

Exploring the Innovative Mind

Step 1

There are lots of thoughts in your mind, in the sleep state.

You can wake those thoughts up and become innovative.

Learn the art of innovation and explore your mind.

.....

Practical Exercise 1:

Remember that if hundred people do the same type of work there is still something different.

And that ‘something different’ is called ‘Originality’.

And that ‘Originality’ exists in you, in your innovative mind.

Find it out. Now...

Fill up the following:

A. You have the strength in a subject area and that area is _____.

Example: Robotics

B. You forget time when you are part of any activity related to _____.

Example: Politics.

C. There is a problem not really 'subject' related and you wish to find its solution.

And the Problem is _____.

For example: "There is everyone in the institute talking about Emotional Intelligence and I am fed up of listening the same type of speeches again and again."

Find the 'Area for Innovation'

Combine A and B:

Here you are going to narrow your subject of expertise towards your real interest.

Example:

Answer these questions:

Can one relate Robotics to Politics? **Yes.**

Is it possible? **Yes**, for example 'Robotic Politics'

Is it worth? **Yes**, When people are thinking of Robotic Emotions and Power, why not think about “Robotic Politics”

If you have the answer to such questions, you have got “your area for innovation”.

Otherwise, you can try to --- -- -- -

Combine A and C:

Here you are going to narrow your subject of expertise to find the solution to your specific problem.

Example:

Analyze your problem again and find out the solution you are looking for.

Analyze the problem specified and then answer the related questions:

For example, if the problem is “There is everyone in the institute talking about Emotional Intelligence and I am fed up of listening the same type of speeches again and again.”

Then give a thought to the following options:

1. You are interested in the topic of “Emotional Intelligence”, but not in speeches.
2. You don’t know whether you are interested in the topic of “Emotional Intelligence”, but you want something new, something different.

If your option is 1 or 2, you can try finding the scope of linking C: “Emotional Intelligence” with A: “Robotics”, otherwise try to redefine your problem.

Answer these questions:

Can one relate “Emotional Intelligence” with “Robotics”? **Yes**

Is it possible? **Yes**, for example in “Human-Robot Interface”

Is it worth? **Yes**, When people can consider Emotions in human interaction, the same can be used in future for human robot interaction.

If you have the answer to such questions, you have got “your area for innovation”.

First Step towards Success:

Congrats!

You have got “your area for innovation”, namely

Choosing a Research Topic

Step 2

This step requires that you have already chosen your subject of study and in other words, “Your Area for Innovation”.

Now, you have to select a topic for research on that area.

Just read the following carefully:

A child goes to school and reads too many subjects up to class 12th.

That student then joins the college and leaves some/ picks other subjects and finds too many sub areas.

That student then comes at the postgraduate level and again leaves some/ picks other subjects and finds too many sub areas.

At this point the knowledge tree that is visible is a huge one with unlimited branches.

For your research to be effective, it is essential for you to know about the recent research areas, that is, few advance research areas.

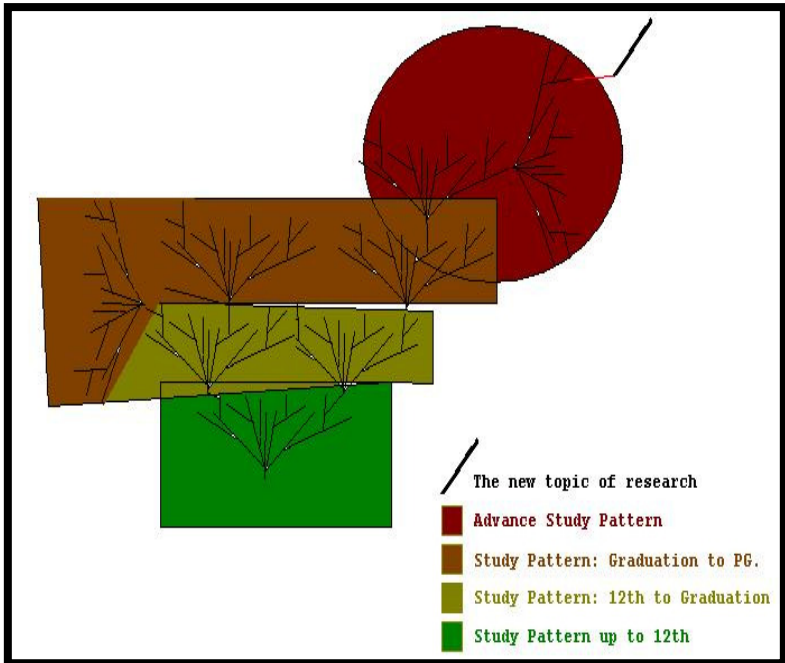


Figure 1: The study patterns

What is the branch you are looking for exploring?

What others may suggest is that start studying a particular branch and go ahead. But you may then end up confused, as you will leave some/ pick other subjects and find too many sub areas.

What I suggest is this...

Choose your topic of interest first and relate it to your subject strength.

That is, pick a branch from outside the tree and show your innovation to bind it to the top of the tree, which is to the branch of any advanced research area.

Practical Exercise 2:

Remember that you have already chosen your subject of study and in other words, “Your Area for Innovation” namely _____ . (If not, go to the Step one.)

Example: Suppose, you have chosen the ‘area of Innovation’ as “Usage Mining”.

Now you have to choose a topic related to this area.

The need is not to study this subject to the end, but to focus your research to a narrow down the area, related to this.

Choose your topic: Say “Personalization”.

Now relate it to your area of Innovation, for example “Usage Mining”.

Try to relate the area for innovation to a focused sub-area.

Ask few questions to yourself ...

Can one relate “Personalization” to “Usage Mining”? **Yes**

Is it possible? **Yes**, for example ‘Usage Mining for Product Personalization’

Is it worth? **Yes**, Product personalization is needed today.”

If you have the answer to such questions as “**yes**”, you can try to still make this research more focused.

For example, your topic can be

“Usage Mining for Education Personalization”

Remember you can try to change this topic to be more focused and narrow, but *don’t compromise on its scope*.

For example:

“Usage Mining for Educational Content Personalization” is good, however avoid choosing topics like “Usage Mining for Educational Personalization for MBA students”.

Second Step towards Success:

Congrats!

You have got “your topic for research”, namely

Using the Inventive Techniques

Step 3

You have selected an Area of Innovation – “Step 1”.

You have also selected a Topic of Research – “Step 2”.

This section is about using the inventive techniques for understanding the topic of research.

This step is to be applied at the beginning of the research work, before you have finalized the plan of your research.

Understanding the topic

To understand the topic the following steps are needed:

- Break the topic into subtasks or subsections.
- Think about each of these subsections and number them so that you can write a paragraph or a page on that portion if necessary.
- Rank subsections in a desired order that you think is more important.

- Think again, to include more questions or subsections that you can relate to your topic.

The following points are also needed to give insight into the topic:

- The purpose of your research.
- The type of research, i.e. Are you going to form an argument, a theory, find an argument based on research, or your research is related to an analysis or comparison of something? Do your research require a survey or an observation?
- The scope of this research.
- What resources do you need to begin work?

Now Use the Invention techniques and have fun!

The most popular inventive techniques are:

- Brainstorming
- Clustering and Mapping
- Cubing the topic
- Making questions and finding answers

Brainstorming

This is about how you treat your thought processes to go around the topic. It is also about the organization--the way you jot down ideas.

1. Note down key words or short phrases in list-form under your subject or broad topic.
2. Look at one of the listed words and see if that generates something new.
3. Check if it is related to your subject or broad topic.
4. If yes, add it to the list.
5. Now, using Word, cut and paste to re-organize your terms and find relationships that might form subtopics/ subheadings.

Clustering and Mapping

This inventive technique can also be used to understand the topic of research.

1. Start with a central word written in the middle of an unlined piece of paper.
2. As related concepts pop in your head, indicate them as branches, arrows or bubbles.
3. Some branches may lead to dead ends.
4. Other branches may flourish, but keep hold of the focus to your topic.
5. Focus on the blossoming areas and draw arrows between concepts to show their relationships.

6. Finally, map the relationships and arrange the ideas.

Cubing the Topic

This is the general strategy of looking at your topic as you would do that for a three-dimensional object with many sides.

Try to consider your topic from a minimum of six different angles.

Make questions and find answers

1. What is the topic about? (topic)
2. What are you trying to do? (“about my topic” – the controlling idea)
3. Why are you interested in the topic? (purpose)
4. Who will be interested in your idea? (scope)
5. What knowledge do you have that makes you the right person to write about this topic? (strength)

Example 1: Breaking a Topic into subtopics

Sample Research Topic ----

Ideological Marketing Issues and Impacts in Asian Countries

The ‘sub-topics’

Defining Ideological Marketing
Issues in Ideological Marketing
The ICT Influence
Ideological Marketing Benefits
Ideological Marketing Opportunities
Ideological Marketing Hazards
Global Impact
Survival Challenges
Related Researches
Ideological Marketing Applications and Tools

Example 2: Breaking a Topic into subtopics

Sample Research Topic ----

Pervasive Personalization

The ‘sub-topics’

Defining Personalization
Personalization Issues in Wireless
Environment
Personalization Benefits
Personalization Hazards
Pervasive Scenario
Personalization Challenges
Related Researches
Applications

Limitations

Example 3: Breaking a Topic into subtopics

Sample Research Topic ----

*Comparative Study of Motes –
Architecture and Applications*

The ‘sub-topics’

Defining Motes

Computer or Intelligent Sensing Device

Size of Motes

Companies

Researches

Applications

Limitations

Benefits

Precautions

Third Step towards Success:

Congrats!

You have got the list of sub topics and now you know how to proceed towards the achievement of your goal.

Knowing the Variables Needed For Research

Step 4

You have selected an Area for Innovation – “Step 1”. You have selected a Topic for Research – “Step 2”. You have also understood your Topic of Research – “Step 3”.

This section is about finding out the variables for your research. This step may be applied at the beginning of the research work, even before you have finalized the plan of your research.

Variables

Variables are necessary to show the cause and effect relationships in a research project.

Scientist may design experiments to show that the changes in one item cause the changes in the other item.

The changing quantities in such cases are called variables.

Variables are of different types:

Independent variables, Dependent variables and Controlled variables.

Independent variables

Most of the experiments have a single independent variable, which is the variable that is changed by the researchers.

Dependent variables

The dependent variables are observed by the scientists to find the impact of the change in the independent variable or to find out the response of the dependent variable with the change in the independent variable.

Controlled variables

Research experiments also have controlled variables. These variables are those quantities that a researcher may want to remain constant over a period of time. Most experiments have more than one controlled variable or constant variables.

Worksheet for Variable Clarity

Question	Independent Variable	Dependent variables	Controlled Variables
	What you will change?	What you will observe?	What you will keep the same?
Q	A	B	C

A Case Study based on

“An Experimental Study to Identify the Impact of Expert Filter Tokens for Syllabus Based Searches”, presented in 18th Annual Conference {International Information Management Association}- Global Influences ~ The Networked Environment, University of Science and Technology, Beijing – China, (2007), paper published in refereed journal (CIIMA)

Q: What is the impact of “Expert Filter Tokens” On Students’ Result?

Independent variable

A -> **A** (changing the independent variable)

A: Study Material (without usage of “Expert Filter Tokens”)

A: Study Material (with usage of “Expert Filter Tokens”)

Dependent Variable

B -> **B** (observing the change in the dependent variable)

B: Students’ Result when Study Material (without “Expert Filter Tokens” was used)

B: Students’ Result when Study Material (with “Expert Filter Tokens” was used)

Controlled Variables

C1: Teachers’ Expertise

C2: Class Room Atmosphere

C3: Others

Variables Checklist for Research

Can you measure the independent variable? If yes, How?

Can you change the independent variable?

If yes, How?

Have you identified all the dependent variables?

Are all dependent variable dependent on independent variable?

Can you measure the dependent variable?

If yes, How?

Have you identified all the controlled variables?

Can you control the controlled variables at a fixed value? If yes, How?

Fourth Step towards Success:

Congrats!

You have got the list of independent, dependent and controlled variables.

Go ahead...., towards the achievement of your goal.

Making the Background Research Plan

Step 5

You have selected an Area of Innovation – “Step 1”. You have selected a Topic of Research – “Step 2”. You have also understood your Topic of Research – “Step 3”. You have a clarity of all the variables to be used in Research – “Step 4”.

This is about making the background plan for your research. This step may be applied at the beginning of the research work, even before you have finalized the plan of your research.

Background Research

Need of Background Research
“A year in the lab can save you a day in the
library”
-Mike Kalish (scientist)

Background Research is needed to

1. Find out the different ways to do things.
2. Select the best of the way to do something.
3. Learn from experience of others.

4. Avoid making blunders and repeating mistakes.
5. Understanding the theory behind a research experiment.
6. Make predictions about the outcome of research experiments.

Knowing about ‘what you are looking for’?

Since you are at the initial stages of research you are sometime not sure of what to look for? There are two ways usually suggested by researchers.

Wander Or Follow the map.

Libraries and Internet based resources have millions of information pages and finding what you need is sometimes not easy, specially, if you select to Wander.

Following the map seems easy for reaching the goal but who is going to give you that map?

Well, you can take the help of a senior researcher in your subject area.

Or make a Background Research Plan

Whether you wander or search using a map the following steps are essential:

1. Using a search engine start reading about your “topic of research” and about the “sub-topics”.

2. Select the most important links (links that keep you focused on your topic/subtopics).
3. Ignore the links that you think may change the focus from your topic/subtopics.
4. Don't fall into temptation and try to change the topic of research at this point.

About making the background research plan

1. Consider your topic of research.
2. Try to isolate the keywords related to the important concepts.
3. Try to make research questions related to these keywords.
4. Check to see if any research question is irrelevant for your research? If Yes, Ignore it.
5. Retain the list of all research questions relevant to your research.
6. Looking at this list of research questions make a map to study the selected areas for the background research.

For example:

If the topic of research is

“The Robot and Human Emotional Interface – Towards Automatic Techniques of Emotional Assessment”

Then the keywords related to the important concepts are –

Robot
Human Computer Interface
Emotional Assessment
Automatic Techniques

And the relevant research questions related to these keywords are –

1. What is the need of emotional assessment?
2. What is the need of emotional assessment in robot and human interface?
3. Is automatic emotional assessment possible?
4. Are there automatic systems developed for emotional assessment?
5. What are the related studies done in this area?

Now Draw A Road Map For Your Background Research. Start learning more about the following including the important researches done in these areas:

1. Robot Human Interface
2. Emotional Assessment
3. Emotional Assessment By Robots
4. Need of Emotional Assessment By Robots
5. Automatic Emotional Assessment Systems And Techniques

Fifth Step towards Success:

Congrats!

You now know what to include in your background research plan.

Writing a Research Proposal

Step 6

You have selected an Area of Innovation – “Step 1”.

You have selected a Topic of Research – “Step 2”.

You have also understood your Topic of Research – “Step 3”.

You have clarity of all the variables to be used in Research – “Step 4”.

You have clarity of what to include in your background research plan. – “Step 5” and have started following it.

This section is to start writing a research proposal.

This is applied at that step of the research (where you have finalized the plan of your research).

Writing a Research Proposal

A research proposal is a very important document. It provides a map of the directions for achieving the research goals. It gives the clarity to the researcher's plans.

It is important because –

1. It is often of interest for the funding agencies.
2. It provides the supervisors the idea of the researcher's sincerity and hard work.
3. It also gives the insight into what will be achieved with the research.

Format of Research Proposal

The University or Funding Agencies mostly provides research proposal writing format.

Or you can download a research proposal template from the Internet based writing resources that you find suitable for your research. However, most of the research proposals need information to be included related to the following sections:

See LIST 1, LIST 2, LIST 3, LIST 4.

Check List for writing a Research Proposal

Before starting to write a research proposal you should have the details in hand on the following:

LIST 1

1. Broad Subject
2. Area of Specialization
3. Duration of Proposed Research Work
4. Principal Investigator and [Co Investigators (if any)]

5. Details of Investigators (name, age, address, designation, qualifications, experience, publications etc.)
6. If the principal investigator is a student, the name and telephone number of the faculty advisor.
7. Institution and Department where the project will be undertaken.
8. Institutional and Departmental facilities available for the proposed work.

LIST 2 - For the Proposed Research Work

1. Project Title
2. Introduction
3. Origin of the research problem
4. Interdisciplinary relevance
5. Review of Research and Development in the Subject both at the National and International level
6. Significance of the study
7. Objectives
8. Methodology Plan
9. Year wise Plan of work and targets to be achieves.
10. Outline of the method(s) to be used to obtain the data, to analyze the data, and to disseminate the results of the research project.
11. Details of collaboration, if any intended.

LIST 3 - For the Required Financial Assistance

Total Estimated Expenditure (approx. cost) including -

1. Salary/ Honorarium (per month), to be given to research personnel involved in the research.
2. Hiring Services
3. Field Work and Travel
4. Resources and Equipments
5. Contingency (including special needs)
6. Books and Journals
7. Other expenses, if needed.

LIST 4 - For the Special Requirement of Research

(Such as the use of Human Subjects in Researches)

1. Number of subjects to be used
2. Subjects recruitment procedures
3. Proposed safeguards to protect the subjects' right to privacy.

Checklist for the points to be included in the Informed Consent Form

1. The purpose of the research.
2. Expected duration of the subject's participation.
3. Description of the procedures to be followed.

4. Description of any risks involved including the invasion of privacy.
5. Description of any benefits resulting from the research.
6. Information to the subject of his/her right not to be a subject in a research project.
7. Information of how subject's anonymity will be guarded and confidentiality will be protected.
8. A statement that the subject's participation is voluntary, and that his/her refusal to participate will involve no penalty and that the subject may discontinue participation at any time.
9. If the subject is a minor, a statement of parental responsibility in consenting to the child's participation in the study.

Sixth Step towards Success:

Congrats!

You now know what to include in your research proposal.

Following the Scientific Method of Research

Step 7

Your Step Ahead.....

You have already got a Research Question based on your “Topic of Research”.(Step 2)

You also know the variables (independent, dependent and controlled) (Step 4)

You have also conducted the related background research. (Step 5)

The scientific method of research is based on the following steps:

1. A research topic (a research question)
2. The related background research
3. Hypothesis Construction
4. Testing of the Hypothesis (with an experiment)
5. Analyzing the output of the experiment
6. Communicate the results of the experiment.

Hypothesis Construction

A hypothesis is a guess about

- If this is done that will happen.

- If this (independent variable) is changed, then (dependant variable) will be like that.
- Construct the hypothesis that is –
 - Clearly stated.
 - Easily Measurable
 - Helps to answer the research question.

Testing of the Hypothesis (with an experiment)

Setting up the experiment should include the following:

- It is capable of testing the hypothesis.
- It is a fair experiment, that is, you have only one independent variable, at a time.
- It has the provision of repeating the experiment again and again, so that consistent results are isolated from accidental results.

Analyzing the output of the experiment

- Collect all the data related to the output of the experiment that was set to prove a research hypothesis.
- Analyze the output of the experiment.
- Find out if the research hypothesis is true.
- If the hypothesis is not true, you may try to construct a new hypothesis and again test and analyze it. (Changing of the hypothesis)

- If the hypothesis is true, you may try to test this hypothesis differently and analyze it. (Changing of the experiment)

Communicate the results of the experiment.

Communication of the experimental results can be done in the following ways:

- Publish the results in the form of the final report of the experiment.
- Use a display board for showing the results.
- Write the results in a research paper and get it published in a conference proceeding or in a scientific journal.
- You may also try to share the results on a poster at a scientific meeting or make an oral presentation for the same.

Seventh Step towards Success:

Congrats!

You know how to follow the Scientific Method of Research.

Writing a Research Paper

Step 8

Research Based Writing makes a new contribution to the knowledge of a given field.

A research paper presents the results of your study on a selected topic.

It is a rhythmic layout of your own thoughts and the facts and ideas you have gathered from a variety of sources.

A research paper is a creation that is distinctively yours.

Not only the shaped research paper, but also, the experience of congregating, interpreting, and documenting information, developing and systematizing thoughts and conclusions, and communicating them clearly is vital and valuable for a researcher.

Think as if you have to add something to an ongoing debate. Remember there are other views on the same topic.

Try to make the subject area small, as if you are selecting a branch of a tree. This also means to narrow down your audience, the research community in your field.

Consider the Readers

It is hard to picture an "audience" reading your paper the same way a group would be physically listening to you speak, however,

... You need to explain the terms for you are not writing for a professor.

... Even if you consider that the readers will be from the public in general, try to keep the focus of your paper.

Type of Readers

- Real (Examples: peer group, reviewers, research supervisor).
- Intended (for whom you are writing a research paper.)

Write with the intended readers in mind and try to establish a relationship between yourself and a larger audience (readers), and not simply between you and your supervisor.

This will make your writing more purposeful, with a clearer focus, and will directly engage your readers in your argument.

It will also make it easier to choose the tone, projection, and even sentence structure style at the drafting time.

Research Paper Types

Research papers are often written at the stage of the research where the researcher has the results of the research or experiment; however

they are also important at other stages of the research process.

A researcher may communicate the proposed research work even at the stage where the clarity of exploring a new area is established or an innovative direction of research has emerged.

A researcher can present a research paper as a review paper or as experimental research paper.

General Sections of a Research Paper

With reference to the following paper:

Saba Hilal, S.A.M. Rizvi, "Evaluation of Syllabus Based Web Content Extractor", published in DMIN-08 proceedings (4th International Conference on Data Mining), USA. (2008).

Title

Give a title to your research work.

Example:

"Evaluation of Syllabus Based Web Content Extractor"

Affiliations

Write the name of First Author, Coauthor(s) (if any) along with the name of Institution/Department, City, Country, email etc.

Abstract

This is a short paragraph written to give the idea of what the reader will find in the given research paper.

Example:

SBWCE, the Syllabus based Web Content Extractor is developed using JAVA for easy and effective extraction of the Syllabus based educational web content. It is based on a new-layered technique founded on specification and prioritization of filter tokens used by search experts. The design of SBWCE uses Google in its search layer. Therefore, the comparative analysis of Google and SBWCE was desired to measures the goodness of the Syllabus Based Web Content Mining technique. The common measures of search performance “Precision” and “Recall” are used for evaluating the performance of SBWCE. This paper presents the comparative analysis of SBWCE and Google’s first ten results. The Relevant Content Worth and Link Weight calculations are also presented based on the different categories of Syllabi used during experimentation.

Introduction

You need to explain different terms required to understand the concepts presented and the purpose of why you are writing the research paper.

Sub- Sections

These sections are needed to create a rhythmic sequence of conveying the ideas to the readers on the research.

Related Researches

This is a very important section of a research paper as it gives an idea of your expertise as a researcher into the subject.

A researcher is expected to know about the different researches of the area of study before even trying to explore a new direction for the contribution to the knowledge.

This section includes the references to the different researches in the related area.

Example:

The study [1] has used Precision and Recall to show how both precision and recall has improved the specific-domain area, in which users can share the same knowledge. The paper focuses to improve search performance by using keywords and web pages, which have been previously used or visited by other users. Another paper [2] presents the results of a research conducted about five search engines

.....

New Contribution

Here you will write about that new contribution of your research for which you have decided to write a research paper.

Comparative Study

This section is required to show how your work is useful, that too in comparison to the work of other researchers.

Example:

The comparison of Google and SBWCE, has shown a clear shift towards relevance in case of SBWCE, see Fig below.

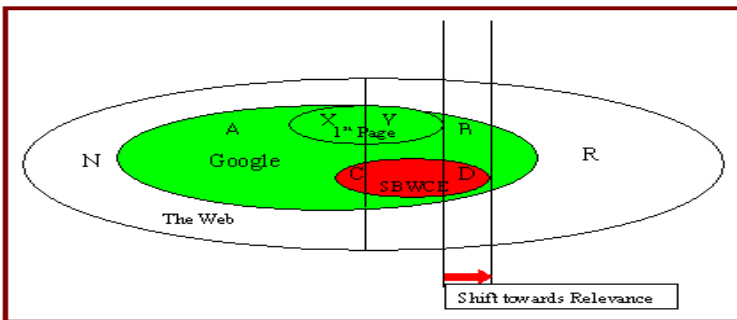


Figure showing SBWCE's shift towards Relevance

Conclusion

Here you can write about what you have included in the research paper, what you couldn't include (the limitations) and even the future recommendations.

Example:

Although the results of comparative analysis of SBWCE with Google, using sample syllabi based on only four categories are presented in this paper, the experiments are being repeated

and extended with other Syllabus types and retrieval formats, and are showing similar results. SBWCE is also being tested based on improved filter tokens for generation of better results.

References

Each reference in this section includes the -
Authors, Title, Publication Details, Date of publication, download links etc.

Example:References

[1] Cho, W.C. Richards, D., “Improvement of Precision and Recall for Information Retrieval in a Narrow Domain: Reuse of Concepts by Formal Concept Analysis”, in Proc. Web Intelligence, WI- 2004, 2004, Pg. 370- 376.

[2] Dr. S. M. Shafi & Rafiq A. Rather, “Precision and Recall of Five Search Engines for Retrieval of Scholarly Information in the Field of Biotechnology”, Weblog, Volume 2 (Number 2),2005.

Eighth Step towards Success:

Congrats!

You know how to write a research paper.

Styles of Writing a Research Paper

Step 9

There are different styles (formats) of writing a research paper.

For example: MLA, APA, CBE, IEEE and Chicago For these styles, there are different websites from which you can download the templates.

Each of these document style templates include guidelines to set fonts, margins, headers, a first page, and a bibliography page.

For information about different documentation styles ---

{MLA, CMS, CBE etc.} :

<http://writing.colostate.edu/guides/researchsources/documentation/specific.cfm>

{LaTeX Style File.} :

<http://web.mit.edu/klund/www/csm/>

For Research Paper Preparation, the templates are available at the following links:

Preparation of Papers for IEEE Sponsored Conferences & Symposia

<http://www.ezconf.net/docs/SOLI%202008/sample.doc>

Preparation of Papers for IEEE Transactions And Journals

http://www.ieee.org/portal/cms_docs/pubs/transactions/TRANS-JOUR.DOC

First page using IEEE style

Learners' Behavior Based Personalization in Education

Mrs. Tanushree Chakrabarti, Dr. Subha Hota¹

¹ Postdoc on ICT and Globalization, R&D cell I DAW Institute of Management, MIT, NIT, Ranchi-834 006, India, tanushree.jain3008@gmail.com, phone: 9836144700

² Project Supervisor, R&D cell I DAW Institute of Management, MIT, NIT, Ranchi-834 006, India, subha.hota@gmail.com, phone: 9836144704

Abstract— Importance of effective human traits in personalization, individual learners differently need the need to find effective solutions and techniques in one's learning style. Therefore, in education, it is often hard to see the understanding of the learners' behavior to design the Behavior Based Learning Systems. The need of personalization is evident at different levels including the content and device based personalization. Usage Analysis has played an important role in understanding the process of teaching the user's requirement. This paper has presented a new framework based on one time adjustment of learning system to test enough for personalization and the need is to create a dynamic system for personalization based on learner's behavior.

I. INTRODUCTION

In the present scenario of globalization and personalization, education is the key to success and personalization. In the sphere of education, behavior personalization is a prime concern. It includes the personalization of the course contents and device. One of the major of personalization is depending upon the learner's behavioral pattern. Today's learning environment is continuously trying to adjust personalization strategies, which cater to the learning demands of the learner. The form of personalization much depend upon the thorough analysis of the behavior pattern of the concerned learner.

II. IMPORTANCE OF LEARNER'S BEHAVIOR

In higher education it has been noted that general teaching habits:

.. Absentminded

.. Passive learners' classroom with less of interaction and stimulation

.. Mid program dropouts (student's situation)

Also, the researchers have found that the more based learning leads to the learning of the emotional and intellectual aspect of the teacher on the student. In education direct instruction, position teaching, personalized instruction and other behavior analysis approaches have great success, it is in regular or special education or even higher education [1].

Accurate take content methods (the learner to prepare the initial studies in a custom and creative way. This reflects the direct outcome and the assessment scores in a positive manner.

Adaptive learning systems cope up with individual differences made of them up of psychological processes

effectively contributing to the learner's behavior as an 'active learner and not merely as a passive learner'.

III. NEED OF PERSONALIZATION IN EDUCATION

Traditional learning is "like dropping ideas into the letter box of the subconscious. You know when they are good, but you're never knowing what he actually is learning" [2].

The action of continuous taking of notes (competitive action during classroom lecture) is often performed in a reflexive, mindless manner. According to research, this competitive task eventually results in first task being ignored by lower centers of the brain that control automatic behavior, with a mild involvement of higher (critical) areas of the brain responsible for higher-level thinking. This finding is captured very clearly in the old saying, "During lecture, information passes from the lecturer's notes to the student's notes and through the mouth of another" [3].

Personalized learning systems empower the learners to be in control of the content, speed and the extent of their learning experience.

IV. NEED OF BEHAVIOR BASED PERSONALIZATION

CATE, The Center for Adaptive Technology Education was designed for use by students, staff and faculty with disabilities to incorporate the use of computers and related technology into the learning and working atmosphere of Eastern Michigan University [4].

Its Lab provides technology accommodations to students with permanent or temporary disabilities for the purpose of determining how adaptive technology can improve the learning environment. Services provided there include the following:

.. Initial Technology Evaluations including a survey of the more current simulations, assessment of the required tasks to be performed and a consultation of adaptive technological solutions.

.. Individualized Training on Adaptive Equipment.

.. Screen Accommodation facilities for those unable to take tests in the classroom.

.. Converting documents into alternate formats including text to speech, computer disk, Braille and large print.

A conference "Adaptive Behavior in Adaptive Learning Systems (AIBALS 2006)", was held in March

APA Template for research papers

<http://www.academic.marist.edu/CTE/APA%20Template%20092806.doc>

First page using APA style

<p>An Experimental Study 1</p> <p>Running head: IDENTIFYING THE IMPACT OF EXPERT FILTER TOKENS</p> <p>An Experimental Study to Identify the Impact of Expert Filter Tokens for Syllabus Based Searches</p> <p>S.A.M. Rizvi</p> <p>Department of Computer Science, Jamia Millia Islamia, New Delhi, India</p> <p>samsam_rizvi@yahoo.com</p> <p>Saba Hilal</p> <p>DAV Institute Of Management, NH3, NIT, Faridabad, Haryana, India</p> <p>saba21hilal@yahoo.com</p>

Ninth Step towards Success:

Congrats!

You know how to use the different research paper writing styles.

The Research Presentations

Step 10

What is the difference between poster and oral presentation?

In oral presentations most of the 'talking' is done by the presenter while in the case of poster presentation, the poster needs to convey the essence of the message.

So, in the poster presentation the message should be clear and understandable without oral explanation.

Why present research as a poster?

- Increased Participation
- The poster format is sometimes superior for the presentation of data.
- The individual presentation time of a panel, i.e. 15-20 minutes is often not enough time.
- Poster sessions are a consideration to foreign colleagues.

The Art of Presenting Research Posters

A poster is a static, visual medium that is used to communicate ideas and messages. It

can be of paper or board variety. In other words, a poster is essentially the paper presented on a poster board.

Guidelines for poster presentation

These guidelines do not deal with the worth of the idea being presented, but instead focus on what can be done in the preparation and presentation stages of a poster session to enhance its audience appeal by making it more clear, understandable, logical, attractive, and impressive.

How much poster space is allowed?

- If the poster is to be presented at a conference or convention, limited space is given for the poster display.
- The allowed space determines the content of the poster.
- This is usually communicated to the presenter in advance.
- If clear instructions are not given to the presenter, the poster can be made using separate sheets, as this gives more flexibility.

Deciding on the content

- Why to design the poster?
Is it to sell a product?

Is it to tell people what you have done?
Is it to tell people of a new discovery?
Is it to convince people that one product or technique is better than another?
• Who is going to attend the presentation?
Are they technical people?
What is the level of their knowledge of your subject area?

Project poster presentation

(General content for the poster)

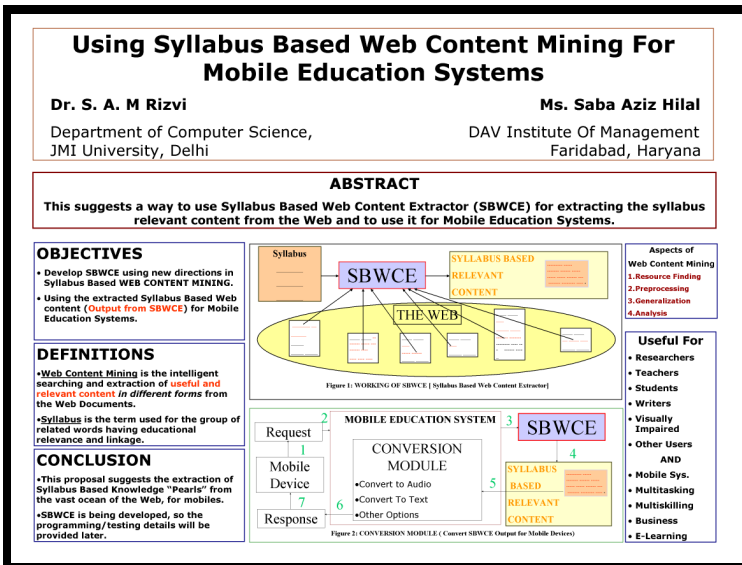
In general the following are included:

- Title page (including the title of the project, the people involved in the work and their affiliation).
- Abstract
- Introduction
- Objectives
- Theory or Methodology
- Results
- Conclusion
- Further Work

Using PowerPoint for designing the poster

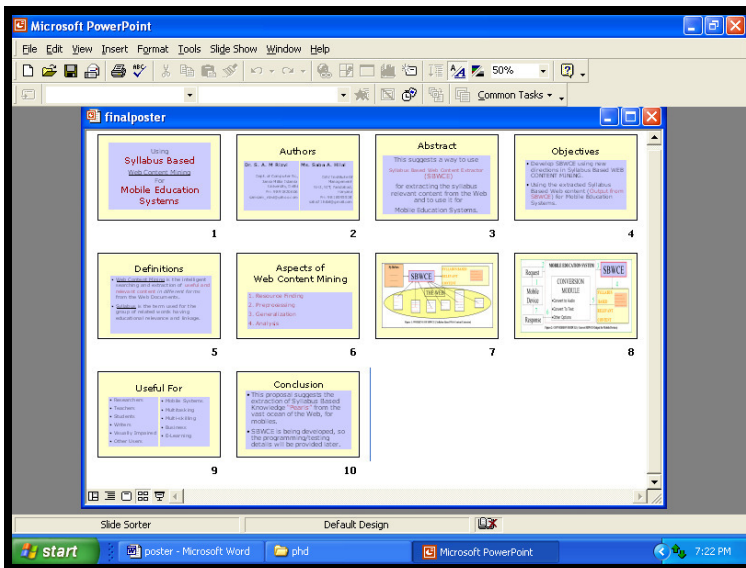
- Start PowerPoint
- Make a New presentation – a blank one.
- When asked for a Layout, choose a blank one – one without anything – even a title.

- Choose the size of the poster. If the size is not specified select a poster size approximately/exactly 48-60" wide (across) and 36" in height (top to bottom).



A fixed dimensional POSTER

- If the fixed dimensions for the poster are not specified, the poster sections can be prepared on A4 sized paper for sticking them onto mounting boards or display stands.

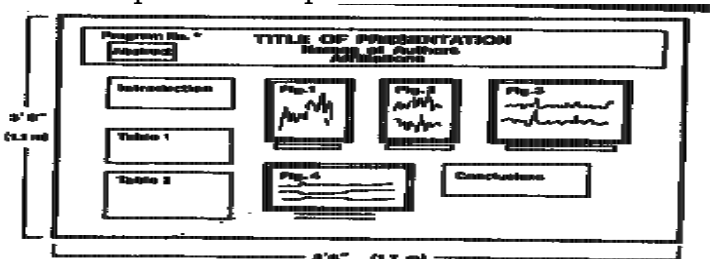


POSTER designed as 10 A4 size sheets

- Start designing the poster. Follow the design rules (see design rules).
- Get the poster printed using a high quality printer/plotter.

Design Rules

Plan and plan...and plan!



Points to Remember while Designing:

- Simplicity (Keep the material simple)
- Use colours sparingly and with taste
- Do not use many font types
- Titles and headings should appear larger than other text, but not too large. The text should also be visible from a distance, say from 1.5m to 2m. A point size of 16-18 (5-6 mm) or larger is recommended for body text.
- Do not use all UPPER CASE type in your posters.
- Avoid abbreviations, acronyms, and jargon.
- Equations should be kept to a minimum.
- Diagrams and drawings should be labeled, large and clear enough so that they are legible from a distance.
- Choose appropriate graphs types.
- Check the spellings.
- Maintain a consistent style.
- Arrangement of poster components should appear smooth.
- Review, review and review.

Tips for Poster Presentations

- Handouts relative to poster presentations are popular and encouraged.
- Have a notepad handy when presenting at the poster session. It may be helpful in elaborating the findings, or for taking

names & addresses of people interested in the research.

The poster presenter should also consider bringing the following items:

- Double-sided adhesive tape and scissors, pushpins etc.
- Business cards with up to date contact information
- Promotional leaflet
- A laptop for running the demo
- The demo on backup media (CD-ROM)
- Publications to distribute (e.g. paper reprints)
- Publications to display (e.g. a book)
- An attire appropriate for the occasion - consider wearing a T-shirt with the research project's logo
- Drinking water
- Reading material, to pass time if attendance is low.

Tenth Step towards Success:

Congrats!

You know how to have a great poster presentation.

End of Step 10

ENJOY YOUR RESEARCH WORK