

# بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

نقاء~



## Research Methods & Design

Dr. Abdullah Al Fraidan



www.ahsaweb.net

إضافة شرح الدكتور من تجميع {سوير آث}

إعادة تنسيق {نقاء~}

## Lecture 1

### Definitions

#### What is Research?

The systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions.

#### under the Research:

- it's not haphazard " صدفة " > if it's haphazard = it's not Research.
- if we don't get result > then it's not Research.

#### steps of Research:

- 1- feeling problem is the first step of doing the Research
  - 2- next step is .. Ask yourself "what should I do ?"
  - > investigating the solutions of the problem.
  - 3- then you'll start gather some data
  - 4- see what the cause of the problem was and testing some solutions until you reach the result .
- \* we can get from Research fact and conclusions or solutions of our problem through collecting some materials and data from different sources.

#### What are methods?

A particular procedure for accomplishing or approaching something, esp. a systematic or established one.

#### Under the Methods:

- \*Methods is procedure or approach that can lead us to something ( it's the way ).

#### What is design?

It is a logical structure of the inquiry (research)

\*أعطى مثال عن ال Logical structure في الدقيقة 5:22 (مشكلة المتحدثين العرب

للأنجليزية بين حرفي B و P) .

\*أعطى مثال عن الـ Methods في الدقيقة 6:24 .

### **Quantitative vs. Qualitative;**

quantity == with numbers

quality == explain without numbers design

\*شرح الفرق بينهم بمثال .

### **Types Of Research;**

**Descriptive** : to describe the situation > just describe without result.

**Explanatory** : just explore to explain the reasons

**Ethnographic** : عن البحث الجغرافي لمنطقة معينة

**Experimental** : it's Widely used in science, biology, chemistry, etc.

**Action research** : أعطى مثال ع السريع و لم يتعمق فيها

**Case study** : it's study on only very few # of people not many of them >>>  
just 1 or 3 or 10 at most

**Longitudinal** : study of something over time = دراسة شيء ع المدى البعيد=

**cross-sectional** : Study of something different periods for different groups=  
دراسة شيء على فترات مختلفة لمجموعات مختلفة

Longitudinal vs. cross-sectional من المثال تفهمون الفرق بين

### **Quantitative vs. Qualitative**

**Quantitative**: you collect data through some tools and you quantify them

**Qualitative**: you collect data through some tools and you explain and discuss,  
argue, hypothesis and philosophy them.

### **Classical Report of Research;**

سيتم شرحها في المحاضرة الثانية .

....

## Lecture 2

**Quantitative Research** : we deal with numbers.

**Qualitative Research** : we deal with data , explanation of data .... etc

### Classical Report of Research:

1. Abstract
2. Introduction
3. Literature Review
4. Methods
5. Data Analysis
6. Results
7. Discussion
8. Conclusion
9. Bibliography
10. Appendices

\*these 10 items is the traditional way to presenting Research.

\*It's can be presented as a chapter in our Research or as a section

it depend on our Research type

There is different types of research

( Dissertation thesis – Articles )

We find them in doctoral message + it's  
longer than Article

We find them in journals and online  
sometimes + it's very short and specific

\*the 10 Items will be as a sections in Article, and as a chapter in dissertation thesis.

\*we can put (Data Analysis - Results - Discussion) in one chapter ,  
depending on their lengthy.

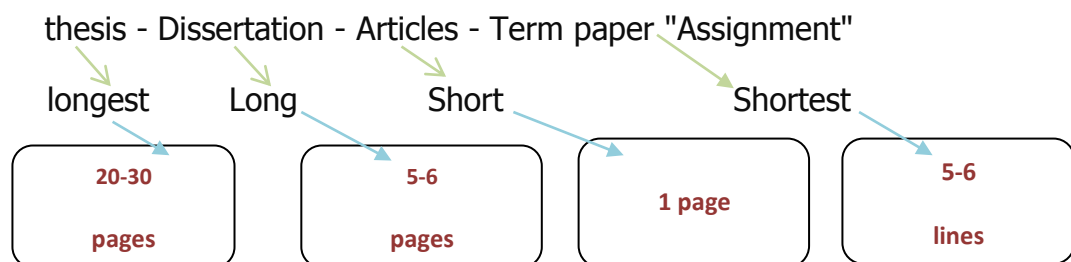
## 1. Abstract:

- It's not get chapter for itself (why??) cause it is only one page or less .
- We find it in the beginning of the articles , dissertations and thesis Research.
- It's like a summary of Research but although we put the Abstract in the beginning of Research it's not going to be written until to very end of your Research (why??) because in Abstract we write the result of our Research.

## 2 . Introduction:

- We can put it in chapter (in dissertation or thesis) or we can put it in section (in Articles ) or in term paper (it's shorter than articles ) .
- In Introduction we introduce the problem and the topic of our Research , is it significant for ourselves or society or to other people around the world.

### There are 4 categories of Research :



## 3 . Literature Review:

- It's important when you write this chapter , you must write it in your own way and you should avoid the plagiarism (steal other's text ) .
- In Literature Review you going to read about your topic , the previous studies , similar to your study and then report it in your own words ( not copy & past ).

## 4 . Methods: How are you doing your Research ?!

## 5 . Data Analysis: After you gather all your data; you must analyze it.

## **6 . Results:**

After you analyze your data = you have result or maybe enumerate result that you need select the important of them but if you have few result you can report it all and present them in very interesting way.

## **7 . Discussion:**

You need to present and discuss and share your opinion agreement or disagreement with the opinion of others and not ashamed for that.

## **8 . Conclusion:**

- If our Research is very lengthy then we need put the Conclusion .
- It's summary about the Research and to remind readers what we have done through the Research.

## **9 . Bibliography:**

- You give us the list of books and articles.
- You use special way to present it ( AB style )

## **10 . Appendices:**

- It's contains copies of questionnaires and interviews that you used in your Research .
- You can append in the end of your research Questionnaires , interviews , pictures, graphs, extra information's that useful to your research.

.....

<http://privatewww.essex.ac.uk/~scholp/report.htm>

## Lecture 3

### What is an Abstract:

a summary of the whole thing

An abstract is a short summary of your completed research. If done well, it makes the reader want to learn more about your research.

- \*If we don't write a well Abstract = we may lose reader cause we have not make them interesting.
- \*The 1st keyword of abstract is "summary", it's very short & not long than one page ( around 200, 250, 350, 500 word ) depending on the require of your research.
- \*The 2nd keyword of abstract is "completed research", it's written by the end of research.
- \*Research is an accumulative knowledge, it's started from nothing (from past research) and then developed continued by different researches until it reach us.

- It is important to note that the weight accorded to the different components can vary by discipline.



- For models, try to find abstracts of research that is similar to your research.

### Components of an Abstract:

1) Motivation/problem statement: Why do we care about the problem? What practical, scientific, theoretical or artistic gap is your research filling?

we always start the abstract by stating the problem which is installs the objective of your research, like ( this research is going to look at ... ) or ( my study is going to look at problem of ...), just a few lines .

2) Methods/procedure/approach: What did you actually do to get your results? (e.g. analyzed 3 novels, completed a series of 5 oil paintings, interviewed 17 students)

- 3) **Results/findings/product:** As a result of completing the above procedure, what did you learn/invent/create?

it's very critical because some people tend not to tell us their result in abstract ( why? ) cause they want to leave it to very end of research and to get us excited about the result .**This is very very very wrong!!**

in the abstract you need to tell us about the result and don't leave it until the end of your research, but you must just mention the main result and make it specific not every little result.

- 4) **Conclusion/implications:** What are the larger implications of your findings, especially for the problem/gap identified in step 1?

we can not conclude the abstract without mentioning the effects or the implications.

### **Components of an Abstract:**

# **notes** : this mark ( ! ) in the beginning of the line means to avoid

- ! You give what is really an introduction, missing out what the results were.
- ! You tell us what each section of the write up is going to talk about (e.g. 'In the third section we will describe the method'), not briefly what you did (e.g. 'The method we used was...')
- ! You include wording that refers forward like '... as we shall see...'. Again it is not an introduction. It should read as referring back to the whole completed project

### **Example of an Abstract: (A good one)**

The Factors Accounting for the Egyptian EFL University

Students' Negative Writing Affect

This study attempts to identify the factors that account for the Egyptian English majors' negative writing affect, i.e. their high English writing apprehension and low English writing self-efficacy. The subjects were administered two scales measuring their writing apprehension and writing self-efficacy, then those students with scores falling into the extremes of the two scales were interviewed about their writing experience and background. To supplement the qualitative data obtained from the interviews, the subjects' scores on three linguistic tests used for measuring their English grammar and vocabulary knowledge were compared to their scores on the two scales.



Analyzing both types of data showed that there are six causes of the subjects' high English writing apprehension and four causes of their low English writing self-efficacy. Based on the results reached, the study presents some recommendations for writing instruction and suggestions for further research.

(1) This study attempts to identify the factors that account for the Egyptian English majors' negative writing affect, i.e. their high English writing apprehension and low English writing self-efficacy. (2) The subjects were administered \*two scales measuring their writing apprehension and writing self-efficacy, then those students with scores falling into the extremes of the two scales were interviewed about their writing experience and background.

To supplement the qualitative data obtained from the interviews, the subjects' scores on three linguistic tests used for measuring their English grammar and vocabulary knowledge were compared to their scores on the two scales.

(3) Analyzing both types of data showed that there are six causes of the subjects' high English writing apprehension and four causes of their low English writing self-efficacy. (4) Based on the results reached, the study presents some recommendations for writing instruction and suggestions for further research.

\* scales = questionnaires

### **Example of a Poor Abstract**

Friends of Children helps underprivileged elementary school children.

There currently is a need for after-school programs in Anywhere Parish, like the one Friends of Children would like to provide.

Such a program will help at-risk children do better in school, learn important interpersonal skills, and become better citizens.

The after-school program will target kids in Anywhere Parish and will operate afterschool on Monday through Friday in the local community center.

Trained adults will provide homework assistance in all classroom topics, as well as provide games and fun activities.

The objectives of the program are to make students better learners and improve their social skills and personal well-being.

The impact of the after-school program will be evaluated by looking at student grades and satisfaction with the program.

Friends of Children is requesting \$137,790 for this project.

-----

- The poor example is incomplete – it does not provide the same level of detail found in the good example.
- This (poor) example does not grab the attention of the reader.
- There is no good description of the need, the organization and its mission is not well defined, and no basic details of the program are provided.

## Lecture 4

### Introduction:

the 1st chapter of research.

### How to choose a topic?

Research to demonstrate not only research expertise in the relevant field but an appropriate level of originality.

One way to achieve this is by a piece of work which applies existing ideas (e.g. previous findings, theories, research methods) to a new domain (e.g. provides a competent analysis of new data in terms of an existing theory or approach).

1.1 | if you want choose a topic go to previous research, see where that research stopped and continue from that research.

1.2 | it's like an accumulative type of knowledge .

1.3 | the best way to find the topic ..

1.4 | originality means : something very new .. no one before you have research that topic ; does not mean you create a new word or change the words ( No !! ) sometimes be original is by finding a different way to do it (new ways .. means a little different from another )

Another way is by a piece of work which proposes a new and interesting account (maybe a new theory) of existing data.

Clearly, the highest attainable level of originality would be to propose a novel theoretical account of novel data (a goal all academics strive for but few attain!).

Clearly, your chosen topic should be one which excites and stimulates your intellectual curiosity, and which is going to retain your interest throughout the period you work on it.

It may also be a topic which has some direct relevance to your future career aspirations, or special importance in the context where you normally work (esp. if you are a teacher)

It should be a topic which you personally feel confident that you are able to master within the time available for your research.

\* You must narrowing down your choice to topic.

هنا قسم الجزء إلى ثلاث خيارات لاختيار التويك، سأكتبها باختصار(أرجعوا للمحتوى).

**A.** The topic should be one which excites and stimulates your intellectual curiosity, and which is going to retain your interest throughout the period you work on it.

**B.** It may also be a topic which has some direct relevance to your future career aspirations, or special importance in the context where you normally work.

**C.** The topic should be one which you personally feel confident that you are able to master within the time available for your research.

For this reason, it is important not to be too wide -ranging in your choice of topic.

On the contrary, there are a number of reasons for focusing your research as narrowly as possible on a topic which is highly circumscribed and specific.

One reason for this is that the existing research literature is growing at such a rapid pace that it is no longer possible to keep up with the whole of the literature in a broad field, so that narrowing down your research topic reduces your background reading to much more manageable proportions.

Secondly, the broader the topic you choose, the more open -ended your research becomes - and the less likely it is that you will complete it on time(so putting yourself under unnecessary financial, emotional and intellectual pressure).

From this point of view, 'Language Acquisition by Bilinguals' is far too broad to be viable as a research topic; by contrast 'A case study of the development of personal pronouns in the grammar of a two-year old bilingual child' is a much more restricted, and hence more manageable research topic.

Note that the weight accorded to the different components can vary by discipline.

For models, try to find abstracts of research that is similar to your research.

### Introduction chapter :

what the topic is, in brief = you need to tell us the topic.

- ! You start telling us a lot of detail about the method and your results at this point

- ! Detailed research questions and hypotheses... premature to give them here

# **notes** : this mark ( ! ) in the beginning of the line means to avoid.

وجود علامة التعجب في بداية السطر (تعني تجنب هذه النقطة و الابتعاد عنها في مراحل كتابتك للبحث).

### reasons for doing the work, e.g.

importance as a research topic in itself, in the context of current knowledge in the relevant field.

-This entails saying a bit about what general areas of ELT, linguistics or whatever the study relates.

-importance for local situation of researcher (esp. if teacher).

-This entails possibly a detailed description of what that situation or context is (e.g. if your study is on writing, then how that is taught throughout the educational system etc.)

! The research is presented as having interest only for the researcher's school/country.

-Classical research needs to be presented as having wider implications.

! Long account of 'problems of teaching in my country'...none of which turn out to be the subject of your research

! Unfounded generalizations with no sources like 'standards of English have become poor in recent years'

! Multiple sections with titles like Importance of the study, Significance of the study, which are really not differentiated in content.

-outline of what will come in the chapters/sections that follow.

-maybe brief definitions of some key terms to be used later.

### Components of an Abstract:

! You give what is really an introduction, missing out what the results were.

! You tell us what each section of the write-up is going to talk about (e.g. 'In the third section we will describe the method'), not briefly what you did (e.g. 'The method we used was...')

! You include wording that refers forward like '... as we shall see...'. Again it is not an introduction. It should read as referring back to the whole completed project

### **Example of an Abstract:**

#### **▬The Factors Accounting for the Egyptian EFL University Students' Negative Writing Affect**

-This study attempts to identify the factors that account for the Egyptian English majors' negative writing affect, i.e. their high English writing apprehension and low English writing self-efficacy.

-The subjects were administered two scales measuring their writing apprehension and writing self-efficacy, then those students with scores falling into the extremes of the two scales were interviewed about their writing experience and background.

-To supplement the qualitative data obtained from the interviews, the subjects' scores on three linguistic tests used for measuring their English grammar and vocabulary knowledge were compared to their scores on the two scales.

-Analyzing both types of data showed that there are six causes of the subjects' high English writing apprehension and four causes of their low English writing self-efficacy.

-Based on the results reached, the study presents some recommendations for writing instruction and suggestions for further research.

## Lecture 5

### Plagiarism

#### What Plagiarism is?

Plagiarism is something very critical & ethical in research.

#### # Authorship:

If you do your research out of your ideas out of your own words from your know ledge then you are the Author of the research

#### # Plagiarism:

If you go and copy others words or ideas then put it in your research without mention his or her name,, this is call Plagiarism.

#### (from the website) # What authorship is

In order to fully understand plagiarism, it is important to first understand the concept of 'authorship'.

Authorship refers to the production and ownership of ideas and intellectual material, such as books, articles, images, etc.

The higher education system in the UK places great importance on recognizing the producer and owner of material, Whereas in some cultures knowledge is thought of as communal property, in the United Kingdom it is considered to be individual property, Therefore, improper or incomplete acknowledgement of a source of information is treated as 'intellectual theft'.

The proper name for this is 'plagiarism'.

The issue of ownership is complicated by the fact that some knowledge is said to be 'common knowledge'.

#### (from the website) # What plagiarism is?

'Using or copying the work of others (whether written, printed or in any other form) without proper acknowledgement'

In brief, if you use the work of others, you must either quote it or paraphrase it, but whichever method you choose, you must include a citation and reference.

Note the phrase 'proper acknowledgement' in the University's definition. A piece of work that is partially referenced (for example, work in which a quote is put in quotation marks but not attributed to anyone) is still classed as plagiarism: merely acknowledging that an idea or phrase is not your own is insufficient. Failing to specify the exact source will be considered plagiarism.

\*\* The meaning of some of these terms ('quote', 'paraphrase', 'citation' and 'reference') may not be completely clear to you. They will be explained in due course, but if you feel that lack of meaning is hindering your understanding, go to the section called 'key terms' now, before you proceed any further.

### **# Quotation:**

you take the words Exactly from the source and then put them into Quotations mark.

### **# paraphrase:**

You have the meaning of the idea and then you retell the idea in your own words. But still you need to refer to the original author .

### **# citation:**

How do you place the name of the original author inside your text .

Or from the website ; The process of acknowledging or attributing an idea/quotation to another by providing information about the source of the other work.

### **# Acknowledgement:**

Recognition that work has been the product of the work of another identified person.

### **# Reference list:**

A list of referenced sources of work that have been cited in the present work. Sometimes called a 'bibliography', although a bibliography can just be a list of relevant books, not specifically a 'reference list'.

### **# Types of plagiarism:**

You will be plagiarizing if you:

- Copy someone else's work as if it were your own

(شرح النقطة هذه و قال أقرؤها)



If you use a source when you write your assignment, whatever that source might be, you cannot simply copy whole sentences or paragraphs as though they are your own. Regardless of your intentions, it is plagiarism: even if you think the sentences are excellent and express the point better than you could; even if you have taken so many notes on a topic that you have forgotten to note the reference to some of the sources. Whatever your reason, the rules are very clear: if you copy someone else's words and use them as your own you will be plagiarizing and risk failing your assignment, receiving a mark of zero for the module, or even being required to withdraw.

**- Copy sections of someone else's work but change the odd word or phrase**

If you use someone else's work in anything you submit for assessment then you must make sure that you give the author full and proper credit according to the conventions of your discipline. You cannot escape this by simply changing some of the words and phrases. You must always acknowledge and give full credit to all your sources. If you would prefer not to quote because of the context, then paraphrase instead.

**- Submit the same piece of work for two different assignments, even if they are to different departments**

You cannot submit exactly the same piece of work for two different assignments. If you have been rewarded for a piece of work once then you cannot expect to be rewarded again for the same piece; this is also true for different years of study, even if you are repeating a year. You will be cheating if you try to get two sets of marks for one piece of work. However, it is perfectly acceptable to refer to, or to use, material from your earlier assignments, so long as you make sure that you acknowledge the original source, even if that source is yourself.

**- Submit written work produced collaboratively, unless this is specifically allowed**

This is known as 'collusion'. Alternatively, if you are required to work with another person, it is simply 'collaboration'. Whereas in most cases of plagiarism, the second party (the person being plagiarized) is not involved directly with the first party (the plagiarizer), in cases of collusion, the first and second party work together to deceive a third party (the marker).

**- Copy the work of another student, even if they have consented**

This is also collusion.

**\*\* the only way to go around Plagiarism is** to be credible and tell us how Exactly you did your research without hidden help from other people .

### **# Common excuses :** ( هنا قال أقرؤها و أن هذه الأعذار غير مقبولة )

Reasons given for committing plagiarism vary from fairly innocent or accidental mistakes to a deliberate intention to deceive. Unfortunately, no allowance is made for whether the act was intended or unintended, as we saw from the University definition of plagiarism.

Some common excuses (which are not accepted) are:

- Being unclear about what exactly plagiarism is
- Having deficient time management skills or being lazy - i.e. being too disorganized with deadlines to undertake and submit original work
- Having an ineffective method of note-taking - i.e. not always recording the source of information
- Feeling under extreme pressure to pass or succeed - whether it be financial, parental, cultural, etc.
- Having different cultural values / practicing different academic conventions
- Mistakenly believing that it will be easy to get away with (see the section how it will be detected)
- Knowing that the syllabus has stayed the same each year - i.e. having access to work from previous students
- Having unclear instructions for an assessment task (if in doubt, always clarify with your tutor)
- Having a lack of academic confidence (again, speak to your tutor or a study skills advisor)
- Being conditioned from secondary schooling - i.e. not being used to acknowledging sources (sorry, no excuse)

### **# Common mistakes:**

There are many reasons why acts of plagiarism occur, some of which are due to genuine mistakes that relate to referencing and note-taking practices. Some students make the mistake of thinking that plagiarism does not apply to every type of source material or to every type of assignment, but it does.

Unfortunately, no allowance is made for whether the act was intended or unintended, as we saw from the University definition of plagiarism

### Examples of some common mistakes include:

- "I thought it would be OK if I only included the source in my bibliography."
- "I made lots of notes for my essay and couldn't remember where I found the information."
- "I am familiar with other academic conventions"
- "I thought it would be OK to use material that I had purchased online."
- "I thought it would be OK to copy the text if I changed some of the words into my own."
- "I thought that plagiarism only applied to essays, I didn't know that it also applies to oral presentations/group projects, etc."
- "I didn't think I had to reference my tutor's notes."
- "I didn't think that you needed to reference material found on the web."
- "I left it too late and just didn't have time to reference my sources."

Please make sure that you do not make these mistakes. If you require any further guidance, you should contact your department.

### # Benefits of referencing:

Avoiding plagiarism is not the only reason for referencing, There are many others.

### Benefits of referencing include:

- Receiving credit for your own hard work and research
- Demonstrating your intellectual integrity by conforming to agreed academic standards of good practice
- Receiving meaningful feedback from your tutor that is targeted to the level you are really at (not pretending to be)
- Contextualizing your work to show how it relates to current research and debates
- Directing your reader to sources of information and enabling them to 'pick up the thread'

## # What needs referencing ( للقراءة )

Before considering what needs to be referenced, it may be helpful to first consider what does not. 'Common knowledge' is the term used to describe established facts that are not attributable to a particular person or authority. For example, it is known that John Lennon was assassinated in 1980, in New York, by Mark Chapman. However, what is less likely to be classed as common knowledge and therefore taken for granted is the exact reason why Chapman killed him. This is because there have been numerous theories, each one claiming to hold the answer.

However, **the following do need to be referenced:**

- Ideas and quotations taken from journal articles, books, etc.
- Information taken from the web
- Images from the web and elsewhere
- Newspaper articles

## # How to avoid plagiarism :

As well as having an understanding of what plagiarism is, you will also need to develop certain

skills to fully protect yourself.

**Some of the key academic skills you will need to develop are:**

### \*Learning how to note-take effectively

Many instances of plagiarism can be traced back to the note-taking stage. Make sure you always record the reference details of your sources for ideas, quotations, and general information. Read the guide to note-taking on the University's my Skills website.

### \*Learning how to reference correctly

Most departments provide their own guidance on referencing; there is more than one system used around the University, so it is important that you follow your department's guidelines, where available. Usually, this information features in the departmental Undergraduate Handbook. If there is no guidance available from your department, read the guide to referencing on my Skills.

### \*Learning how to paraphrase correctly

Paraphrasing is the practice of putting someone else's ideas into your own words. It is an alternative practice to quoting, but still requires a citation and reference, though not quotation marks. Only changing one or two words is NOT paraphrasing: you must rephrase the idea entirely, whilst still capturing its essence and meaning. And remember, paraphrasing is an extremely helpful exercise in clarifying your own understanding - it is not just a means of avoiding plagiarism.

### **# Cheat-sites**

There are a number of websites that sell essays. Some of the essays have been written by students, others claim that the essays have been written by experts. These websites are relatively easy to find, and vary enormously in both style and cost. You are strongly advised not to purchase or copy essays from these websites, as you will risk failing your assignment, receiving a mark of zero for the module, or even being required to withdraw.

#### Why would you download an essay from the web?

When you are preparing to write an essay or any other type of coursework, it might seem like a good idea to buy a complete essay on the topic. It might seem like another way you can research your topic.

#### For example:

- It would be helpful to read how somebody else has structured their essay on a particular topic .
- It would be helpful to compare your references and bibliographies with this essay.
- You might fully intend to reference the source in your own essay.

But you should not rely on essay websites to provide this information. If you would like any advice on appropriate source material you should speak to your tutor, who will be able to direct you to relevant material. Please remember that if you are having any difficulties with your assignment you should always contact your department for further support.

Anyone who is prepared to risk failing their assignment by using one of these cheat-sites should stop and ask themselves:

- How do I know that these essays are a reliable source of information on my topic?

-If I am aware of this cheat-site, are the other students also using it and submitting the same essay?

-If I am aware of this cheat-site, is my tutor also going to have seen it?

-What will happen if I submit the essay as my own work and get caught?

-Do I realize that I'm cheating?

Whatever your reasons, you are strongly advised not to purchase essays from websites. If you submit an essay, or part of an essay, which you have bought or copied from a website as your own work, then you will be plagiarizing and risk failing your assignment.

.

.

**<http://www.essex.ac.uk/plagiarism/index.html>**

**باللون الأسود شرح الدكتور**

**باللون الرمادي الإضافات من الموقع**

## Lecture 6

### Literature review

- It's 2nd chapter or section in your research.

- In Literature Review (LR) you tell us about previous finding, the previous existing knowledge and theories.

\* REVIEW OF LITERATURE covering these things but not necessarily in this order review and critique of previous research in the same general area (shortcomings of methods or argumentation previously used, new areas to look at suggested by previous results). Their findings, esp. with respect to variables you are interested in. This should at every point be explicitly connected to your specific project.

- Ex: in 1:20 مثال في الدقيقة

- In Literature Review you review the previous studies.

- Ex: (x) in 1:50 مثال في الدقيقة

# Essence of Literature review : ( الجوهرة / الخلاصة )

(1) you review previous research (2) criticize the methods they used (3) and then you tell us the connections between the previous studies and your research.

- this Essence is very important, if you don't do it ; then it's not Literature Review and your Literature Review is going to be rubbish.

\*! The background review reads like an MA survey essay on some area of investigation, cataloguing other people's studies, with no comparison of them with each other, or critique, and no use explicitly made of them to connect to your own work by showing what they suggested for it.

⊖ ! Too broad... need to focus rapidly on just what bits of articles and books are relevant to your study.

⊖ ! You report previous work as 'important' when actually it has no relevance to your own research (though it may be highly regarded in the field generally).

⊖ ! You retail other people's criticisms of each other's research but do not resolve opposing views, argue your own view, or draw implications for your research.

⊖ Review feels like the literature got on top of you, rather than that you are on top of the literature, and is too long (more than a third of the write up)

Ex: you required to write research of 3000 words>> the LR must be 1000 words. مثال

\*\* the ideal number of a good Literature Review (words) is : third of the whole research.

\_ ! You mention the results of your own later research in your review.

**- ! see also <http://privatewww.essex.ac.uk/~scholp/litrevsarc.htm>**

\_ theoretical background(s) or 'models' from which the ideas come (both pure and applied linguistic, and maybe in psychology, sociology...), or which you hope to shed light on

\_ ! Ostrich: you stick with one model you have learnt about and don't cover the rival theories or look in other disciplines that have something to say.

\_ Discussion of definitions of key terms... ESP, vague ones (e.g. in ELT 'communicative', 'function', 'strategy', 'task' etc....) where you disentangle different opinions of scholars

\_ ! You catalogue a lot of people's definitions of X but fail to show where they agree/differ or which one you are adopting for your work and why.

\_ a review of methods used previously to gather relevant data, justifying yours (e.g. merits of interviews versus questionnaires etc.).

\_ Better here than in Method chapter/section if it is substantial.



## Lecture 7

### Refining Research Ideas and Beginning to Design your Study

#### Agenda

- So I have a good idea....now what?
  - Research design elements:
    - Sample selection
    - Comparison/control groups
    - One time versus Many times
    - Reducing Confounds and Bias
  - Variables and Operational Definitions
- Turning your research question into a research hypothesis

#### Recap

- So....you have a good idea
  - You realize that you could gather information to test that idea in some way
  - You did a literature search to confirm it is a good idea (i.e., that it hasn't been done well before)
    - Now what should I do to make it scientifically rigorous?.....
    - you must make your research rigorous .. stand on hard ground.
- Research Design & Methods is what makes a good idea into a great research study,
  - the methodology of your research and design is the 3rd or sometimes the 4th chapter in research in your study.

#### Elements of Research Design: Sample

- "**Sample**" versus "**Population**"
  - Population = it can be plants, animals, humans, communities.
    - in your study you always target certain people.
  - Ex: in 6:19 مثال في الدقيقة the sample in this study (or the Population) is children.
  - if you select your sample in a way not accepted>> it going to affect your research.
    - we select a sample from Population.

**- Sample determination**

▬ What group (population) is your research idea about?

o If it is about people in general – then it doesn't matter who you sample

o Is it about a particular type of person, age group, culture, sex/gender, clinical group, occupation?

- you must use an acceptable selecting methods>> sometimes it can be random (you need to justify "تبرير" why ?? )

-شرح + أمثلة مهمة في الدقيقة 8:30

- your selection (determination) must be linked to justifiable reason = you have justify the selection.

- the justification should be reasonable and linked to your research objectives.

▬ Inclusion and Exclusion Criteria specified

- you need to specify why you are included the sample and why you excluded the others !!?

- you have and you must mention this in your research

**Elements of Research Design: Sample/Recruitment**

▬ Where will you get the data from that group?

- it's called recruitment cause sometimes you need to recruit sample or you need to pay for them to participate in your research .

o Own organization versus other organization

o Do they have enough people there? (i.e., sample size)

o Will the people be interested or motivated to participate in your research?

o How long will it take? Are you willing to wait that long?

o Will you need to compensate them?

**Elements of Research Design: Data Format**

▬ What format will the data be in?

o Questionnaire? Standardized versus survey?

o Interview? (individual versus focus group)

- Structure interview : you have a list of questions maybe (5,7,10) and you want the answer of them and that's it .

- Semi structure interview : you have some questions but when you do the interview
  - you can ask the interviewees more questions>> Ex: in 22:48 مثال

o Interviewer/observer rating scale?

- Sometimes you need someone to set and observe the interview.

o Retrospective chart reviews?

- skip it لم يشرحها

o Continuous versus categorical data (means versus frequencies)

- skip it ; we going to deal with it in lecture of result لم يشرحها

- Data format affects statistics/interpretive methods you use (e.g., qualitative versus quantitative methods)

## Lecture 8

### Refining Research Ideas and Beginning to Design your Study

#### Elements of Research Design: Comparison/Control Groups

**comparison** (experimental) / **control groups**

Usually in experimental design you have 2 groups :

- **comparison (Experimental) group** : you gave them new treatment .

- **Control group** : this group has no treatment .

Treatment = الطريقة أو الوسيلة التي تستخدمها في دراستك أو بحثك

Selecting a comparison group:

- **Between Groups Designs:** Compare it to another group (that is similar to research group except with respect to the treatment/construct you are measuring)

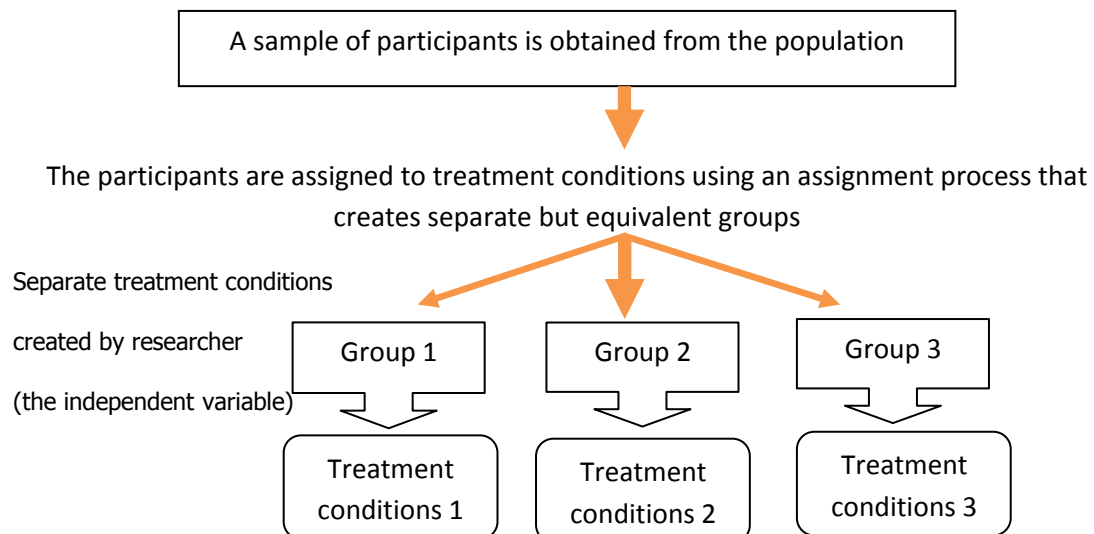
- You have 2 groups and you want to see the differences between them.

- **Within Group Designs:** Can compare one group to itself over time(i.e., before treatment and after treatment)

- You have just 1 group and you want to see the differences within that group itself.

**Note:** qualitative/descriptive studies do not use comparison groups – they just describe...really well

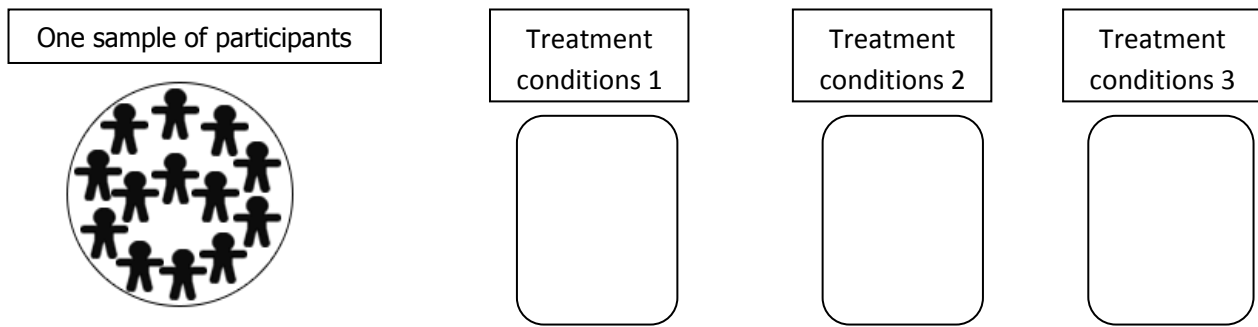
#### Elements of Research Design: Between Groups Design:



**Figure 8.1** The structure of a between-subjects experiment the key element is that separate groups of participants are used treatment conditions.

Source: Gravetter, F.J., & Forzano, L. B. (2006). *Research Methods for the Behavioral Sciences*(2nd ed.). United States of America: Thomson Wadsworth.

### Elements of Research Design: Within Group Design:



**Figure 9.1** The structure of a within-subjects Design the same of individuals participates in all of the treatment conditions. Because each participant is measured in each treatment, this design is sometimes called a repeated-measures design.

**Note:** All participates go through the entire series of treatments but not necessarily in the same order.

Source: Gravetter, F.J., & Forzano, L. B. (2006). *Research Methods for the Behavioral Sciences*(2nd ed.). United States of America: Thomson Wadsworth.

### Elements of Research Design: One time .vs. over time research.

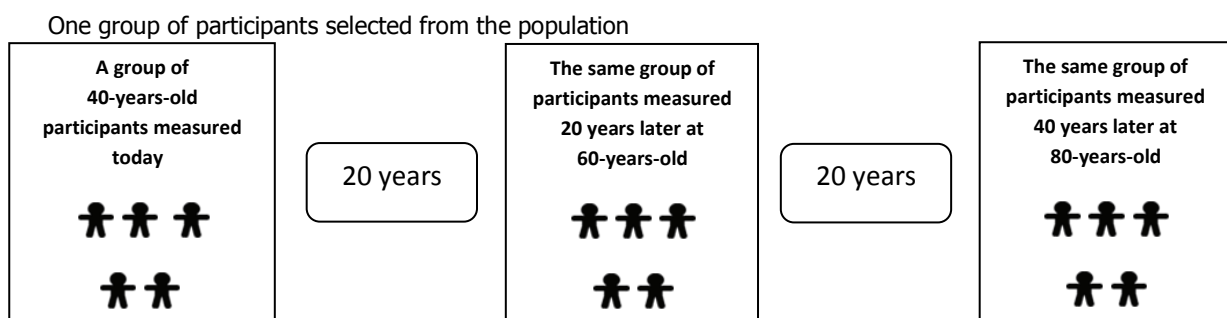
#### - Cross-sectional method

- \* Same group of people are observed at one point in time
- The risk here is : you don't get the reality , you don't get the real finding because the 2 groups are different .

#### - Longitudinal method

- \* Same group of people are observed at different points in time as they grow older
- The risk here is: the attrition of sample "تآكل أو النقصان في عناصر المجموعة"
- Ex: maybe now you have 100 children but after 3 years you don't have the same number...

### Elements of Research Design: Longitudinal Method:



**Figure 10.8** The structure of a Longitudinal Design One group of participants is measured at different times as the participants ago.

Source: Gravetter, F.J., & Forzano, L. B. (2006). *Research Methods for the Behavioral Sciences*(2nd ed.). United States of America: Thomson Wadsworth.

## Lecture 9

### Elements of Research Design: Defining your terms

- In each research there is something called variable that's we want to test or measure it
  - Ex: the affect using computer in teaching a grammar (in 1st min)
- The variable here are the computer and subject of learning English.
  - Computers is affecting the learning.

- **Independent variable** – variable that is manipulated by the researcher (or the variable that is thought to affect the outcome/dependent variable)

**manipulated** "التلاعب"

- here in the Independent variable you can do the manipulate.
- the variable that effect others variable is called the Independent variable.

Q: **we have this subject** مثلاً يجيكم هالسؤال في الامتحان

" **computer and their effect on students achievements**" the Independent variable here is (**computers-achievements - students** )

- **Dependent variable** – variable that is measured to assess the effects of the independent variable.

- in dependent variable we can't manipulate them cause we going to measure the effect of Independent variable on them.
- if we have a few variable in our research we need more focus and if we have a lot of variable in our research then we need les focus on them. (Ex: in 4th min)
- **"Operational definition"**– procedure for measuring and defining a construct (i.e. ,what measures will you be using)

### Turning your research question into a Research Hypothesis

- It is the test of your idea or theory
- A hypothesis is a statement that describes or explains a relationship among variables
  - it comes from literature.

# the different between Research Hypothesis (RH) and Research Questions (RQ):

- RH: is something previously answered by some researchers.

- RQ: is something has not answer before << this is "why?" it's called **question** because it has no answer in the literature or in the previous studies; no one before you answered It. 7:20  
مثال توضيحي للفرق بينها في الدقيقة

▬ It is a prediction that is derived from your research question

- e.g. "Shared Journey staff education will improve patient satisfaction as compared to units whose staff did not receive SJ training"

- e.g. "internalized stigma is related to increased depression"

# under It is a prediction that is derived from your research question

- prediction "التنبؤ"

Sometimes you answer your RQ as prediction from your reading..... even if it's not answered before << it's called prediction and then you need to compare your prediction with result. (Ex: in 10:15)

### RH & RQ

<http://privatewww.essex.ac.uk/~scholp/Hypotheses05.htm>

قال هنا المطلوب أن نحفظ اللي في الرابط للاستزادة و زيادة المعلومات العامة لنا

### Summary

▬ Start thinking about who you want to participate in your study, how you will recruit them, how you will collect the data etc.

▬ Decide if you want a single or multiple groups of participants and if you want to collect data at one time or over time

▬ Start thinking about how you can minimize/eliminate confounds and bias

▬ Formulate a research hypothesis

# under Start thinking about how you can minimize/eliminate confounds and bias

- bias "التحيز"

Try to avoid bias because if you use it you going to be hide the reality and the troth of your research.. don't choose samples cause you like them or they are only around you << that' s called bias. (الشرح في الدقيقة 16:40)

## Lecture 10

### Data Collection Defining your terms

#### Defining your terms:

##### Task 1. Words:

Counting things in spoken or written products can be harder than you think. Even 'What is a word?' can be complicated (and caused a disaster to one of my PhD students when asked this in a viva once!...). Yet one cannot count words without a definition!

- ▬ In this text, how many words are there?
- ▬ What problems arise in deciding on the answer?
- ▬ How would you prefer to resolve them in your definition of a word?
- ▬ How do you think a computer would resolve them if asked to count words?

**At long last I decided that I couldn't put up with the food any longer. But having taken that decision I next had to decide where else to go to eat. I long for take-away fast food. Indecisive, I first went to McDonalds then KFC.**

- two important criteria in selecting you text :

1| word difficulty 2| length of text

- How we can measure the length of text ?

By count the words, how many words are there in this piece of text.

- what a word is ?!!

based on this definition we can count word (في الدقيقة 40 : 6 in)

- there is something on count word called **type** – **token**

- **Type** : هي الكلمة المراد عدّها

- **Token** : عدد المرات التي تكررت فيها الكلمة داخل سطور القطعة

##### Task 2. T units:

Often one wants to quantify the length of text or spoken utterances. One can do this in words or in sentences, but quite popular in child and learner research are also T-units. A T-unit('terminable unit')is essentially a main clause with a non-elliptical subject, including any dependent clauses. Thus When I got home, the new TV



I ordered yesterday was on the doorstep, is one T-unit, as is John got up and left the room. However, John got up and Mary left the room is two T-units because each coordinated clause has its own subject expressed, and could stand alone as a sentence.

How many T-units in each of the following fragments of child writing?

Hence what is the average length of T-unit in words of each?

And what do you think are the supposed merits of measuring length of utterances or text in T-units rather than sentences?

**a) I like branded because they always win and it is fun and I like it because sometimes he gets killed. <Note: Branded is an old TV program set in the Wild West>**

**b) I like to come to school and my mummy like school and my breathers we was so happy wane I come home I eat cake and dearer my tea I help my mummy. One day I want in m sister house The end.**

#### Task 4. Errors:

Categorizing and then counting errors in more or less naturally produced written or spoken material used to be common. But in order to constitute a proper variable a good categorization/classification system should: be exhaustive, have mutually exclusive categories, not mix categories of different types in one set, have unambiguously defined categories, etc.

A student came up with these categories for classifying errors: do you see any problems?

How to improve the classification system?

\* Grammar errors

\* Vocab errors

\* L1-induced errors

- the source of errors is L1

( أعتقد المقصد هنا هو اللغة الأم أو اللغة الأولى للفرد )

- L1 errors can be in grammar + vocab

## Lecture 11

### Data Collection - Questionnaires

#### Questionnaires

Data elicited in the form of people's reports about language or something related

Data of this sort is most used in ELT, applied linguistics and sociolinguistics: essentially subjects report about what they or others do, or on beliefs about or attitudes to language, language learning etc., or on non-linguistic variables you need to record (e.g. their age, years of learning English...).

# Questionnaires .. it's not the best way to collect data , maybe some people see it the easiest way to collect data but No!! design a good Questionnaires is not an easy job.

One type, the grammaticality judgment task, is popular in acquisition research ((You gave a task to your student ( or participant ) then you ask them to judge whether this is grammatically correct sentence or not >> and from this task you will know if your student learn the grammar well or not.

Reporting ranges from (a) 'think aloud' reporting, immediate retrospective reporting after a task, open interviews, or diary type of reports to (b) structured interviews, closed questionnaires or attitude rating inventories and judgment tests.

#### هنا إضافات الدكتور

# think aloud : ask the participate to speak aloud any idea that comes to his mind. شرح هذه النقطة في الدقيقة 13:30

# immediate retrospective reporting after a task :It's some kind of interviews .. after you finish your Questionnaires (or task or test ) you set with participant and then start to ask them about what they did >> just to make sure that you are getting all information you want.

# open interviews : - I set with you just talking , asking each other Q and then I will get information. - in open interviews you don't have a set of Q .

# diary type of reports to :You go to your student ( or participant ) and ask them to write every that they did during a period of time .

# structured interviews & Simi structured interviews : نفس كلامه في المحاضرة ( السابعة نسخته هنا

# Structure interview :you have a list of questions maybe (5,7,10) and you want the answer of them and that's it .you set with people you want to ask and read the Q ...

# Simi structure interview : you have some questions but when you do the interview you can ask the interviewees more questions .

# [closed questionnaires](#) :They (participant) need to just to cercal some answers and that's it.

# [open questionnaires](#) :You ask the participant and then they answer the Q from their information (write it).

The former are heavy on Data Analysis transcribing them (if spoken) and categorising what people say, and often contain material suitable for purely qualitative analysis. في هذه الفقرة تكلم عن صعوبة جمع البيانات و المعلومات من المشاركين و ترتيبها و ذكر أن أحياناً ممكن نضطر لترجمتها من العربي للانجليزي و العكس... (مجرد توضيح) .

The latter involve more work in constructing the Materials beforehand, and the Data Analysis may be fairly automatic (and computerisable). The more open instruments of this sort are typical of ethnographic research. All might be involved in action research, or classical research usually of the nonexperimental type.

هذا الجزء قال لا تهتمون فيه كثير.. اهتموا أكثر بالطرق و التولز اللي كتبها أعلى.

### Conventional closed questionnaires:

1) Spot as many unsatisfactory features as you can in the following start of a sociolinguistic research questionnaire given to people in Wales:

هنا كان يمر على كل سطر و يصحح و ينتقد بعض المشاكل بهذا المثال (في الدقيقة 17:38)

هنا بداية الاستبيان ال Questionnaires ← Name? ..... (optional)

\* some people don't like write their names = so make it an optional , and maybe others reject answer because of it.

What age category do you belong to? Under 18 years

19 18-21 years

22 21-25 years

Over 25 years 26 and above

\*\* هنا المشكلة في تسلسل الأرقام.. بعض الناس ما يحبون يعطونك عمرهم الحقيقي فالأفضل تكون دقيق في كتابة الفئات العمرية.

Some people don't like to tell you their real age; so be specific in writing age groups.

– Have you ever learnt any other languages? If so, which languages?

If not skip to Q 3.

– How much do you speak Welsh at home?

**Often, Sometimes, Never**

problem here.. maybe there is someone who always speak Welsh inside and outside the home

- \_ Do you agree that Welsh should be obligatory in schools in Wales and on official documents (e.g. income tax forms)? **Yes/No**

The problem here .. Question consists of two parts maybe there is person is OK on the first part and the second part rejecting

- \_ There are not enough Welsh language programs on TV. **Yes/No**
- \_ How many variables are being measured there?

Variable here is (1) people attitude and beliefs (2) Age.. Check the effect of age on attitude (the Independent variable is the age -the dependent variable is the attitude)

- \_ Think of more than one hypothesis one might formulate about them.

Older people will prefer to use welsh more than younger people.

- \_ How would you represent people's responses on each as a number for computer entry?

Count the answers and then from the computer you can generate the graphs and columns.

## Lecture 12

### Your research variables

# when you choose your topic you must decide in the variable.

>> the **more** variables; your research is bigger

>> The **few** variables; then smaller and focus your research.

\* The idea of this lecture that ... you need to know that you have some central variables ( that you are going to research it ) and these variables are your interest **but** there are some factors or some others variables that can affect your research and you need to control them by one way or another.

#### 1) How many variables are centrally involved?

▬ We are not counting here the variables you might want to exclude the effects of...see later, just those that are central to a **RQ** or **RH**.

So is this a one variable design, two variable, three variable etc. design?

أمثلة في الدقيقة 8:52

# your central variables ( or the main variables ) is the central of your **RQ** & **RH** .

- Ex: this hypothesis from last lecture " Older people will prefer to use welsh more than younger people " the central variables is attitude + Age ..

>> and there is other factors like gender (if participant male or female) affecting the preferring of welsh but it's not in the hypothesis = so the gender is not central of the research.

▬ In the jargon: univariate, bivariate or beyond two variables it may be either factorial or multivariate (As a rough guide, it would be called factorial only where there are two or more explanatory variables in categories, see below for explanation, otherwise it would be called multivariate). هذا الجزء للفائدة فقط.

- In this course we stick to two-variable designs, since understanding them properly is the key to understanding more complicated ones. In fact often a study with many variables can be broken down into a whole lot of RQs each dealt with as a two variable design. E.g. in a questionnaire you ask Taiwan senior high school learners of English their gender and also how often they use 20 different reading strategies; you also give them Nation's Levels test to check their vocab proficiency. You then potentially have a whole lot of two variable analyses (each with its own research Q or H!), involving gender in relation to each of the 20 strategies and vocab prof in relation to each of the 20 strategies (so 40 two-variable designs are analysed).

شرح مثال التايوانيين في الدقيقة 13:25

## 2) What roles do the central variables each play?

Often we think of one or more variables as potentially 'explaining' or 'causing' or 'affecting' or 'predicting' one or more of the others. For instance gender would be regarded as 'explaining' any differences in use of strategies we find. It would be odd to regard strategy use as somehow affecting people's gender! In the jargon, the 'explaining' variable (or variables) is perhaps most neutrally labeled the 'explanatory variable' (EV, as I prefer), but many call it the 'independent variable' (IV), or in some special design circumstances 'factor' or 'predictor'. The other variables are then 'dependent variables' (DV) or sometimes called 'response variables' etc. Sometimes there is no obvious EV - DV distinction among variables, e.g. if you are interested in the relationship between learners' grammatical proficiency and vocabulary size it is not obvious that either one is potentially affecting the other. Then regard the design as having DVs only.

There is a reason for talking in weaker terms and saying that one variable 'explains' another, or just 'is related to' it, rather than more strongly saying it 'causes' it or 'affects' it. Much language research is not experimental in the true sense, and the conventional wisdom is that it is only in a proper experiment that cause and effect can definitely be demonstrated.

# people thought that is all research is experimental "تجريبي" that we have experiment

>> **No!!** it's not experimental at all.

## 3) Is this an experiment, in the strict sense?

- Is experimental in a sense.. if we have for example an intervention "like  
- Ex; of computers" it's an experiment (I want to experiment using a computers and it's affect ) ..

- How about " attitude " I want to measure student attitude !!

→ it's not experiment it's called a study

= so this is the difference between an **experiment** and a **study** .

## 5) What variables are or should be considered additionally to the central EVs and DVs?

- **EVs** = explaining variable

- **DVs** = dependent variable

- These are variables that you might need to control, in the sense of 'exclude the effects of' (which I call CVs!). They may well not be mentioned in the research question/hypothesis, but are nevertheless crucial. They are things that may otherwise interfere with the results and make it hard to interpret what you discover about the central variables in the design.

▬ You can 'control' or eliminate such variables in various ways. One is by making them constant. E.g. you choose only people in their twenties for a study comparing men and women, thus eliminating the age variation factor; for an experiment where people read two types of text (narrative and argumentative) you make all the texts at the same level of vocabulary difficulty. Another way is to randomize the variable (or, more often, claim it is as good as random, even though you have not strictly randomized it...): to eliminate age you pick men and women randomly of all ages, so hopefully you will not get a lot more older people in one group than in the other. We have already seen also the 'stratified sampling' solution to this sort of problem, where you would pick equal numbers of people of different age groups in each gender, and the use of the 'matched subjects design' which also eliminates this, if age is chosen as one of the variables to be used for matching.

▬ If you fail to make sure relevant variables are controlled, then you may have what is called a 'confounded' design. E.g. you want to compare people's strategies depending on the rhetorical type of the text they read (narrative vs argumentative), but you use texts where the difficulty of language and unfamiliarity of topic is greater in the latter texts than the former. Then if you find a difference between text types in the strategies readers use, a critic afterwards will say 'maybe your result really shows a difference between easy and hard texts, not narrative and argumentative ones'. You will have failed to 'control' language and topic difficulty and have 'confounded' these variables with your targeted EV

▬ In much language research ideal control is not possible. In theory, it is only in experiments that it could be fully achieved. E.g. suppose you study learner behaviour going on in classes in a school taught by two different means (which could be either naturally occurring means or ones you experimentally impose). You will typically have to use existing classes ('intact groups') rather than take students and randomly assign them to the two method groups. Hence you cannot control whether, say, more proficient students get into one group than another. The best you can do here is to at least record as much as you can about the subjects in the two classes with a little background questionnaire. Then you can afterwards use the information about proficiency, for example, to help interpret the findings, and maybe analyse the data with the effects of prof statistically taken into account and discounted (by treating the offending variable as a 'covariate' in the analysis, but that is an advanced topic).

▬ Obviously the 'alternative' research paradigms do not lend themselves to control and rely heavily on delicate interpretation by the researcher of how all the uncontrolled factors might have affected what is observed.

\*\* ..... the uncontrolled factors might have affected what is observed.

There is uncontrolled variable you can't control them ; you must mention that in your research.

أغلب المحاضرة يقرأ بين سطور الأمثلة و يوضح نقاط بسيطة،، بالمثل أقرؤها للفهم.

## Lecture 13

### Results

# **Results** = is the last step in your research.

- In result you show us the product "نتاج" of all your efforts "جهود", all the hassles "متاعب", all the troubles "مشاكل" you have been through and present them to us.
- the result is consider to be the essence of your research , the main thing of your research.
- we do research cause we want to reach an outcomes , to reach conclusion , to reach some kind of result to help us for full our research objectives.

#### - **RESULTS IN GENERAL: THREE STATISTICAL THINGS TO DO WITH RESULTS**

(a) **Presentation**. Mainly presentation consists of making easy to understand tables, and especially graphs of various sorts, to go in the main text and show the key features of the results (e.g. histograms, bar charts, scatterplots, line graphs of various sorts). For these tables and/or graphs, frequencies of people falling in a category may be converted to %, etc., for easy understanding, and often what will be presented are descriptive statistics derived from the data (see b), rather than scores or whatever of each case separately.

- It's very important that you know how to present your result.
- In the result you try to make a thing very easy to reader ; specially when you use tables and graphs you need to explain them.
- if you have graphs and table you may Convert them into percentages "%"  
(Ex ; in 6:15)

(b) **Descriptive statistics**. These are figures you (get the computer to) calculate from a lot of specific figures which arise from data. Essentially they summarize certain facts just about the specific cases you studied. Hence they are referred to as 'statistical measures' based on 'observed' data, sometimes referred to as O (=observed) figures for short (cf. 'statistical tests' in c which go beyond just what has been observed about samples). Mainly they are of one of the following types, depending on what kind of thing about your people/words/etc. they measure:

" التحليل الوصفي " (Ex; in 7:22) - in all result you always start with descriptive statistics (only describe the numbers of data)

- These are figures you (get the computer to) calculate from a lot of specific figures which arise from data. = use computer to calculate ;

فيه برامج مخصصة لحساب النسب والرسوم البيانية نقدر نستعين فيها مثل الإكسل

EXCEL من مجموعة برامج مايكروسوفت أوفيس+برنامج إحصائي اسمه SPSS

entsab.com ~ 40 ~

دعواتكم لنا و لوالدينا بالرحمة و المغفرة



**(b1) Measures of centrality.** These in some way indicate the one score or category that you might choose to represent a whole set of scores or categorizations for one group of cases on one variable. These are mostly familiar measures from everyday life. One example is the "average" score of a set of interval scores (technically the Mean). Another, where you have cases that have been put in categories, is the category that the greatest proportion of people chose or fell in

- where you have cases that have been put in categories, is the category that **the greatest proportion of people chose or fell in** = the highest score that my participant selected.

- we want to know where our data are centered so we can describe them or we can depend on them to reach a result.

**(b2) Measures of variation.** These summarize how far the individual scores were closely spread round some central measure, how far they were widely spread. In a way they measure how closely the scores (or people who scored the scores) "agreed" within a group, on a scale running upwards from 0. The higher the figure, the greater the variation. Examples of such measures are the Standard Deviation (and related notions Variance and Error) for scores, Index of Commonality for categories.

- Standard Deviation = is how to separate the score from each other (score here is the participant answers ; are they close to each other or not )

- Passed on the mean we can have a result. الفقرة هذه ستفهمونها أكثر بعد سماع المثال

**(b3) Measures of difference.** These summarize the amount of difference between pairs of samples or groups measured, or between scores the same group obtained in different conditions, usually by a figure that is the 'difference between two means', or the 'difference between two percentages' (percentage difference). Again such figures normally run upwards from 0 (= no difference) to any size.

- Ex in 21:45 مهم جداً تسمعون المثال هنا

**Level of significance:** "مستوى الدلالة" in 24:40

It's should be something like ".05" It's called "p = Probability significance" → we get this number by computer (special programs)

- If you get this number ".05" and less then it's called in research **significance difference** □ this is what we are looking for in research.

- If you get this number ".05" and above then **NO!! it's not significance difference**; we can't say there is a different (Ex in 27:37)

**(b4) Measures of relationship.** These quantify the amount of relationship between two (or more) variables as measured in the same group of people or whatever. They are usually on a scale 0-1 (in some instances they run from -1 through 0 to +1).

I.e. if such a measure comes out near 1 (or -1 where relevant), that indicates that those cases that scored a particular value on one variable also tended to score a particular value on the other. E.g. those who scored high on motivation also scored high on proficiency. If it comes out near 0, that indicates that cases that scored a particular way on one variable scored all over the other variable, and vice versa. Examples are the Pearson 'r' Correlation Coefficient, the Spearman 'rho' Correlation Coefficient, Kendall's W, the 'phi' Correlation Coefficient, Kruskal's 'gamma'. (Remember that relationship and difference are really the same thing looked at from different points of view. If there is a difference between men and women - the two values of the gender variable - in attitude to RP accent, then there is a relationship between the variables gender and attitude to RP accent. It is just that for technical reasons sometimes statistics approaches the matter more via measuring difference, sometimes via measuring relationship).

If you are only interested in the particular cases or groups of cases you measured in themselves (e.g. because they are the whole population of interest), then (a) and (b) probably provide the answer to any questions or hypotheses you had about them. But usually in research you have not measured everyone/thing of interest directly, but only samples, and wish to generalize, hence inferential statistics are also needed.

- Ex in 29:37 \* These quantify the amount of relationship between two (or more) variables as measured in the same group of people or whatever.  
في هذي الجزئية ، فقط هذه الجملة المطلوبة معنا و الباقي قراءة لزيادة معلومات.

(c) **Inferential statistics**. These in some way enable you to generalize from the specific sample(s) you measured, and the descriptive measures of them (O's), to a wider 'population' that you sampled (if that is of interest to you, of course). Most descriptive statistical measures have associated inferential statistics. In effect then, the input to inferential.

- It's deal with **P** value >> هنا لم يتكلم عنها كثيراً و قال أن الذين سيأخذون الستاتيك سيعرفون الأسماء و.....الخ.

- **the level of certainty** is about what inferential stats tells you that you will be satisfied with. No inferential stats give you 100% certainty of anything. I.e. statistics can never tell you that, based on the difference between 3rd graders and 4th graders you found in your samples, it is 100% certain that there is a difference between 3rd and 4th graders in the populations your samples represent.

\* No inferential stats give you 100% certainty of anything → after we do research we can't be 100% certain that are these result 100% perfect **NO!!**; you should have some margin of errors and this calculated to be **5%** at least in your research ... you can be **95%** that your result are good.

⊖ You have to choose to be satisfied with something less than 100%.95% is commonly taken as adequate in language research: this is the same as choosing the .05 (or 5%) level of significance as the one you will be satisfied with →95% is the maximum that we can reach in certain of ore research.

(Statistics actually works with the chances of being wrong about a difference rather than being correct, hence 5% not 95%). If you adopt that level, then if a statistical test comes up with a significance of less than .05 for some difference or relationship you are interested in, then that is the same as saying that there is a 95% or more certainty that there is a population difference/relationship, not just one in the sample. So you will take it that a difference or relationship is proved to be real in the population(s) as well as the sample(s). If you adopted .01 as the threshold then you would only be satisfied if the test came out with a significance smaller than that (You would be demanding 99% or more certainty).

**Significance tests.** These deal with hypotheses about 'differences' or 'relationships', which is why it was a good idea to think in these terms when formulating hypotheses and planning what to do in the first place - before actually starting gathering data. They tell us if a difference or relationship we have observed in samples is strong enough to indicate a 'real' difference/ relationship in the populations sampled or not.

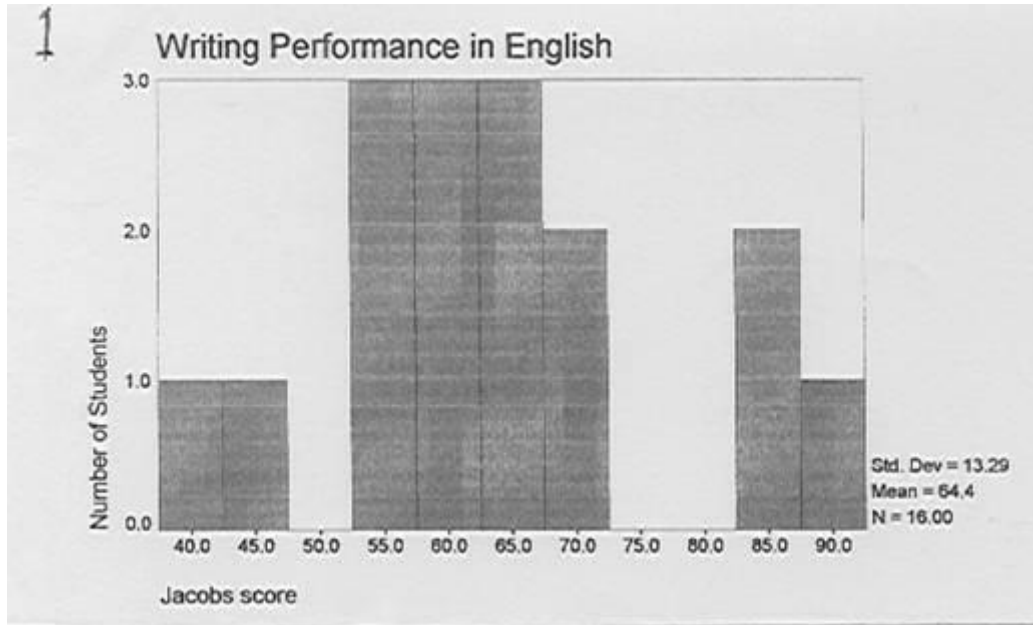
- We use it for just to give us a poised or confidence that's we can say (yes we are have a real difference or a real relationship ) << "How??" through the Level of significance.

Suppose you are comparing the attitudes of men and women to RP. You find an observed difference between the results for two samples (one of men and one of women) - i.e. the sample difference between the two average scores for attitude to RP English is not zero. So clearly the samples are, descriptively, different, but what can you say about the hypothesis about the populations of men and women that you sampled (since it is this "large-scale" hypothesis that you are really interested in)? Common sense says that you could get small differences between samples of men and women without there being any real population difference between men and women, just because samples from populations don't exactly reflect those populations in microcosm. Something called 'sampling error' always comes in. What you want (though you may not realize it!) is to be told a probability: you need to know the probability that you would get a difference the size of your observed one between samples if there were no population difference. If the probability is remote (say 5% or less ( $p < .05$ ) - the common threshold chosen), then you will conclude that your samples are evidence for a population difference and will say that the difference is, technically, 'significant'. But if the probability is reasonably large (bigger than 5%,  $p > .05$  say), then it is not safe to regard the "no difference" hypothesis as rejectable.

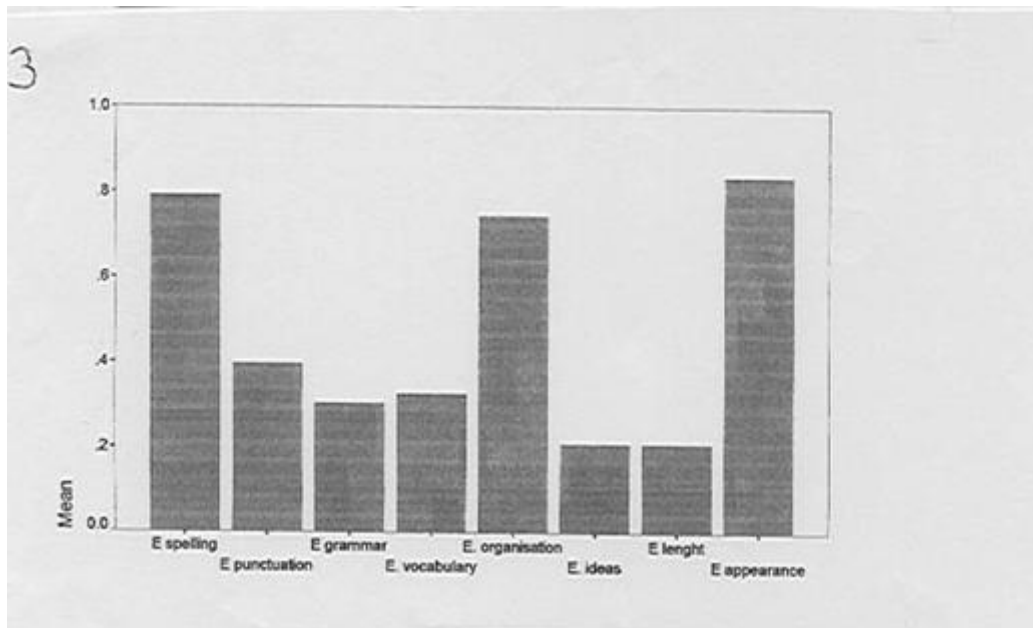
The main bit of information you get from any significance test is therefore a probability, which may be referred to as p or sig.

<http://privatewww.essex.ac.uk/~scholp/onevardesc.htm>

من الرابط ،، ذهب للرسم البياني و وضحَ عليه كذا نقاط مهمة في الدقيقة 40 تقريباً



و تكلم عن هذا في الدقيقة 45



## Lecture 14

### Revision & Final Exam

#### A hypothesis is:

- A hypothesis is a statement that describes or explains a relationship among variables
  - A hypothesis is a statement about your research
  - A hypothesis is a statement about the problems in your research
  - A hypothesis is a statement about the outcome of your research

#### The independent variable is:

- the variable that is thought to affect the dependent variable
  - the variable that is thought to affect the hypothesis
  - the variable that is thought to affect the results
  - the variable that is thought to affect the abstract

#### Research is:

Looking for knowledge only

Looking for data only

Looking for new ideas and findings

Looking for previous studies

#### An Abstract is:

A summary of the whole thing

A summary of the whole results

A summary of the whole literature review

A summary of the whole methodology

#### A good classical report will consist of:

Abstract- methodology- results-introduction

Abstract-literature review- results-introduction

Abstract-introduction-literature review-methodology-results

Abstract-results-introduction-literature review

**In the introduction:**

You introduce the results

You introduce the study and its significance

You introduce all previous studies and a critique for them

You introduce all the methods and instruments you used

**In the literature review:**

You talk about the results

You talk about the study and its significance

You talk about all previous studies and a critique for them

You talk about all the procedures used

**Plagiarism is:**

Representing other authors' language and ideas as your own original work

Representing your own language and ideas as your own original work

Representing other authors' language and ideas as their own original work

Representing other authors' language and ideas as a plagiarised work.

**The dependent variable is:**

The variable that is affected by the independent variable

The variable that is dependent on the hypothesis

The variable that is affected by the abstract

The variable that is affected by the results

**The significant difference has to be at the level of:**

P= 50

P=.05

P=.50

P=0.50

**If you have one variable in your research, then it is:**

Multivariate

Univariate

Bivariate

factorial

**We use questionnaires in research as a:**

tool to collect data

tool to analyse data

tool to generate results

tool to design research

.

.

.

تم الانتهاء

لا تنسوننا من دعواتكم بظهر الغيب