

Types of Psychological Research (on the basis of application)

1) Pure and Applied Research

- This dichotomy in research and the accrued knowledge is age-old and is existing in all sciences - natural as well as psychosocial.

For example - Pure and applied mathematics and economics & psychology etc.

- "The supporters think that these 2 variety of researches differ from each other with respect to the guiding force, manifesto and degree of freedom enjoyed by the researcher". old and conventional view.

- However modern view regarding pure and applied dichotomy does not consider these two as varieties of researches. Rather they consider them to be complementary to each other like two sides of the same coin for reasons which are as follows:-

- That both pure and applied researches follows the same scientific methodology.
- That the starting point of scientific enquiry does not determine its type. At initial stage, a given research may appear to be pure but ultimately it may lead to such findings that have great practical or applied value. Likewise applied research may appear initially applied, but it may lead to the discovery of new principles that are entirely pure in nature.

Possible interplay from the side of Applied research

- Applied research can give birth to fundamental laws and principles. For eg. Pavlov dog experiment led him to the establishment of the great principles of conditioning.
- Applied research can put theory to verification and by doing so it tests whether the given theory is valid or not.

Date: _____ Page: _____

- Applied research can help in conceptual clarification without which the given sciences cannot grow.

- Applied research may integrate previously existing theories

Possible interplay from the side of pure research.

- Pure research by developing a general principle, offers solutions to many practical problems.
- Pure research helps in finding out the key factors in a practical problem and offers a mutually enduring solutions.
- The findings of pure research may suggest to the policy makers better way of doing the things.
- Pure research may suggest alternative solutions of some practical problems with the result that consumers of the research findings may prefer the best

costly and less time consuming solution to tackle the problem successfully.

	Pure or Basic	Applied
Guiding force (motivation)	The pure researcher is motivated to know more about the nature	The guiding or motivated force of the applied researcher is betterment of life.
Manifesto	Knowledge for the sake knowledge is the manifesto	Knowledge for the sake of betterment of life is the aim of the applied researcher.
Degree of freedom	The pure researcher enjoys complete freedom. He is free to select any topic of his choice and conduct research to know the underlying principle phenomena of the given phenomena	The applied researcher works under any org. or agency whose task is to conduct research for ^{practical} problem solving.

② On the basis of objective
Experimental, Non experimental and
Quasi-experimental

a) Experimental

② On the basis of development.
Longitudinal and Cross sectional

- This type of dichotomy is generally encountered in the science of genetics and child of developmental psychology.
- In longitudinal research, the same sample of children is studied continuously at successive period for a pretty long time, in order to gain information on the growth process and to establish developmental norms. Hence it is also known as 'Genetic longitudinal Approach'.
- On the contrary, in cross-sectional research, cross-sectional samples of children of successive ages are studied in order to gain information on the growth process and to

establish developmental norms. Hence it is also known as "Normative Cross sectional Approach".

- The both approaches try to achieve the same common goal namely gathering information on the growth process for developing the growth norms or standards with which the growth level of a given child can be compared.

Except the point of commonness these 2 approaches differ on several grounds

- It is said that longitudinal research is basically sound due to its power of giving accurate information regarding the growth process. But it is possible ~~is~~ with a limited number of cases. So with such an adequate number of sample, establishment of the developmental norms is not sound as per canons of research methodology.
- That is why cross sectional research is more popular in child or developmental psychologists.

③ Global Types

Sharing the view of Scott and Westheimer (1962), all sort of behavioural researchers can conveniently be classified into 3 global types

- ① Problem Solving
- ② Theory developing
- ③ Theory - Testing

① Problem Solving Research - As the name applies implies, the researchers falling under this category are always applied in nature. They are mostly concerned with seeking ^{scientific} solutions to the problems affecting day-to-day working.

② Theory developing Research -

Under this category comes all those researchers that aim at clarifying the implicit hunches existing in the mind of the researchers with an intention to build up some theory. This type of research is exploratory and theoretical or basic in nature. The researchers comes under this type of caption are always concerned with

answering 'what', 'how' and 'why' aspects of the phenomena under investigation.

③ Theory testing Research -

It is difficult to separate clearly theory developing research from the theory - testing research because both are basic and pure in character and are governed by 'knowledge for the sake of knowledge' manifesto.

In theory - developing research, 'inductive logic' is the dominating system whereas in theory - testing research, 'deductive logic' is the prominent system.

④ Exploratory Research.

- Exploratory research is an important part of any marketing or business strategy.
- Its focus is on the discovery of ideas and insights as opposed to connecting statistically accurate data

Date: _____ Page: _____
It is most commonly used for defining company issues, for potential growth, areas courses of action and alternative prioritizing areas that require statistical research.

When it comes to online surveys, the most common example of exploratory research is the form of open-ended questions.

- Test responses may not be statistically measurable, but they will give you richer quality information that can lead to the discovery of new initiatives or problems that should be addressed.
- Exploratory research is conducted in order to determine the nature of a problem. Exploratory Research provides researchers with a better understanding of the problem, but the results of exploratory research are typically not useful for decision making alone.

- Exploratory research can be used in various various type of research methods, including -

- trial studies
- pilot studies
- interviews
- case studies
- focus groups
- and various experiments

- Exploratory research takes the form of open-ended questions - questions where participants can leave responses in the format of open text comments.

⑤ Descriptive Research. (quantitative)

- It takes up the bulk of online surveying and is considered conclusive in nature due to its quantitative nature.

- Unlike exploratory, it is preplanned and structured in design so that the information collected can be statistically inferred on a population.

- The main idea behind using this type of research is to better define an opinion, attitude or behaviour held by

Date: _____ Page: _____

a group of people on a given subject. Consider your everyday M.C.Q. Since they are predefined categories a respondent must choose from it is considered descriptive research.

- Grouping the responses into predetermined choices will provide statistically inferable data. This allows you to measure the significance of your results on the overall population you are studying, as well as the changes of your respondents' opinions, attitudes and behaviours over time.

- The objective of descriptive research, also known as statistical research, is to describe situations.

- Unlike exploratory research, descriptive research is methodically planned, designed and formatted to collect quantifiable data.

Grouping responses into set choices will provide statistically conclusive data.

Date: _____ Page: _____
Descriptive Research (quantitative) uses quantitative methods to describe what is, describing, recording, analysing and interpreting conditions that exist.

It involves types of comparisons or contrast and attempts to discover relationships between existing nonmanipulated variables.

Some form of statistical analysis is used to describe the results of the study.

(causal / explanatory)

⑥ Experimental Researches.

Under this category all those psychosocial, and educational researches that are experimental in nature.

An experimental research, in true sense of the term, is one in which experimenter enjoys complete manipulation control over the 'independent variable'(s) involved in the study. This is only possible only in the case of such IV that is not 'continuous'.

Date: _____ Page: _____
Hence there are 2 types of research in the experimental category:-

- (A) Laboratory experiment
- (B) Field experiment.

A) Laboratory experiment.

— As the name implies it is an experiment performed under controlled conditions of the laboratory because the experimenter has the full control over his/her variable at his/her will.

— It aims to investigate the relation between the independent and dependent variable under the controlled conditions created within the four walls of laboratory so that the verification of the causal relation takes place with minimum confounding effect if any, purer conditions. It can be done on single subject or on a group. The steps involved in psychological laboratory experiment are as follow.

~~(A) Problem~~

- i) Problem
- ii) Hypothesis
- iii) Variables and their control
- iv) Design
- v) Equipments and Material
- vi) Subjects
- vii) Procedure
- viii) Introspection
- ix) Analysis and Discussion
- x) Conclusion.

- Pavlov's experiment with the dog for identifying the determinants of classical conditioning and the Skinner's experiment with the pigeon for studying the effects of different schedules of reinforcement upon operant conditioning can be cited as good illustration of laboratory experiment.

- A bright series of experiments by Neal Miller and his colleagues has upset another long-held and well cherished belief - that learning occurs only with ^(moving hand) voluntary responses, and that the ^(heart rate, Blood pressure) involuntary responses is subject only to classical conditioning.

- ~~They~~ Their work has shown that through instrumental conditioning the heart rate can be changed, stomach contractions can be changed, and urine formation can be altered. This discovery is "super important".
- The idea of experiment is simple: reward one group of rats when their heart rates go up, and reward another group of rats when heart goes down.
- Miller's big problem was control. There are various reasons that can change heart rate - for eg muscular exertion.
- To control such extraneous variables Miller and his colleague (Tromell) paralysed the rats.
- They decided to use direct electrical stimulation ~~to~~ of the brain as all can not reward paralysed rats.
- The dependent variable, heart rate was continuously monitored through electrocardiograph, which has a small

Date _____ Page _____

change in heart rate occurs (in the right way) an animal was ~~rewarded~~ given an electrical impulse to a reward centre of its brain.

This was done till the animals were "trained"

② B) Field Experiment.

This variety of research is ~~is~~ essentially experimental in character but it is carried out in real life situations

In other words, here the experimenter manipulates at his will, his active independent variable in real life and exercises control over the suspected & extraneous variables as the real life active independent variables and the dependent variable under the permissible control conditions of the real life situations

- Thus, no large steps differentiate it from the laboratory experiment except ~~it~~ that fact it is performed in the field where as other is in laboratory

- Since experiment is performed in real life situations, has to take extra ^{special} care with respect to planning and conduct of such experiments.
- Moreover, he can ^{not} carry ~~handle~~ this out such experiments single handedly. It becomes a team work, requiring co-operation from his co-experimenters.
- Field experiment is a tedious task that demands a field experimenter who is both a task specialist and socioemotional specialist.
- In the third quarter of 20th century Tata Institute of social sciences, Bombay was entrusted the task of studying the impact of "agricultural bulletin" through radio upon the farming populace, by the state Govt. of Maharashtra. For this purpose a field experiment was designed and carried out.

⑦ Quasi Experimental

It is also known as semi-experimental research

In this variety, out of the two or more independent variable involved in the study at least one is 'active' IV and at least one is an 'assigned or attribute' IV.

Thus here, researcher exercises control over his independent variable by the method of ~~selection~~ purpose manipulation and by the method of selection

He uses former method for exercising control over his active IV and latter for his 'assigned' IV.

The steps involved in Quasi research are by and large the same, which we have in connection with laboratory experiment, except that it deals with two or more IV of which ^{most} one is active IV and the remaining 'assigned' IV.

Date _____ Page _____

like laboratory Exp. it cannot be performed on a single subject.

The most appropriate design for such studies is the 'factorial design'.

It may be of a 2×2 , 2×3 , $3 \times 2 \times 2$ factorial variety, depending upon the number of IV involved in the study and the study number of variations introduced in each IV.

⑧ Non - experimental Research.

Under this category fall the researches that are non-experimental in nature.

Non-experimental research is one in which no attempt is made by the researcher to manipulate his IV and control ~~ext~~ exercised by him over the extraneous variable is loose.

There are 3 researches grouped under this category -

- A) Ex post facto
- B) Field studies
- C) Survey.

A) Ex post facto research

It is a scientific enquiry in which a given phenomena is studied after its occurrence with an intention to search out its already occurred antecedent conditions in a retrospective fashion so as to establish a causal link the phenomena and the causal agent(s).

Hence it is justifiable called 'ex post facto' because its literal meaning is "from what is done afterwards".

For example - investigator takes a case of lung cancer and then goes back to explore the probable cause of it. He may find that cigarette smoking and a chronic cough are the most common associated with lung cancer.

Here, lung cancer is dependent variable and smoking and chronic cough is IV.

These 2 IV have already occurred therefore they are beyond the direct control of the investigator.

B) Field Studies

Any ex post facto study which systematically discovers relations and interactions among variables in real life situations such as school, factory, community college etc may be termed as a field study.

— There are ~~two~~⁴ imp. features of field study :-

① They are basically ex post facto in character

② They are always conducted in life situations such as some institutions, org., communities or factory as a target of investigation.

③ They are devoted to investigating the relations and interactions among psychological, sociological, and educational variables.

④ No attempt is made to manipulate (active) IV in such studies.



— There are 2 types of Field Studies (Merlinger) :

- (a) Exploratory field studies is one that intends to discover significant variables in the ~~va~~ field situations and find out relations among those variables so that the groundwork for better and more systematic testing of hypotheses can be laid obviously. For correlates productively with various factors like age, sex, pay, hours. But no hypo. formed.
- (b) Hypothesis field testing studies is one in which the investigator formulates some hypotheses and then proceeds to test them.

For eg. ~~he~~ formulates the hypothesis that the prolonged^{hours with} the poor pay of work may result in lower productivity. On the basis of the results obtained by Hypotheses testing field study, he will verify the ~~test~~ hypotheses.

c) Survey Research

Survey is a blanket term. Dictionary defines it as a careful and objective inspection of something to provide exact information about it.

In this sense, it converse census, opinion poll and survey research. They are different as

- The term census refers to the study of entire population that it undertaken officially or unofficially with an object to provide an exact info. about the number of people and their vital facts such as sex, education, age occupation, marital status.

The opinion poll also refers to the study of the infinite ^{or} finite population, but is always carried out on a representative sample of a given population with an objective to know as accurately as possible opinion or attitude of the public regarding some issues.

The term survey research however, has a special connotation in social scientific investigation. No doubt it also studies the population however it always does so by dealing with the representative sample drawn from large or small populations with an objective to discover not only the relative incidence or distribution of the sociological, psychological and educational variables but also the interrelations among them.

Survey researches covered by this connotation are called 'sample survey' by Campbell and Katona.

Types of sample survey.

- ① Personal Interview
- ② Mailed Questionnaire
- ③ Telephonic Surveys
- ④ Panel Technique
- ⑤ Controlled / Obs. Systematic observation