d. click "Keyword"
e. Any other please specify ____________________

37. Read the following extract and select the quotation that would best explain what the NCFL does:

"Sometimes it takes a creative idea to give power to good intentions. We think the National Center for Family Literacy is a great idea, and that is why Toyota is proud to be one of its major supporters. NCFL is the leader in parent-child learning. It's a powerful way to develop learning skills in young children by helping disadvantaged parents complete their own education and learn important life skills at the same time. Toyota has provided support to more than 150 family literacy programs across America…” (From: U. S. News & World Report 10 Dec. 2001: 27.)

a. "NCFL is the leader in parent-child learning."

b. "It's a powerful way to develop learning skills in young children by helping disadvantaged parents complete their own education and learn important life skills at the same time."

c. "Sometimes it takes a creative idea to give power to good intentions."

d. "Toyota has provided support to more than 150 family literacy programs across America."

e. Any other please specify ____________________________
38. You are researching the topic "child abuse" for a paper and find these two quotations

Spank in anger? That's right. If you're going to spank a child's rear end, it is rightful to make perfectly clear you disapprove of the child's behavior. You are displeased, as in angry. Not in a rage, however. You are not in a rage because you've spanked as a first resort. You are just angry, and you are able to communicate that emotion clearly."(Rosemond, John K. "Should the Use of Corporal Punishment by Parents be Considered Child Abuse?"Debating Children's Lives.Ed. Mary Ann Mason and Eileen Gambril. Thousand Oaks, CA: Sage Publications, 1994. 210-214.)

"Ironically, if spanking is to be done at all, the "last resort" may be the worst time. The problem is that parents are usually very angry by that time and act impulsively. Because of the high level of anger, if the child rebels and calls the parent a name or kicks the parent, the episode can escalate into physical abuse. Indeed, most episodes of physical abuse started out as physical punishment and got out of hand..." (Strauss, Murray S. Ten Myths about Spanking Children. Durham, NC: University of New Hampshire Family Research Laboratory, 1992.).

What do these two quotations do?

a. They contradict each other.
b. They offer different explanations of the causes of child abuse.
c. They have conclusions based on different research.
d. They talk about two different topics.
e. Any other please specify ___________________

39. When evaluating sources of information, the date of the source:

a. is important depending on the topic
b. should never be more than ten years old
c. is only critical in medical research
d. usually not important if it is a reliable source
e. Don't Know
40. How will you know that the information which is available on a Web page is reliable?
   a. checking the Web page author’s qualifications
   b. researching other sources for the same information
   c. finding out which institution is hosting the Web page
   d. answers a. and c.
   e. answers a, b and c.

41. Why should you cite i.e. give references for the sources you used for a research project?
   a. Readers of your paper may want to find and read the sources you cite.
   b. Copyright law states that research papers must contain such a list.
   c. You could be accused of plagiarism if you don’t cite your sources properly.
   d. answers a., and c.
   e. answers a, b and C

42. Your professor indicates that you must use the proper citation style for your research paper to list the resources you have used. What is citation style?
   a) a list of books on specific topic
   b) a handout describing the steps in the research process
   c) Formatting rules for making a citation, a quote, a reference list
   d) Don’t know
   e.) None of the above

43. The main reason for citing your source is to give credit to those authors whose ideas you have used in your research?
   a) True
   b) False
44. The citation writing style used by education students is called
a) Whatever most of our courses use
b) Modern Language Association Style (MLA)
c) American Psychological Association (APA)
d) Whatever since it is not that important as long as you get your project handed on time.
e) Don’t Know

45. Which of the following statements is true?

a. In order to cite sources properly you should consult citation style manual.
b. Different disciplines, such as psychology or biology, have developed specific citation styles.
c. The MLA style of citations is used by Web search engines.
d. answers a. and b.
e. answers b and c.

46. While reading a book on learning disorders for a course it contained the footnote:


This citation is for

a) a book
b) a journal
c) Journal article
d) a website
e) Don’t Know
47. Using the work of another person without giving credit to that person is
   a. Citation
   b. Annotation
   c. Plagiarism
   d. Googling
   e. Don’t Know

48. You are planning an open house for your students’ parents. Browsing the Internet, you find the report Child Safety on the Internet, which is a US Department of Education publication. If you distribute 30 copies of the report to parents at the open house, which of the following copyright choices is the proper action?
   a) permission is not needed as the report is from a government agency
   b) permission is not needed as the report was found on the Internet
   c) permission is not needed as you are only distributing 30 copies
   d) permission to distribute 30 copies of the report must be acquired
   e. Don’t Know

49. You must create a radio advertisement for your job. You want to use a small part of a popular song from a CD for background music. What is required of you, if anything, before broadcasting this advertisement?
   a. Notify the songwriter that you will use part of his song.
   b. Find out who distributed the song and negotiate with them for the right to play part of this song.
   c. Nothing, you can use the song since you are only playing a small part of it.
   d. You can use the song since you paid for the CD it is published on.
   e. Don’t Know

50. When you utilize books or periodical articles for a paper, you should evaluate
   a. title and intended audience.
   b. title, date, and country of publication.
   c. relevance, currency, publisher, and author’s credentials.
   d. Title and publisher
   e. Don’t know
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<td>c</td>
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<tr>
<td>23</td>
<td>b</td>
<td>47</td>
<td>c</td>
</tr>
<tr>
<td>24</td>
<td>c</td>
<td>48</td>
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<td>25</td>
<td>a</td>
<td>49</td>
<td>b</td>
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<tr>
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<td></td>
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<tr>
<td>30</td>
<td>b</td>
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<tr>
<td>31</td>
<td>c</td>
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<td>32</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>d</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 3

LIST OF EXPERTS

1. Dr. Maroliya
   Co ordinator, NIC
   SHPT School of Library Science
   SNDT Women’s University
   Churchgate

2. Dr. Shefali Pandya
   Professor
   Dept. of Education
   University of Mumbai
   Kalina, Santacruz

3. Dr. Sybil Thomas
   Associate Professor
   Dept. of Education
   University of Mumbai
   Kalina, Santacruz

4. Mrs. Sampada Jadhav
   Assistant Professor
   Dept. of Library and Information Science
   University of Mumbai
   Kalina, Santacruz

5. Ms. Andrea Pinto
   Assistant Librarian
   J. N. Library
   University of Mumbai
   Kalina, Santacruz

6. Ms. Shilpa Waghchoure
   Librarian
   Gokhale College of Education, Training and Research
   Parel
APPENDIX 4
INFORMATION LITERACY FEEDBACK FORM

1. Please rate the usefulness of the content of each session

<table>
<thead>
<tr>
<th>Session</th>
<th>Useful</th>
<th>Neutral</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Success</td>
<td>Useful</td>
<td>Neutral</td>
<td>Not useful</td>
</tr>
<tr>
<td>Re –Searching</td>
<td>Useful</td>
<td>Neutral</td>
<td>Not Useful</td>
</tr>
<tr>
<td>Research Ethics</td>
<td>Useful</td>
<td>Neutral</td>
<td>Not Useful</td>
</tr>
</tbody>
</table>

Comments:

2. After completing these sessions I feel more confident in my ability to do research

   a) Strongly agree
   b) Agree
   c) Neither Agree nor disagree
   d) Disagree
   e) Strongly Disagree

Comments:

3. The practice and feedback exercises help to clarify the concepts

   a) Strongly agree
   b) Agree
   c) Neither Agree nor disagree
   d) Disagree
   e) Strongly Disagree

Comments:

4. The quiz questions were clear.

   a) Strongly agree
   b) Agree
   c) Neither Agree nor disagree
   d) Disagree
   e) Strongly Disagree

Comments:
5. The quiz reinforced the learning
   a) Strongly agree
   b) Agree
   c) Neither Agree nor disagree
   d) Disagree
   e) Strongly Disagree

Comments

6. Study material or handouts provided during the session were helpful?
   a) Strongly agree
   b) Agree
   c) Neither Agree nor disagree
   d) Disagree
   e) Strongly Disagree

Comments:

7. What part of the session was most helpful to you and Why?

8. What part of the session was least helpful to you? What would have made it more helpful?

9. Do you any other comments or suggestions for improvements to the content of this module?

10. What is your overall assessment of the sessions?
APPENDIX 5
FOCUS GROUP SCHEDULE

1. Do you think you have acquired enough skills which will help you in your individual research project?

2. What do you think about different methods used in session like quiz, worksheet and reflection exercises? Did it help you and how?

3. Which session was most helpful to you and why?

4. Which session was least helpful to you and why?

5. Any further comments and suggestion to improve the sessions
APPENDIX 6
NJIT ASSESSMENT SCALES: INFORMATION LITERACY

| NJIT Assessment Scales: Information Literacy | Reader’s Name: ______________________ |
| Course: ______________________ |
| Student’s Name: ______________________ |

Date: ______________________

The Middle States Commission on Higher Education defines information literacy as “an intellectual framework for identifying, finding, understanding, evaluating and using information. It includes determining the nature and extent of needed information; accessing information effectively and efficiently; evaluating critically information and its sources; incorporating selected information in the learner’s knowledge base and value system; using information effectively to accomplish a specific purpose; understanding the economic, legal and social issues surrounding the use of information and information technology; and observing laws, regulations, and institutional policies related to the access and use of information.” It is the presence and extent of such literacy that we are assessing as it exists within undergraduate courses offered by the Department of Humanities at NJIT.

1. Citation: This portfolio includes sources that are documented so that the original source can easily be found.

Discussion: All information needed to identify a source must be present. The audience-centered ability of students to present a source that may be retrieved without undue burden is more important than stylistic adherence to a particular citation system. The contents of the portfolio demonstrate that the student has cited sources so that the original source can be easily found.

<table>
<thead>
<tr>
<th>Very strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly</th>
</tr>
</thead>
</table>

382
2. Evidence of Independent Research: This portfolio includes evidence of research independent of sources indicated within the course syllabus.
Discussion: While it is important that students reference information from textbooks, readers, and bibliographies provided by the instructor, researched work demands that students have sought, evaluated, and used information beyond the syllabus. An authentically researched assignment demonstrates that the student has sought ideas from a variety of sources to become truly informed about the topic at hand. The contents of the portfolio demonstrate that the student has performed independent research.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

3. Appropriateness: The sources used in this portfolio are appropriate to the topic the student addressed.
Discussion: Academic integrity demands that authoritative sources must be used in researched work. Research that is appropriate to the topic at hand will be sensitive to issues such as validity, timeliness, and sufficiency. An authentically researched assignment will demonstrate a student’s ability to identify valid sources that have been reliably reviewed by those recognized as knowledgeable about the topic at hand, to select sources that offer time-appropriate views on that topic, and to ensure that the sources used are adequate to support the demands of the topic.

The contents of the portfolio demonstrate that the student has used appropriate sources.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>
4. Integration: The sources cited in this portfolio have informed the course work. Discussion: Authentically researched work will demonstrate that the student has incorporated information in order to deepen critical thought. Authentic integration will demonstrate that the student has used sources to interpret, deepen, and reflect on the topic at hand.

The contents of the portfolio demonstrate that the student has integrated sources.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

5. Overall Information Literacy Portfolio Score:

The contents of the portfolio demonstrate that the student has employed an information literacy framework.

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The materials in the portfolio demonstrate superior information literacy skills.</td>
<td>The materials in the portfolio demonstrate very good information literacy skills.</td>
<td>The materials in the portfolio demonstrate an acceptable level of information literacy skills.</td>
<td>The materials in the portfolio demonstrate below average information literacy skills.</td>
<td>The materials in the portfolio demonstrate information literacy skills at a level near failure.</td>
<td>The materials in the portfolio demonstrate information literacy skills at a level of failure.</td>
</tr>
</tbody>
</table>
APPENDIX 7
INSTRUCTIONAL DESIGN FOR THE SESSION ON RESEARCH SUCCESS

STEP 1: ANALYSIS

- **Need Analysis:**
  B Ed students as a part of their curriculum are required to submit Individual Research Project which involves integrating sources from the academic literature. For most of the B Ed students this is their first experience with academic research and writing. As soon as the research project is announced student become confused and anxious and are very uncertain and apprehensive. In order to complete their research project successfully, students need to identify the gaps as to what they know about the research topic and what they want to find out in the subject area. If the students are not defining their needs they will reinvent the wheel and miss relevant knowledge information and data that may inform them and aid in the completion of a project. If the students want to define their needs they should have in their mind structured and related knowledge of a subject or a general awareness of the subject they are doing research on. Hence the B Ed students’ needs to be instructed in defining the research problem and information needed so that they can have clear idea.

- **Learner Analysis:**
  This instruction is directed towards the students enrolled for teacher education programme. The average age of the students in Bachelor of Education program is 25, which means most are returning to higher education after completing their undergraduate studies. They bring with them wealth of life and work experience. Most of these students are independent learners and heavy users of internet resources for their research. Though they are comfortable with learning and using technology, they often lack skills that academia demands. Many working librarians have experienced and identify top three challenges faced by the students as conducting research, writing assignments based on research, knowing what resources and tools are available through the library.
• **Content Analysis:**
In order to determine research topic and information need student should define and articulate the need for information and identify different types and formats of potential sources of information.

• **Theory**
In order to identify research topic for doing individual research project it is necessary to understand the assignment. As the project is announced it is also accompanied with basic instruction. An instruction may have overview of some kind regarding the topic. Certain style and technical details are also provided. Once you interpret the assignment then you can choose a research topic. Selecting a topic is the most difficult part of doing research. Always start by choosing a topic that you like and one that is interesting and one you are curious about it. Once you finalize your topic, read about research topic in a specialized encyclopaedia, dictionary or handbook. These reference sources will help you to focus your topic. Once you have your topic write it out as short sentence or question and look at the different components that make up your statement. Start compiling a list of the keywords that you will use as you search for your topic. The way terms are used in some fields can be very different from standard everyday usage. Once you are through you need to conduct an information need analysis a process in which you decide how much information is needed and what sources might provide that information.

• **Practice**
  - Preparing timeline for the project
  - Identifying the general topic of interest
  - Identifying the sources for getting preliminary or background information about topic
  - Preparing concept map of the selected topic
  - Framing research question on the basis of the identified topic
  - Identifying the key concepts from the research question

• **Task Analysis:**
  • **Constraints**
    - Heterogeneous group,
    - Less Time
    - Large class (approx.. 100 students)
• **Delivery Options**
  - PowerPoint Presentation
  - Activities

• **Objectives/Learning Outcomes**
  - **Learners will be able to:**
    - identify the topic for the purpose of research
    - collect information related to the research from different sources
    - focus the research problem based on available information
    - state the research topic in the form of research question.
    - identify the key concepts and terms that describe the information need.
    - identify different types, formats and uses of information sources.

2. **Design**

_Keeping in mind the previous knowledge of the audience, the time constraint and the content involved in the analysis of the survey data, it was decided to select the following data analysis techniques._

**Planning Instruction:** Instruction was designed to facilitate

- defining research problem and identifying the nature and extent of information needed.

Instructional strategy for all the above would include lecture- discussion, group work and presentations.

**Identifying resources:** Material resources included Computer based presentations, Questions for reflection and quiz.

**Planning Evaluation:**

Evaluation of participants’ knowledge about the information literacy skills was done by administering pre-test on information literacy skills. At the end of the session a quiz and reflection exercises would be given to the students, the purpose of these was to encourage students to reflect on the various activities carried out in each session as well as to provide feedback on the overall course.

A feedback schedule would be used to evaluate the effectiveness of the module.
3. Development Phase:

Development of content:

Every student will be asked to fill the pre-test that will help to understand their information literacy skills level. PowerPoint presentations as support material will be developed. Handouts will be prepared for the session on different resources and information included in each resource.

Development of assignments:

There will be no formal assignments that students will be asked to fill, however there would be worksheets which will be given to the student and the same will be discussed. Worksheet and quiz will be developed on different aspects of the information literacy skills covered in the lecture.

4. Implementation:

The seminar-workshop will be implemented in December 2012 in All India Khilafat College of Education.

5. Evaluation:

The participants will work in individually as well as in groups and their worksheets will be analysed. As well student will be given quiz and reflection exercises.
APPENDIX 8
WORKSHEET - SESSION 1

Roll no: __________

1. Prepare a timeline for your project.

2. What is your general topic?

3. Why you are interested in this topic?

4. Write down the titles of all sources you use to gather preliminary or background information on your topic. Give a brief summary of what each contributes to your project.

5. Prepare a concept map of your topic for finding focus.
6. I have identified the following research question as a specific focus for my paper

7. What are the key terms or concepts in your research question or topic statement? (there should be at least two)

8. Write at least 3 terms related to your first key concept, following the guidelines for broader, related and narrower.

9. Write at least 3 terms related to your second key concept, following the guidelines for broader, related, and narrower.

10. Write at least 3 terms related to your third key concept, following the guidelines for broader, related, and narrower.

11. Identify types of resources you would need to answer your question. List up to five resource types that would help you answer your question.
# APPENDIX 9

## REFERENCE SOURCES

<table>
<thead>
<tr>
<th>REFERENCE SOURCE</th>
<th>WHAT IT'S USED FOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encyclopaedia</td>
<td>Give basic information on many different subjects. Encyclopaedias go into more depth than almanacs, but don't provide enough information to stand alone as the only source for a research project, for example. An encyclopaedia is a good place to begin one’s information search.</td>
</tr>
<tr>
<td>Almanac</td>
<td>A book that provides factual information about many different things, such as famous people, organizations, current and historical events, countries, governments, and statistical trends. This is a good source of information if you just want a few specific facts, but don’t need to go into a lot of depth.</td>
</tr>
<tr>
<td>Atlas</td>
<td>A collection of maps. Of course, because there are so many different kinds of maps, atlases are not all alike. Some maps tell you what roads you can use. Some maps tell you where you’ll find mountains, valleys, lakes, rivers, etc. Some atlases include maps of the entire world, while some might be for just a country or even just a state.</td>
</tr>
<tr>
<td>Dictionary</td>
<td>Tells you just about everything you need to know about words. In a dictionary you can discover not just how to spell a word or what it means, but, among other things, what part of speech it is, what language it originally came from, how to pronounce it correctly, and other forms of the word that you are likely to see.</td>
</tr>
<tr>
<td>Yearbook</td>
<td>Offers facts and statistics for a single year. If you know the year that an event happened, you could look it up in a yearbook and discover more about it.</td>
</tr>
<tr>
<td>Bibliography</td>
<td>A list of books or articles on a specific subject, period of time, or author. Use a bibliography to find out what sources might be helpful in researching a specific topic. From there, you can search out the specific works and use</td>
</tr>
<tr>
<td><strong>Biography</strong></td>
<td>A written work that tells the story of a person’s life. Often biographies will be stand-alone books, but sometimes biographies come in the form of biographical dictionaries, or collections in which each chapter tells about the accomplishments of a different individual.</td>
</tr>
<tr>
<td><strong>Directories</strong></td>
<td>It contains contact information for persons, organizations or companies. They may also contain descriptions of those entities.</td>
</tr>
<tr>
<td><strong>Manuals</strong></td>
<td>It contains technical, how-to information on everything from operating a device to performing a sophisticated task, such as repairing a car.</td>
</tr>
<tr>
<td><strong>Handbooks and Guides</strong></td>
<td>It contains detailed, advanced information about a particular subject area.</td>
</tr>
</tbody>
</table>
APPENDIX 10
INFORMATION LITERACY QUIZ ON THE SESSION 1

Roll no:

1. Your research topic should be
   a) be as broad as possible so that you have plenty to write about.
   b) be as narrow as possible so that your reader is not overwhelmed with details.
   c) be stated clearly enough that you can use it as a guide to selecting or rejecting possible research sources.

2. Which is the best 1st strategy when you find too much information?
   a) Broaden your question
   b) Narrow your question
   c) Change your topic

3. How has the volume of heroin production changed over the past 10 years?
   a) This question is a good research question.
   b) This question is too narrow
   c) This question cannot be answered

4. You have to write a 10 page research paper and the topic you want to explore is childhood obesity. Why might you want to start with a subject encyclopaedia?
   a) To put off doing the real research
   b) To get an overview of your topic
   c) To read a primary resource.

5. Identify the keywords in the following assignment question.
   “Describe the effects of a thinning ozone layer on the environment”.
   a) Effects, environment
   b) Environment, ozone layer
   c) Effects, thinning

6. You should type your full topic sentence or question in to the search box to find the most relevant results.
   a) True
   b) False
7. Which of the following is the primary source?
   a) Poems about Abraham Lincoln from the 1870s-1890s
   b) A biography of Abraham Lincoln
   c) “Abraham Lincoln: idealistic liberator or cynical tactician?” in Journal of Civil War studies
   d) Abraham Lincoln’s diary

8. What does peer-reviewed mean?
   a) The author asked colleagues to help edit the article before submitting it to a journal
   b) The article has been rated good or excellent in reviews
   c) The journal publisher had a group of anonymous experts go over the article to spot errors and suggest improvements.

9. Which of the following is a characteristic of a scholarly resource?
   a) Source contains a lot of colour pictures and advertisements.
   b) Articles are relatively short and addressed to a general audience.
   c) Articles contain technical jargon or terminology and are addressed to an audience in a specific field of study.

10. Which of the following statement is false?
    a) Scope (how broad or narrow is the topic?) is important to consider when developing a topic.
    b) It is best to formulate your thesis statement before you begin doing any research.
    c) As you find sources during your research it is a good idea to be flexible about your topic and not be afraid to adapt.
APPENDIX 11
REFLECTION EXERCISE: SESSION 1

a. Give a brief explanation of what you did in today’s session.

b. Which new skills did you learn in this session?

c. Were you able to apply the skills you learnt in your practical session? Provide your answers with a brief explanation on how the skills learnt helped you in defining your research problem.

d. If you were not able to apply the skills to your work today, what could be the reasons? Please explain briefly.
APPENDIX 12
INSTRUCTIONAL DESIGN FOR THE SESSION ON RE-SEARCHING

STEP 1: ANALYSIS

• Need Analysis:
With the information explosion, information nowadays is generated in different forms. As a result there is so much information of doubtful quality, so accessible through so many different forms that even pitfalls for students have multiplied geometrically. It cannot be assumed that because today’s students have grown up in a digital age they are competent information seekers and users. In a recent, extensive study of the information seeking behavior of young people born after 1993, the University College London found several consistent themes: young people spend little time evaluating information, have poor understanding of their information needs, and find it difficult to develop effective search strategies. Hence the B Ed students’ needs to be instructed to develop awareness of different resources available and the tools available for accessing those resources and developing search strategies and evaluating the information available through various medium.

• Learner Analysis:
This instruction is directed towards the students enrolled for teacher education programme. The average age of the students in Bachelor of Education program is 25, which means most are returning to higher education after completing their undergraduate studies. They bring with them wealth of life and work experience. Most of these students are independent learners and heavy users of internet resources for their research. Though they are comfortable with learning and using technology, they often lack skills that academia demands. Many working librarians have experienced and identify top three challenges faced by the students as conducting research, writing assignments based on research, knowing what resources and tools are available through the library.

• Content Analysis:
  • Theory
Once the students have defined their research topic they need to find resources relevant to their research. For searching information they should have knowledge about the different tools which will help them to find resources for their research. These search tools will vary in their complexity from simple catalogues to well...
defined databases and search engines. In order to use these tools efficiently it is necessary to frame proper search strategy as well knowledge about working and use of these tools.

- **Practice**
  - Identifying the resources for research project and tools which will used to find the resources
  - Preparing the search strategy by using Boolean operators to search the information
  - Writing the citations for the sources which are retrieved and which are relevant for the research project.
  - Evaluating the websites based on the evaluation criteria discussed in the class.

- **Task Analysis:**
  - *Constraints*
    - Heterogeneous group,
    - Less Time
    - Large class (approx. 100 students)
  - *Delivery Options*
    - PowerPoint Presentation
    - Activities
  - **Objectives/Learning Outcomes**
    - **Learners will be able to:**
      - Utilize the library catalog for identifying different resources available in the library.
      - use the table of contents and indexes to locate the information within the sources
      - use the periodical indexes to locate the information in the periodicals
      - prepare search strategy using Boolean operators in order to retrieve the information.
      - use different access points of the library catalog.
      - use the OPAC
use the databases general and subject specific to identify the periodical articles for research
utilize the search directories and search engines to retrieve information related to research.
identify the citation and to locate the relevant information sources.
evaluate the information found through websites and online resources.

2. Design
Keeping in mind the previous knowledge of the audience, the time constraint and the content involved in the analysis of the survey data, it was decided to select the following data analysis techniques.

Planning Instruction: Instruction was designed to facilitate access to needed information effectively and efficiently.
Instructional strategy for all the above would include lecture-discussion, group work and presentations.

Identifying resources: Material resources included Computer based presentations, Questions for reflection and quiz.

Planning Evaluation:
Evaluation of participants’ knowledge about the information literacy skills was done by administering pre-test on information literacy skills. At the end of the session a quiz and reflection exercises would be given to the students, the purpose of these was to encourage students to reflect on the various activities carried out in each session as well as to provide feedback on the overall course. A feedback schedule would be used to evaluate the effectiveness of the module.

3. Development Phase:

Development of content:
Every student will be asked to fill the pre-test that will help to understand their information literacy skills level. PowerPoint presentations as support material will be developed. Hand-outs will be prepared for the session on different resources and information included in each resource.
Development of assignments:

There will be no formal assignments that students will be asked to fill, however there would be worksheets which will be given to the student and the same will be discussed.

4. Implementation:

The seminar-workshop will be implemented in December 2012 at All India Khilafat College of Education, Byculla.

5. Evaluation:

The participants will work in individually as well as in groups and their worksheets will be analysed, As well student will be given quiz and reflection exercises.
APPENDIX 13
WORKSHEET SESSION 2

Roll no ______

1. Identify the resources which you are going to use for your research paper and identify the tools you will use to search the same?

<table>
<thead>
<tr>
<th>Sources</th>
<th>Search tools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

2. Frame the search strategy by combining the keywords which you had identified in the session 1 e.g. bullying (and/or/not) teenager

3. Write the details of the sources which were retrieved by you using the search tools and search strategy and which you are going to use in your paper for e.g. author, title, web address etc.

4. Evaluate one websites with .com domain using the criteria studied in the session.
APPENDIX 14
EVALUATING INFORMATION – APPLYING THE CRAAP TEST
Meriam Library, California State University, Chicago

Currency: *The timeliness of the information.*
- When was the information published or posted?
- Has the information been revised or updated?
- Does your topic require current information, or will older sources work as well?
- Are the links functional?

Relevance: *The importance of the information for your needs.*
- Does the information relate to your topic or answer your question?
- Who is the intended audience?
- Is the information at an appropriate level (i.e. not too elementary or advanced for your needs)?
- Have you looked at a variety of sources before determining this is one you will use?
- Would you be comfortable citing this source in your research paper?

Authority: *The source of the information.*
- Who is the author/publisher/source/sponsor?
- What are the author's credentials or organizational affiliations?
- Is the author qualified to write on the topic?
- Is there contact information, such as a publisher or email address?
- Does the URL reveal anything about the author or source?

Accuracy: *The reliability, truthfulness and correctness of the content.*
- Where does the information come from?
- Is the information supported by evidence?
- Has the information been reviewed or refereed?
- Can you verify any of the information in another source or from personal knowledge?
• Does the language or tone seem unbiased and free of emotion?
• Are there spelling, grammar or typographical errors?

**Purpose: The reason the information exists.**

• What is the purpose of the information? Is it to inform, teach, sell, entertain or persuade?
• Do the authors/sponsors make their intentions or purpose clear?
• Is the information fact, opinion or propaganda?
• Does the point of view appear objective and impartial?
• Are there political, ideological, cultural, religious, institutional or personal biases?
APPENDIX 15
INFORMATION LITERACY QUIZ ON THE SESSION 2

Roll no:___________

1. Which of the following tools could you use specifically for locating articles in scholarly journals?
   a) Book Catalog
   b) Database
   c) Search engines

2. When you want to search for an item by Author, most library catalogues require that you enter the author’s last name first.
   a) True
   b) False

3. Google provides access to everything on the web.
   a) True
   b) False

4. What are Boolean operators (or connectors)?
   a) Connectors are used to build databases
   b) Word placed between keyword search terms to narrow or expand a search
   c) Mark up languages used in developing web based databases

5. In an online database, which of the following searches would retrieve the most results?
   a) Birth order or depression
   b) Birth order and depression
   c) Birth order not depression
6. Which three things should you consider when evaluating a website?
   a) Navigation, structure and format
   b) Authority, purpose and currency
   c) Layout, Graphics and Publisher

7. You are researching new treatments for diabetes in children, which of the following evaluation criteria would be most important.
   a) The format of the information source
   b) The length of the information source
   c) The currency of the information source

8. Which one of these search types looks for terms anywhere in the record of a book or article?
   a) Title search
   b) Keyword search
   c) Author search

9. Yahoo! is mainly
   a. An Internet subject directory and search engine
   b. Google
   c. An echo

10. Dogphile is example of
    a. Internet subject directory
    b. Metasearch engine
    c. Search engine
APPENDIX 16
REFLECTION EXERCISE
SESSION 2

a. Give a brief explanation of what you did in today’s session.

b. Which new skills did you learn in this session?

c. Do you think that the skills you acquired in the process of searching would apply to other situations in your academic work? If yes, what is one thing you learned in this lesson that you will use for similar or future assignment?

d. Generally describe possible problems encountered in the entire process of searching and evaluating information (if any) and how you solved them.
APPENDIX 17

INSTRUCTIONAL DESIGN FOR THE SESSION ON RESEARCH ETHICS

STEP 1: ANALYSIS

• **Need Analysis:**
  Information explosion and availability of information in different formats has created entirely new social and legal issues. These issues such as privacy, fraud, and intellectual property rights are in the background of every web page and use of technology. Users must be made aware of these issues. Similarly information which is incorporated in the research should adhere to the scholarly conventions; hence the knowledge of citations, different citation style is must.

• **Learner Analysis:**
  This instruction is directed towards the students enrolled for teacher education programme. The average age of the students in Bachelor of Education program is 25, which means most are returning to higher education after completing their undergraduate studies. They bring with them wealth of life and work experience. Most of these students are independent learners and heavy users of internet resources for their research. Though they are comfortable with learning and using technology, they often lack skills that academia demands. Many working librarians have experienced and identify top three challenges faced by the students as conducting research, writing assignments based on research, knowing what resources and tools are available through the library.

• **Content Analysis:**
  • **Theory**
    Once you have located, evaluated and used your information in your writing, you need to report it in a way that adheres to scholarly conventions.
  • **Practice**
    Preparing citation for five resources using latest APA citation style

• **Task Analysis:**
  • **Constraints**
    - Heterogeneous group,
    - Less Time
    - Large class (approx.. 100 students)
• **Delivery Options**
  
  o PowerPoint Presentation
  
  o Activities

• **Objectives/Learning Outcomes**
  
  o **Learners will be able to:**
    
    o understand the role of citations in scholarly writing
    o identify when you do not need to cite your sources
    o recognize the most common scholarly citation style
    o understand what constitutes plagiarism and know the importance of how to correctly acknowledge the work and ideas of other
    o understand the concept of copyright and intellectual property
    o understand what information can be legally copied under the concept of fair use
    o use information appropriately without breaching copyright.

2. **Design**

*Keeping in mind the previous knowledge of the audience, the time constraint and the content involved in the analysis of the survey data, it was decided to select the following data analysis techniques.*

**Planning Instruction:** Instruction was designed to facilitate

Instructional strategy for all the above would include lecture-discussion, group work and presentations.

**Identifying resources:** Material resources included Computer based presentations, Questions for reflection and quiz.

**Planning Evaluation:**

Evaluation of participants’ knowledge about the information literacy skills was done by administering pre-test on information literacy skills. At the end of the session a quiz and reflection exercises would be given to the students, the purpose of these was to encourage students to reflect on the various activities carried out in each session as well as to provide feedback on the overall course.

A feedback schedule would be used to evaluate the effectiveness of the module.
3. Development Phase:

Development of content:

Every student will be asked to fill the pretest that will help to understand their information literacy skills level. PowerPoint presentations as support material will be developed. Handouts will be prepared for the session on different resources and information included in each resource.

Development of assignments:

There will be no formal assignments that students will be asked to fill, however there would be worksheets which will be given to the student and the same will be discussed.

4. Implementation:

The seminar-workshop will be implemented in December 2012 at All India Khilafat College of Education.

5. Evaluation:

The participants will work in individually as well as in groups and their worksheets will be analysed, As well student will be given quiz and reflection exercises.
Compile a reference for the following different types of sources by using APA style

**Book**


**Web document**


**Journal article**

Appendix 19
Hand-out for APA style

Book
You need to include the following information:

Author. (Year). Book title. Place: Publisher.

Example:

If there is more than one author, insert & before the last author's name. If the book is in its second edition or beyond, you also need to include this information in the reference:


Chapter in an edited book
Sometimes books contain collections of chapters which are written by different authors and collated by an editor or editors. To reference a chapter in an edited book you need to record the following details:

Chapter Author. (Year). Title of chapter. In Book Editor (Ed.), Book title (chapter page numbers). Place: Publisher.


Journal article
To cite a journal article you will need to record the following information:


Electronic journal article
If the electronic journal article is also available in paper format and if the layout, page numbers, text and images are exactly the same, you can just reference it as you would
a print journal article. If you have only looked at the electronic version you should add [Electronic version] after the article title.

For a journal article which is only available online or differs from its print version you will need to include the date when you found it and the URL:

Author(s). (Year). Article title. *Journal Title, Volume Number*, pages. Retrieved month day, year, from URL


**Web document**

To cite a document from a web page (that is not an electronic journal) you should record the following information in the reference: Author or Editor (if available). (Year, if available). Title. Retrieved month day, year, from organisation Web site: (if applicable) URL

APPENDIX 20
INFORMATION LITERACY QUIZ- SESSION 3

Roll no: ________

1. When you present ideas from sources in the text of your paper, which of the following methods require you to provide citation information about the source
   a) Direct quote b) paraphrase c) summary of the information d) all of the above

2. Which of the following is not a reason to cite your sources?
   a) They lend authority to your work b) they let readers retrieve sources that you have cited c) they give credit to the source authors d) the more sources you list better the grade

3. Where do you need to include citation information?
   a) In the body of your text b) in the header of each page c) At the end of your paper in a list of works cited or references. d) both a and c are correct.

4. The section of copyright law that allows libraries and educational institutions to use copyrighted works is called:
   a) Public domain b) fair use c) Intellectual property d) None of the above

5. Information in the public domain is non-copyrighted material which is freely available for anyone to use.
   a) True b) False

6. Plagiarism is
   a) including other’s paper idea in your paper b) using someone’s ideas in your paper, but not citing (crediting) the source c) directly quoting a source instead of using your own words

7. You do not have to provide a citation for information you find in google books
   a) True b) False
8. Which of the following is a journal article? Please tick


APPENDIX 21
REFLECTION FOR SESSION 3

1. Give a brief explanation of what you did in today’s session.

2. Were you able to gain any important skills? If yes, give an outline of major skills that you have learned in this lesson.

3. In case you encountered the problems, how were the problems solved?
APPENDIX 22
TRANSCRIPT OF FOCUS GROUP INTERVIEW OF ALL INDIA KHILAFAT COMMITTEE COLLEGE OF EDUCATION

Focus group questions:

1. Do you think you have acquired enough skills which will help you in your individual research project? Tell briefly which skills you have acquired and how are you going to use it?
2. What do you think about different methods used in session like quiz, worksheet and reflection exercises? Did it help you and how?
3. Which session was most helpful to you and why?
4. Which session was least helpful to you and why?
5. Any further comments on the session?
6. Any suggestion to improve the session?

**Actual Transcript**

Teacher: *Do you think you have acquired enough skills which will help you in your individual research project?*

Student: Yes

Teacher: Tell briefly which skills you have acquired and how are you going to use it?

Student: *like this will help us in telling about the citation and this will help me to know what is copyright exactly because prior to this I didn’t knew what copyright was. My intention and concept was wrong so ma’am clarified it and secondly*

Teacher: *What was your concept about the copyright?*

Student: My concept was that we can or we should have the right to copy some content and ma’am explained to me that it is the right of the author that he can sell it and publish it according to the, he has the right to sell his product this whatever is the concept or the discovery he has done so that was my insight about this I got this insight from today’s orientation which I had attended and then I knew about what is paraphrasing and as my colleague also explained. Paraphrasing is something which*
you have to you just don’t have to phrase it you have to phrase it in your own words so that was another insight which I get through this orientation. It is quite helpful for me for my future research work which I will be doing in Khilafat.

Teacher: Ok Arpita how this session was helpful to you

Student: It was helpful because I came to know that keywords the exact keywords that we should put in internet so that we can get the exact words whatever is useful and how exactly we should search in the library using the catalogue and the call numbers and all that and if we have to search for the person’s name supposing she gave example of ‘Usha Rao’ so it is not by author’s name but it is by the subject because using a subject we came to know exactly not only what she has written but what is written about her. So that is also what I came to know and then I learnt in today’s session about citation and plagiarism. I didn’t know about that so we came to know about that also.

Teacher: What do you think about different methods used in session like quiz, worksheet and reflection exercises? Did it help you and how?

Student: it was helpful because through reflection we could visualise what was done in the session and what new skills we have learnt in the session and how we are going to use these skills. Through quiz we came to know that whatever we learnt in session and whatever was ticked was right or wrong. As after the quiz immediately we were told answers so that was also helpful to us. Through worksheet we are putting the keyterms of whatever research topic we had got. earlier we were not aware of keyterms so whenever we had to search we use to type about research topic and we never use to get proper information. Through worksheets we came to know to find key terms in our topic and how to use those key terms for searching. Similarly we came to know what sources to be used, how to use library and how to find journal articles.

Teacher: be more specific what all you had done in worksheet for example you were making one concept map and how it was helpful for you.

Student: As the research topic which we had got was very broad like my topic was practice teaching then ma’am helped us to narrow the topic with the help of concept map. Like she told in concept mapping you have three different aspects like teacher’s
attitude, field environment and so on. She also explained us that we can further narrow it down. If we are narrowing the topic properly we will get the proper data.

Teacher: what is this reflection exercise? How it can be helpful to you?

Student: through reflection exercise we were able to tell what new skills we have learnt in the session, how those new skills are useful for us in our individual research project and if it is not useful we were asked to tell why it was not useful.

Teacher: Jasmine would you like to add to something about the different methodology or methods which she has used during the session.

Student: about the quiz and worksheet we came to know about how much we know or whatever she has taught are we right in that or wrong because in the end she was saying the answers and correcting us and she was explaining us too so it was very helpful.

Teacher: how is it going to help in your research?

Student: like whatever answers were wrong and we knew the answers what it is and we will work according to it.

teacher: would you like to give some suggestion to her. So what could be more reflective practice like whichever would be more effective methods she could use?

Student: she could use like group study also; she could make us use this in groups and help us in solving that quiz in groups.

Teacher: so which session you enjoyed more?

Student: Today’s session on plagiarism as we didn’t knew anything about it.

Teacher: how do you find this three day session?

Student: it is very good and like knowledgeable for us.

Teacher: now tell me which session was most helpful to you and why?

Student: as per me yesterday’s session was quite helpful to me because of the use of ‘and’ ‘or’ ‘not’, phrase searching and use of symbols like asterisk or special symbols. for e.g. if you want to search a concept or term on learn you just type learn and put *
and so all the related terms to learn like learn, learner, learning the entire thing can be visualised and can come to a compact data.

**Teacher:** did she mention about some search engine that was very helpful for you?

**Student:** Yes ma’am she discussed about various search engine and she also discussed about website.

**Teacher:** which search engine? I am talking about search engines and not websites?

**Student:** yes she discussed about search engine like one was ERIC I suppose one was dogpile and another one was google scholar, google books and normal google search engines.

**Teacher:** How it was different from other normal search engines, normally you people are using Google?

**Student:** exactly basically we go through a normal google search and we find data which is quite large and sometimes it is irrelevant we don’t find very specific data we get number of things and which we again need to go indepth for searching a specific information and if we go to these specific sites then we will get relevant data. we just need to put the relevant keywords and terms and we get the relevant and specific data.

**Teacher:** u mean to say information

**Student:** yes

**Teacher:** Nazia would you like to share about anything regarding most enjoyable and most effective session.

**Student:** Most effective session was the yesterday’s session on searching.

**Teacher:** Why?

**Student:** because madam taught us about the different types of search engines. in that means in that if we are not getting some books in our library we can search in university library and we can order means if we need articles and we also came to know about the different websites and search engines. otherwise we normally go to
google. She told us that Google is also there, Google books, Google scholar and in Eric you can search with titles and subject specific things which is accurate. In Google we don’t have the evidence of whether it is right or wrong. But in some websites some references are there so it is very helpful.

Teacher: Now tell me which session was least helpful to you and why?

Student: I think today’s session on citation and plagiarism was very least helpful because if someone is using a copyright of some other person it is like that we are mentioning sometimes means as far as websites but sometimes it is not useful for us that we need to know about the website authority and copyright.

Teacher: Ok this was very new to you but why do you think so?

Student: Ya it is least helpful because sometimes we don’t take ok if article is from that person we mention that name of the person, that we had taken the article from that person.

Teacher: According to you no need of referring to that or no need of acknowledging that person.

Student: No just to give we had taken from that person we had already know that the article is taken from that person we mention that name so today’s session as compared to other two session was least helpful for me.

Teacher: Can you tell me what is main purpose of doing research is?

Student: To get knowledge about that thing and as well as

Teacher: You just want to get knowledge or you want to give some knowledge to other?

Student: Yes to give something additional means we will do addition to it means the knowledge we had taken from that source we can put our addition of taking different different means articles from other person and then we are clubbing it together.

Teacher: Do you think all these three session are going to help you in any way in your future research.
Student: yes it will be helpful as I am working on emotional intelligence it will help me for my review of related literature.

Teacher: Apart from that review and research how is it going to helpful for you?

Student: Yes of course because up till now I was not very expert like using the internet or search engine like Google search and all these session has made me feel that it is very easy to search. Suppose we are doing research on linguistic skills of different English medium schools. So I will just type like linguistic skills but it is very difficult to get but now while attending the session I came to know like that there are different keywords from which it will be very easy for us to get information so it was very useful for us.

Teacher: Any further comment or suggestion to improve the session?

Student: If only by giving lecture if that ma’am would have grouped us in some four or five students and asked us to do practically like how to search Google search engine and all and if we are doing it practically it would be helpful for us.

Teacher: Now you people practice this one in your home. Any other suggestion to improve the session so that she can make it more effective.

Student: yesterday madam had called ten of us and she made us do from here only but it was time consuming and all were sitting and talking and then she told that I will show you directly on PPT. So while we were doing it practically it was more interesting for us.

Teacher: So it was giving you first hand learning experience.

Student: Yes

Teacher: so what did you learn from yesterday’s session?

Student: Yesterday she told us about the keywords and how to use it and different symbols. First we didn’t know about that and now we are very familiar so we can go sit at computer and we can do our research nicely.

Teacher: Is it going to help you in your research only or any other aspect.
Student: Yes in any other aspect like we do lesson planning there are certain things we don’t understand so it will be helpful in that.

Teacher: Did she mention about any website from where you will get any innovative ideas of lessons and all.

Student: Innovative ideas I don’t think so she has told all those things.

Teacher: so it was about research only.

Now all of you are aware about various aspects of research and this session proves to be an effective or gives extra benefit to your research experience. Can you share something regarding extra benefit which you got from these sessions?

Student: we were very this thing like how to do research and all that it is very tough and we can’t do. We can’t do in the sense but today we are clear that even we can do this and it is not that tough as we are thinking.

Teacher: Tell me which aspect became very clear to you?

Student: specially like to search the particular terms and all and how to go to internet and to find that concept and review of related literature.

Teacher: If you had any other suggestion to improve the session. Please feel free to give suggestion as one student had already pointed out that it should be more practical.

Student: We have workshops and we have cooperative learning and group learning, so she could have made us do like that. Most of the teacher or student teachers have laptop at home so she could have told students to bring the laptop and we could have done that particular research we are doing. We could have typed that using the search engine and all that and we could have done that practically as according to research what 90% we do learning by doing is what is more impact on us so she could have done that. Because she already knew that she had pre planned that she is going to take these three sessions back to back so on the first day or 2nd day she could have said that on 3rd day we are going to do it practically on what we have covered in first two sessions.
Teacher: what is your overall impression about all the three sessions?

Student: overall means it will be helpful surely in the research work that is for sure but there are certain loopholes that be kept in mind like learning by doing should have been done group teaching should have been done.

Teacher: So apart from time constraints there are any other aspects she should consider while conducting this type of sessions?

Student: Yes, instead of taking three days for this session she could have divided into two sessions. First should be oral presentation or orientation and second day she could have made the students do it practically here in front of all so it could have more impact and so what all she was giving would be more effective.

Teacher: Any other suggestion?

Student: One thing madam as whole session was only in English there are urdu medium students also. There are chances that they might have not understood completely what she was saying. If she could have included hindi so it would be better even they would have understood completely. Secondly as earlier student said that everyone has laptop, it is not necessary that everyone has laptop. so instead of telling everyone to get it there it is possible that she can give assignment on searching according to our topic , concept or the concept which we have to write so even they would have learnt how to search using Boolean operators and special symbols.

Student: Similarly she was handling everything singlehandedly like she was operating the computer, explaining also if she had some helping hand so it would have been better.

Teacher : so do you think she was not able to concentrate on entire class and not successful in establishing the rapport with the students.

Student: there were many times we were not interested.
Teacher: Can you tell me reason

Student: because it was getting diverted as she was doing the laptop also she was handling ppt, explaining also so sometimes for fraction of minutes we would get diverted. So if she had some other helping hand for handling the laptop it would be more helpful.

Teacher: ok any other reflection or suggestion.

So overall you people enjoyed this three day session and learnt many more new things.
APPENDIX 23

Reflection Exercise for Session 1 – Research Success

Q.1. Give a brief explanation of what you did in today’s session.

- Today we were given the information about how do we begin with our research project. The topic of our research project should be of our interest.
- In today’s session I learnt more about what is action research. In action research what micro step has to be followed.
- Today I selected a topic of my interest. I narrowed it down by using sources like books encyclopaedia. I prepared a concept map. From the concept map I selected the topic which is small of my topic of my interest. I framed a research question and wrote a thesis statement.
- Today’s session gave us information about what is the common layman term ‘research mean’. The detailed session of the research topic finding and the follow about of the research helped me a lot in preparing myself for the action research project. Also today’s session had keywords which helped to enlighten me a new knowledge of words and its effect on searching
- I don’t know what new I have learnt but after attending all these session my all concept about research and analysis is clear.
- today we have learnt of making decision about the topic which contain more or less information (broader or narrower). Accordingly we have to narrow down our topic. after that we have to subdivide the topic and then we have to choose the topic on which we are getting more information and then we have to decide which source of data we are using whether primary or secondary.
- we have learnt to reduce or lower down tension of action research. how to select topic, form the question and try to find keywords and synonyms and to find resources.
- I learnt about the action research project, what are the several procedure to carry out the research project.
- In today’s session we learnt about how to make timeline for our project and how to make concept map.
- Learnt about the concept of research, how to do research, steps involved and planning for research.
• We learnt about how to draw concept map for our topic. How to prepare timeline for topic. How to narrow or broaden the topic and how to frame a research topic.

Q. 2. Which new skills did you learn in this session?

• Finding sources, writing the thesis statement, deciding how to analyse our project.
• I learnt in this session micro skills required for successful completion of the research project.
• Finding resources, writing citation, deciding the topic of research according to its innovativeness and applicability.
• searching skills, narrowing down the question (broad question) and how to conduct research using keywords.
• the new technique which I have learnt today is finding out the synonymous words and breaking down the topic into sub small topic
• how to make thesis statement. We have learnt knowledge about the scholarly magazine.
• we learnt about the time management i.e how to work on particular topic in a fixed time.
• in this session we learn new skills like how to make concept map and how to make our topic narrow and how to search for information. we also learn how to locate keyterms and concepts in our topic.

Q. 3. Were you able to apply skills you learnt in your practical session? Provide your answers with brief explanation on how the skills learnt helped you?

• Yes the practical session helped us to apply the skills. We could decide, discuss on our topic, get our thesis statement and find our sources.
• Finding resources – I went through many books, journals found out author and edition of books, went through some journals and found out how to write bibliography. Hence learnt the skill of citation. I learnt that just knowing the topic does not help. It must be seen whether the research is applicable and practical.
• Yes, it definitely helped me in research for my topic. I was able to find a research topic and was able to accordingly narrow it down for my convenience. Above all reference books gave me the required amount of content to fill in my research paper to an extent. Net also provided a good source as it gave me specific content correctly and with a narrowed down content.

• In carrying out our research project which make myself very clear what we are supposed to carry out in the research in more simpler and effective way.

• In this session whatever we have learnt it will be helpful for making our research project.

• Yes I was able to apply skills in my practical session. it really helped me to find the topic on a given time.

• the skills we learnt in our practical session was very helpful to make our topic narrow and locating key terms in our topic. this is really good and helpful for us.

• yes, I t helped me in managing the time. it gives fair idea of the project and its correct direction and how to go about it.

**Q.4 If you were not able to apply the skills to your work today, what could be the reason? Please explain briefly.**

• I must not have understood today’s session if the above case existed. in fact at first the situation seemed familiar, but as the search skills progressed I was able to find my research topic more easily.
Reflection Exercise for Session 2 – Re-Searching Basics

Q.1. Give a brief explanation of what you did in today’s session?

- We have learnt how to use internet for research purpose.
- Today’s session covered different tools to search the information sources, how to search the internet and how to evaluate the information.
- In today’s session we learnt about what are the different type of sources and how to search information or article on our topic by using Boolean logic.
- In today’s session we have learnt the strategy of combining words and how to search on website.
- Learnt about various ways to search like print and non print and various websites from were we can search and also what keywords should be useful along with Boolean operators.
- In today’s session we learn the different strategy of combining the keywords and we also got details of sources like search tools which we are going to use in our research work.
- In today’s session we learnt about what are the different types of sources and how to search information or articles on our topic by using Boolean symbols.
- We have learnt the search basic. in this session we learn about different tools of information like print and non print tools which are very beneficial for searching information for our research work. we have seen different criteria for evaluation of information from internet.
- We discussed about catalogue, various links which would help us in our research work.

Q.2. which new skills did you learn in this session?

- Searching the internet, awareness about search tools, search directory and Meta search engines.
- We learn how to search information using Boolean symbol and how to evaluate information by using different evaluation criteria.
- Search tools or search strategy for finding the books and evaluating websites.
- The new and innovative skills learnt by us were how to use search tools.
I have learn that how to search information easily by seeing author names in catalogue, title etc. and how to evaluate the information which we get from internet by using evaluation criteria.

Q.3. Do you think that the skills you acquired in the process of searching would apply to other situations in our academic work? If yes what is one thing you learned in this session that you will use for similar or future assignment?

- Yes, I think that the skills I acquired in the process of searching would apply to other situation in our academic work. There are various types of books available on related topic or content which you can use for your academic work.
- Yes searching for information.
- Yes I think that the skills we have acquired can be used in our academic work. I have learnt very important thing in this session for e.g. If I want to refer to any book on the internet what should I type to find.
- Yes, searching through catalogue, searching through various websites using keywords, Boolean search, meta search engines.
- Yes the skills acquired by us were very creative which could be used for future assignment like to search for author, title etc.
- Yes it will really work when we search for information, we find lot of it but by using Boolean symbols we can get proper information and we can also evaluate information by using different evaluation criteria.
- Yes it helped me in finding our research topic very easily and up to date information.
- Yes, using of “and” “or” and “not” operator by using these specific skills at the time of searching something will get us close to those topic which are actually required by us.

Q.4. Generally describe possible problems encountered in the entire process of searching and evaluating information (if any) and how you solved them.

- generally when we are searching and evaluating information in the entire process many problems are encountered like server down, page cannot be displayed, poor connectivity.
- There was no internet connection available in the lab.
the problem was during the searching of information but after this session I can successfully able to solve them with the help of the session.
Reflection Exercise for Session 3 – Research Ethics

Q.1. Give brief explanation of what you did in today’s session?

- Today’s session I have learnt a difference between the references and bibliography, citation, plagiarism and writing the references in APA style.
- How to write bibliography for the research work.
- listened to the orientation, studied about citation, copyright and plagiarism
- We learnt about plagiarism, copyright and citation writing style used by the education students.
- We learnt about APA style and plagiarism and copyright.

Q.2. Were you able to gain any important skills? If yes, give an outline of major skills that you have learnt in this session.

- Yes we didn’t know how to write bibliography and how to write name of author in citation but when I attended this lecture I got to know how to prepare bibliography.
- Yes learnt how to differentiate between references and bibliography and ways to present it.
- Yes we learnt about preparing bibliography for our project.
- I get a thorough knowledge of how to make blueprint or framelist for research report and how to work on it which technique should be used while preparing for research.
- Yes this will help us in writing bibliography. We can write correct citations for journals, articles and etc.
- yes we came to know about the word and importance of plagiarism

Q.3. In case you encountered problems how were the problems solved.

- In case of problem we took help of the teacher.
- With the help of the madam who hosted the session, she helped us to solve the problem which was encountered during the session.
- Problems were solved through discussion.