


A large graphic of a target with concentric red and white rings. A golden arrow with a blue feathered tail is shown hitting the center bullseye. The target is positioned on the right side of the upper half of the slide.

RESEARCH

QUALITY RESEARCH WRITING

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**“Reading maketh a full
man, conference a ready
man, and writing an exact
man.”**

- Francis Bacon

RESEARCH WRITING

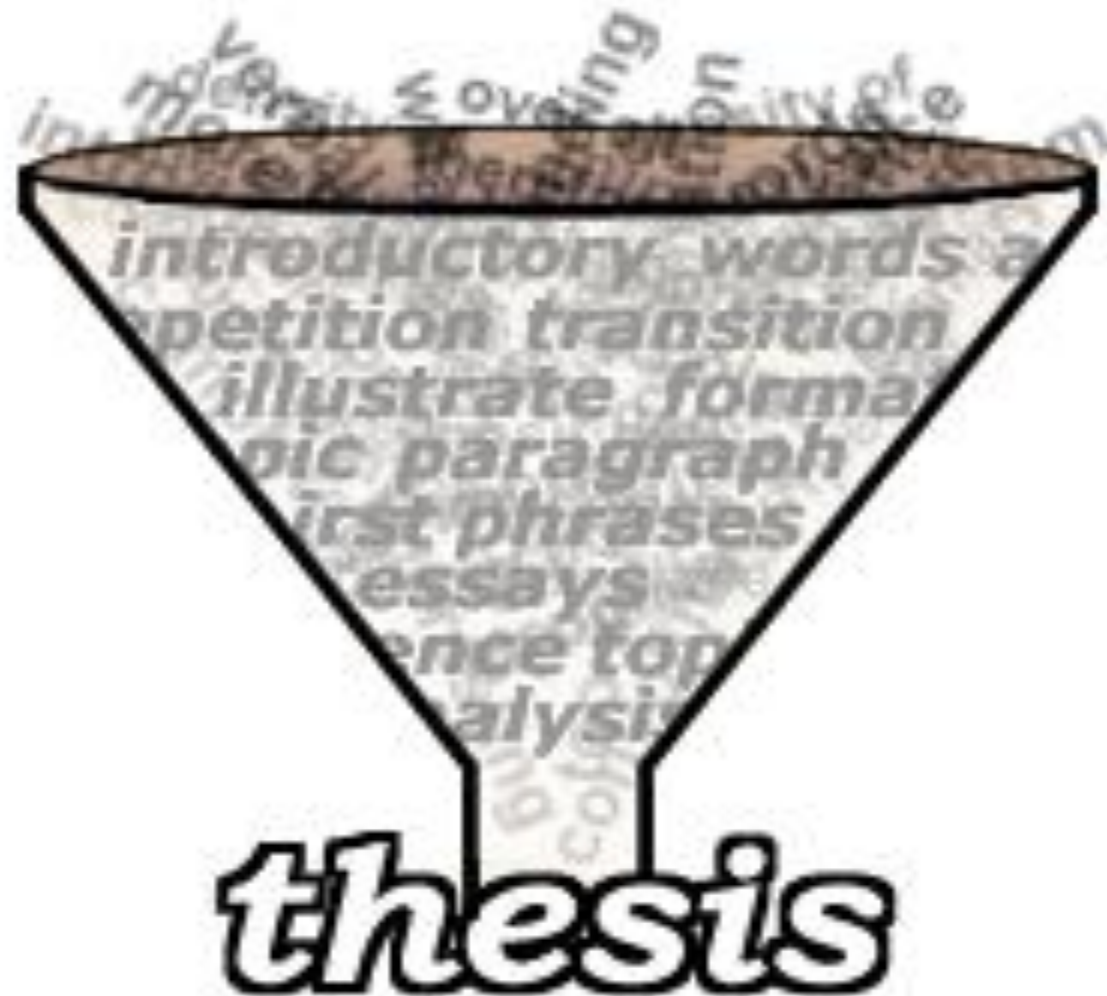


RESEARCH WRITING

How it feels when you write your
PhD thesis 😊



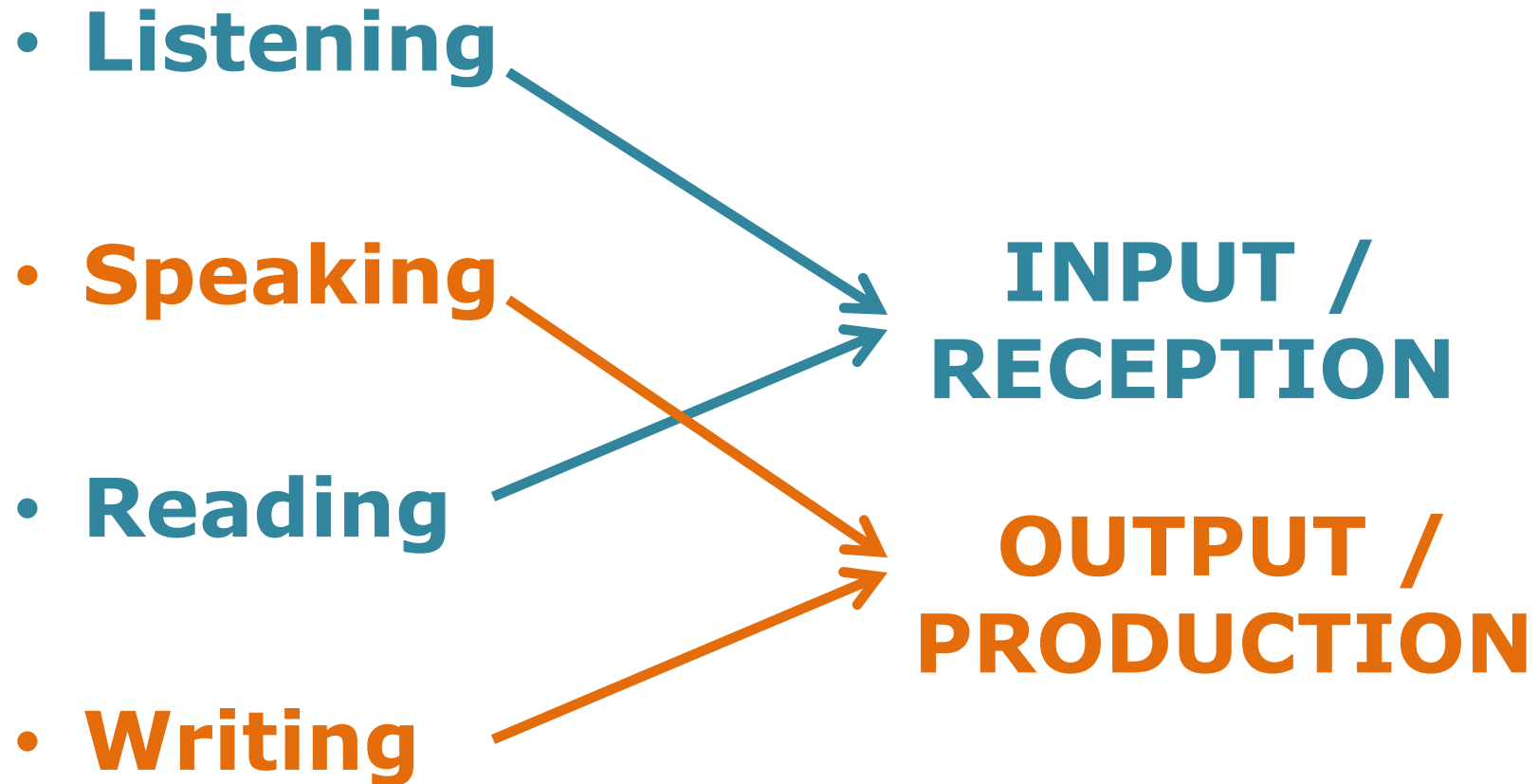
RESEARCH WRITING



The Proof of Pudding is in the Eating ... !



Communication Skills



Production Skills



SPEAKING

WRITING

Writing Styles



**“What a piece of work is man !
How noble in reason! How infinite
in faculty ! In form and moving,
how express and admirable ! In
action, how like an angel ! In
apprehension, how like a God ! The
beauty of the world ! The paragon
of animals !”**

- Shakespeare

Writing Styles



“Man is a metazoan, triploblastic, chordate, vertebrate, pentadactyle, mammalian, eutherian primate.”

-From a research article

Writing Styles



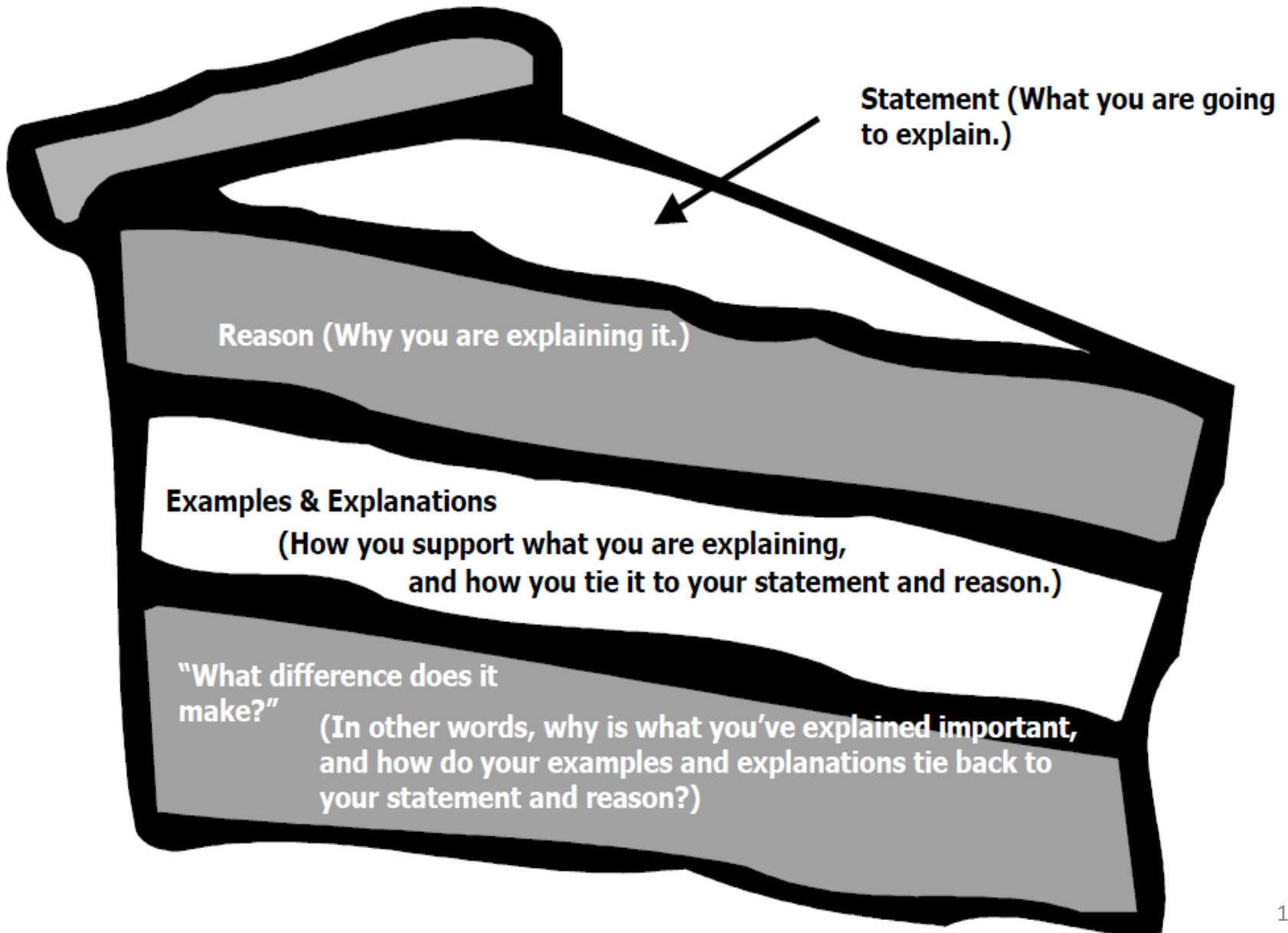
- **Descriptive**
- **Expository**
- **Narrative**
- **Persuasive**
- **Argumentative**
- **Technical**
- **Literary**

Expository Writing



- **seeks to inform, explain, clarify, define or instruct.**
- **assumes that the reader has prior knowledge or prior understanding of the topic that is being discussed.**

EXPOSITORY WRITING CAKE



Expository Writing - Characteristics



- **Focus on main topic**
- **Details, Explanations and Examples**
- **Strong Organization**
- **Clarity of Thought and Expression**
- **Unity and Coherence**
- **Logical Order**
- **Smooth Transitions**

TRANSITIONAL WORDS & PHRASES

INFORMATIVE/EXPLANATORY TEXTS

To Clarify:

after all, as can be expected, clearly, generally, markedly, namely, naturally, obviously, of course, specifically, surely, usually

To Show Relationship:

as for, by the same token, comparatively, correspondingly, coupled with, equally, identically, in comparison, in the same way, moreover, likewise, similarly, still, together with, with regard to, with reference to

To Link:

also, and, as an example, as an illustration, as far as, furthermore, for example, for instance, in addition, in contrast, in the same way, moreover, next, not only...but also, now, similarly, so, to, thus, turning to

Expository Writing – Patterns



Pattern	Description	Cue Words
Description	The author describes a topic by listing characteristics, features, and examples.	for example, the characteristics are
Sequence	The author lists items or events in numerical or chronological order.	first, second, third; next; then; finally

Description



- **The Olympic symbol consists of five interlocking rings. The rings represent the five continents - Africa, Asia, Europe, North America and South America - from which athletes come to compete in the games. The rings are colored black, blue, green, red and yellow. At least, one of these colors is found in the flag of every country sending athletes to compete in the Olympic games.**

Sequence / Narration



- **The Olympic games began as athletic festivals to honor the Greek gods. The most important festival was held in the valley of Olympia to honor Zeus, the King of the Gods. It was this festival that became the Olympic Games in 776 B.C. These games were ended in A.D. 394 by the Roman Emperor who ruled Greece. No Olympic games were held for more than 1,500 years. Then the modern Olympics began in 1896. Almost 300 male athletes competed in the first modern Olympics. In the games held in 1900, female athletes were allowed to compete. The games have continued every four years since 1896 except during World War II.**

Expository Writing – Patterns



Pattern	Description	Cue Words
Comparison	The author explains how two or more things are alike and/or how they are different.	different; in contrast; alike; same as; on the other hand
Cause and Effect	The author lists one or more causes and the resulting effect or effects.	reasons why; if...then; as a result; therefore; because

Comparison



- **The modern Olympics is very unlike the ancient Olympic games. Individual events are different. While there were no swimming races in the ancient games, for example, there were chariot races. There were no female contestants and all athletes competed in the nude. Of course, the ancient and modern Olympics are also alike in many ways. Some events, such as the javelin and discus throws, are the same. Some people say that cheating, professionalism, and nationalism in the modern games are a disgrace to the Olympic tradition. But according to the ancient Greek writers, there were many cases of cheating, nationalism, and professionalism in their Olympics too.**

Cause & Effect



- **There are several reasons why so many people attend the Olympic games or watch them on television. One reason is tradition. The name Olympics and the torch and flame remind people of the ancient games. People can escape the ordinariness of daily life by attending or watching the Olympics. They like to identify with someone else's individual sacrifice and accomplishment. National pride is another reason, and an athlete's or a team's hard earned victory becomes a nation's victory. There are national medal counts and people keep track of how many medals their country's athletes have won.**

Expository Writing – Patterns



Pattern	Description	Cue Words
Problem and Solution	The author states a problem and lists one or more solutions for the problem. A variation of this pattern is the question- and-answer format in which the author poses a question and then answers it.	problem is; dilemma is; puzzle is solved; question... answer

Problem & Solution



- **One problem with the modern Olympics is that it has become very big and expensive to operate. The city or country that hosts the games often loses a lot of money. A stadium, pools, and playing fields must be built for the athletic events and housing is needed for the athletes who come from around the world. And all of these facilities are used for only 2 weeks! In 1984, Los Angeles solved these problems by charging a fee for companies who wanted to be official sponsors of the games. Companies like McDonald's paid a lot of money to be part of the Olympics. Many buildings that were already built in the Los Angeles area were also used.**

Language of Research



- **'Language Apart' – Register**
- **Goal-directed**
- **Business-like**
- **Unornamented**
- **Targeted to a specific group**
- **Free from ambiguity**
- **With the precision of scientific equations**
- **Clear and Candid**

Research Writing



- **Never Writing, always Rewriting**
- **Analyzing, Revising and Improving**
- **Role of Peers' and Experts' Comments**
- **Reviews of similar research reports for different styles.**
- **Continuous process, not to be left to the end of the work**

Research Writing



- **Key Point – Clarity**
- **Direct, Simple and Coherent**
- **KISS Principle**
- **Simplicity and Brevity, not at the cost of reason or complexity of the researcher's assertions**
- **Standards of Accuracy - Higher**

Research Writing



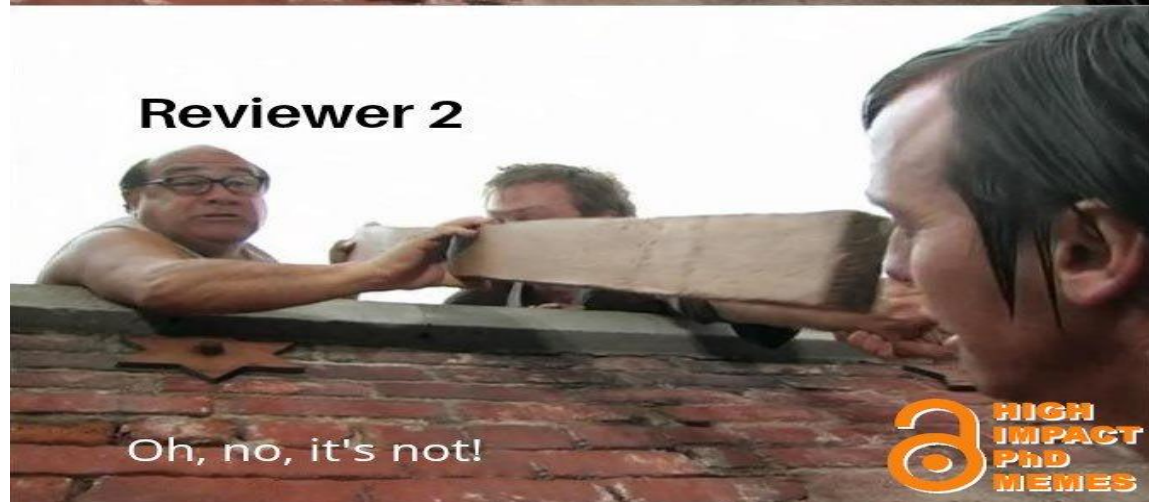
- **Tone – Impersonal**
- **Personal pronouns avoided**
- **Use of adjectives and fancy phrases avoided**
- **Use of third person (?)**
- **Use of dummy subject**
- **Appropriate use of ‘tenses’**

Research Writing



- **Use of non-sexist language to avoid gender bias.**
- **Use of plurals - 'they' and 'their' instead of 'his' or 'her'**
- **Perfect sentence structure and grammar**
- **Spelling, Capitalization, Abbreviation and Punctuation**

Research Writing



Negative Mannerisms



- **TAUTOLOGY (Expressing something needlessly in different words)**
 - **I went there personally.**
 - **My first priority is to lose weight.**
 - **She always over-exaggerates things.**
 - ***I heard with my own ears.***
 - **The visitors arrived in succession, one after the other.**
 - **There is a meeting at 06.00 a.m. in the morning.**

Negative Mannerisms



- **TAUTOLOGY (Expressing something needlessly in different words)**
 - Is the material adequate enough for the paper ?
 - I never make predictions about the future.
 - Morning sunrise and evening sunset
 - ATM Machine
 - PIN Number
 - ISBN Number

Negative Mannerisms



- **VERBOSITY (Expressive Style that uses excessive or empty words; pomposity, circumlocution)**

"Three good things happen when you combat verbosity: your readers read faster, your own clarity is enhanced, and your writing has greater impact. Both you and your readers benefit."

- Bryan A. Garner (2001)

Negative Mannerisms



- **VERBOSITY**

- Amidst the sweet reverberations caused by the melodiously composed musical milieu, descended on the dais, his would-be soul mate for the rest of the journey called ‘life’, attired in snowy-white costumes and her tearful eyes stole a glance of his countenance from behind the veil of modesty and grace.
- **The bride looked at the groom.**

Negative Mannerisms



- **VERBOSITY**

- Even after the doomsday of nuclear warfare, when all the known signs of life will be swept off by electromagnetic radiations, a tiny familiar animal with twin antennal-flagella and jointed legs, though with faded exoskeleton, will come out from a weary hole on the face of a red-burnt cliff to be the new master of this once homo-sapiens dominated piece of the universe.
- **A cockroach can survive through a nuclear war.**

Negative Mannerisms



- **VERBOSITY**

- The emperor of the moving kingdom visualized the overcast sky, sensed the tempest in- the- make and sighed dejectedly. This man who found at his finger tips, making the mighty iron vessel slip on the huge blue mat of the nature, now felt like a helpless soul and ultimately allowed the vehicle of about thousand travelers on board to dance to the whim of the waves.
- **The captain lost control of the ship.**

Negative Mannerisms



- **JARGONS (The outlandish technical language of a particular profession, group or trade)**
 - **Medical**
 - **Afebrile**
 - **NPO**
 - **Business**
 - **The end-user perspective**
 - **Face time**

Negative Mannerisms



- **JARGONS (The outlandish technical language of a particular profession, group or trade)**
 - **Police / Military**
 - **Operation**
 - **The suspect assumed room temperature during the interrogation.**
 - **Political**
 - **Right Wing, Left Wing**
 - **POTUS**

Negative Mannerisms



- **COLLOQUIALISMS (Expressions & Grammatical forms used in familiar speech, but inappropriate in formal writing – regional, informal)**
 - **Free expressions – hold on, long time-no see, what's up ?**
 - **Contractions – We're, I've, para, lab**

Negative Mannerisms



- **SLANGS (Not a part of standard vocabulary)**
 - **Cool**
 - **Supersize**
 - **Mega**
 - **Bloody**

Negative Mannerisms



- **CLICHES (Over-used words / phrases)**
 - **As a matter of fact**
 - **To be frank**
 - **To tell you the truth**
 - **The shock of my life**

Some Examples



- **To find out the significance of difference between the mean intelligence scores of the male and female participants.**
- **It was found that the mean religious attitude score of the men is higher than the women.**
- **The advertisements of the Central Government are informative and creative.**

Some Examples



- **The data were subjected to appropriate descriptive and differential analysis.**
- **The data reveals that**
- **Data correction was done by the investigator in the respective institutions.**
- **58 items were pooled initially for the Rating Scale.**

U (The digital revolution and economic globalization have heralded a new era towards the global knowledge society where information, skills and competence become the driving forces of social and economic development. The problems associated with this transformation cannot any longer be solved by traditional means.) (2) The Indian higher education system is said to be the one of the largest sector in the world with around 600 universities and 35,000 colleges. Despite of this, India is hardly able to register 15% of the Gross Enrollment Ratio as against 23% GER at global level.) (3) The technological enhanced learning will help the young population crying out for better education in biology and the possibilities of better education can be attained through

ultimately go on & soon...

Learning is a non-substitutable necessity and an everyday phenomenon of every one's

life-right from a toddler with 2legs to the toddler with 3legs (inclusive of the support stick). This

being a widely accepted fact, learning and education becomes an irreplaceable necessity of

mankind. Science is a systematic enterprise that builds and organizes knowledge in the form of

Distance Education courses are very popular in rural India. One of the

main reasons for this is the provision that one can get degrees from various

renowned universities from anywhere in India. Distance education is given

through correspondence courses, where the student and the teacher are

separated in time and space and sometimes both. ~~Distance learning is doing a~~

~~wonderful job by the society~~ ^{which give} have an opportunity to get educated.

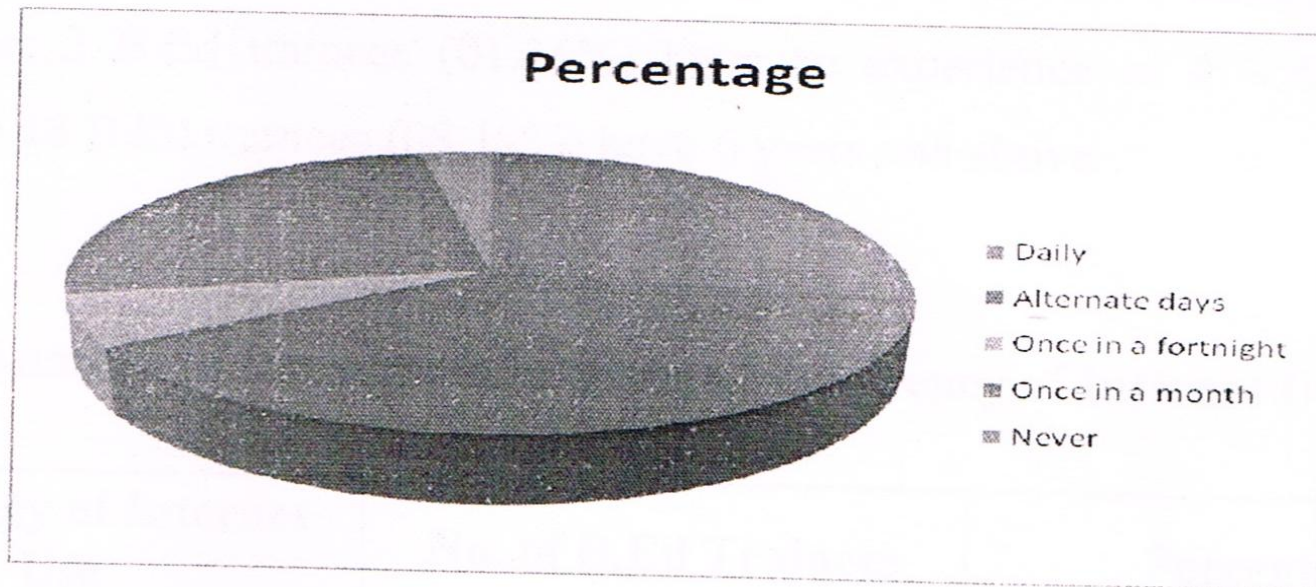
“The challenge before a researcher is to make sense out of massive amount of data, reduce the volume of information, identify significant patterns and construct a frame work for communicating the essence of what the data reveal.”

- John W. Best (1971)

In this chapter the procedure under taken for the processing and analysis of information obtained from the survey is presented. Information is processed according to the purpose of research. The bulk of information obtained from the

Figure – 4.1

Pie chart showing the Sample in terms of Frequency of Computer Use



The above table (Table 4.7) gives the analysis of the sample in terms of the B.Ed Trainees Frequency of Computer Use. As observed, 60 B.Ed trainees

Some Examples



- **“There is no significant difference between the mean Adjustment scores of the Higher Secondary students who have literate and illiterate fathers.”**
- **“There is no significant difference between the mean Adjustment scores of the Higher Secondary students, sub-grouped on the basis of their literacy level.”**

Some Examples



- **“The expected prevalence of mental retardation, based on the assumption of a normal distribution of intelligence in the population, is stated to be theoretically about 2.5%.”**
- **“The expected prevalence of mental retardation, if intelligence is normally distributed, is 2.5%.”**

Some Examples



- **“To control infection with *Mycobacterium tuberculosis* (M. tb), a robust cell-mediated immune response is necessary, and deficiency in this response predisposes an individual towards active TB.”**
- **“Deficiency in T-cell-mediated immune response predisposes an individual to active TB.”**

Editing / Revision



- **“This paper provides a review of the basic tenets of cancer biology study design, using as examples studies that illustrate the methodologic challenges or that demonstrate successful solutions to the difficulties inherent in biological research.”**

Editing / Revision



- **~~“This paper provides a reviews of the basic tenets of cancer biology study design, using as examples studies that illustrate the methodologic specific challenges or that demonstrate successful and solutions to the difficulties inherent in biological research.”~~**
- **“This paper reviews cancer biology study design, using examples for specific challenges and solutions.”**

Some Web Resources



<https://owl.english.purdue.edu/>

<http://www.umuc.edu/writingcenter/onlineguide/>

<http://www.stevendkrause.com/tprw/>

<http://www.esc.edu/online-writingcenter/resources/research/>

<http://www.esc.edu/online-writing-center/resources/exercises/>

Communication...incorrect..!



- **Class teacher once said : "Pick up the paper and fall in the dustbin!!!"**
- **The teacher in the class : "Shhh... quiet...the principal is revolving around college"**
- **Seeing the principal passing by, the teacher told the noisy class.."Keep quiet till the principal passes away"**
- **The teacher to the student, "Will you hang that calendar or else I will HANG MYSELF".**
- **Chemistry HOD says, "My aim is to study my son and marry my daughter".**

Communication...incorrect..!



Leave Letters

- **As I have to go to my native place to sell my lands with my wife, I request you to declare leave for**
- **Since my father-in-law has expired and I am only responsible, I am in need of two days holidays.**
- **As I am going to the burial ground for a funeral and I may not return, kindly declare holiday for one day.**



THANK YOU ... !