Бош илмий-методик марказ

FARG‘ONA DAVLAT UNIVERSITETI HUZURIDAGI PEDAGOG KADRLARNI QAYTA TAYYORLASH VA ULARNING MALAKASINI OSHIRISH MINTAQAVIY MARKAZI

“TADQIQOTLAR OLIB BORISHDA LINGVISTIK METOD VA YONDASHUVLAR”

MODULI BO‘YICHA

O‘QUV –USLUBIY MAJMUA

N.Abbasova- FarDU katta o‘qituvchisi

2022

Modulning ishchi dasturi Oliy va o‘rta maxsus ta’lim vazirligining 2020 yil 7 dekabrdagi 648-sonli buyrug‘i bilan tasdiqlangan o‘quv dasturi va o‘quv rejasiga muvofiq ishlab chiqilgan va FarDU Ilmiy kengashining 2021 yil «30» dekabrdagi 5 -sonli qarori bilan tasdiqlangan.

Tuzuvchi: N.Abbasova - FarDU katta o‘qituvchisi

Taqrizchi N.Toirova – Ingliz tili o‘qitish metodikasi kafedra

mudiri, f.f.d., PhD

MUNDARIJA

I. ISHCHI DASTUR

Kirish

Dastur O’zbekiston Respublikasi Prezidentining 2017 yil 7 fevraldagi “O’zbekiston Respublikasini yanada rivojlantirish bo’yicha Harakatlar strategiyasi to’g’risida”gi PF-4947-son, 2019 yil 27 avgustdagi “Oliy tahlim muassasalari rahbar va pedagog kadrlarining uzluksiz malakasini oshirish tizimini joriy etish to’g’risida”gi PF-5789-son, 2019 yil 8 oktyabrdagi “O’zbekiston Respublikasi oliy tahlim tizimini 2030 yilgacha rivojlantirish kontseptsiyasini tasdiqlash to’g’risida”gi PF-5847-son va 2020 yil 29 oktyabrdagi “Ilm-fanni 2030 yilgacha rivojlantirish kontseptsiyasini tasdiqlash to’g’risida”gi PF-6097-sonli Farmonlari va O’zbekiston Respublikasi Prezidentining 2012 yil 10 dekabrdagi “Chet tillarni o’rganish tizimini yanada takomillashtirish chora-tadbirlari to’g’risida”gi PQ-1875-son hamda O’zbekiston Respublikasi Vazirlar Mahkamasining 2019 yil 23 sentyabrdagi “Oliy tahlim muassasalari rahbar va pedagog kadrlarining malakasini oshirish tizimini yanada takomillashtirish bo’yicha qo’shimcha chora-tadbirlar to’g’risida”gi 797-sonli qarorlarida belgilangan ustuvor vazifalar mazmunidan kelib chiqqan holda tuzilgan bo’lib, u oliy tahlim muassasalari pedagog kadrlarining kasb mahorati hamda innovatsion kompetentligini rivojlantirish, sohaga oid ilg’or xorijiy tajribalar, yangi bilim va malakalarni o’zlashtirish, shuningdek amaliyotga joriy etish ko’nikmalarini takomillashtirishni maqsad qiladi.

Dastur doirasida berilayotgan mavzular tahlim sohasi bo’yicha pedagog kadrlarni qayta tayyorlash va malakasini oshirish mazmuni, sifati va ularning tayyorgarligiga qo’yiladigan umumiy malaka talablari va o’quv rejalari asosida shakllantirilgan bo’lib, uning mazmunida amaliy tilshunoslik va til tahlimi,til o’rganish strategiyalari, tillarni o’qitish usullarini o’rganish, leksiko-grammatika va korpus tilshunosligi, ilmiy va amaliy tadqiqotlar, o’quv jarayonini tashkil etishning zamonaviy uslublari bo’yicha tegishli bilim, ko’nikma, malaka va kompetentsiyalarni rivojlantirishga yo’naltirilgan.

Dastur doirasida berilayotgan mavzular ta’lim sohasi bo‘yicha pedagog kadrlarni qayta tayyorlash va malakasini oshirish mazmuni, sifati va ularning tayyorgarligiga qo‘yiladigan umumiy malaka talablari va o‘quv rejalari asosida shakllantirilgan bo‘lib, mazkur modul o’z ichiga tadqiqot va tadqiqotnini tashkil etish uchun mahlumot yig’ish metodologiyasi: birlamchi va ikkilamchi mahlumotlar yig’ish va ushbu mahlumotlarni tahlil qilish, mahlumotni tahlil qilish uchun metod va yondashuvlar, tahlil etish natijasida mahlumot tayyorlash: maqola, kitob va dissertatsiya shakldagi tahliliy materiallar yozish, Sco’us va Science Direct xalqaro ilmiy-texnik mahlumotlar bazasidan foydalanish va ilmiy maqolalarni yuqori impakt-faktorga ega jurnallarda chop etish, chet tillarini intensiv o‘zlashtirish darajasini oshirish hisobiga ularning kasb mahoratini, ilmiy faoliyatini muntazam yuksaltirish, bilan bog‘liq kom’etensiyalarga ega bo‘lishlari ta’minlanadi.

Qayta tayyorlash va malaka oshirish yo‘nalishining o‘ziga xos xususiyatlari hamda dolzarb masalalaridan kelib chiqqan holda dasturda tinglovchilarning maxsus fanlar doirasidagi bilim, ko‘nikma, malaka hamda kompetensiyalariga qo‘yiladigan talablar o‘zgartirilishi mumkin.

Modulning maqsadi va vazifalari

Modulning maqsadi - tinglovchilarning tilshunoslikda tadqiqotlar olib borishda lingvistik yondashuvlari, ingliz tili tilshunosligi va o’qitish metodikasi fanidan tadqiqot metodlarini o’rganish.

Modulning vazifalari – Tadqiqotlar olib borishda lingvistik metod va yondashuvlar modulidan pedagog kadrlarning kasbiy bilim, ko’nikma, malakalarini takomillashtirish va rivojlantirish;

- pedagoglarning modul bo’yicha ijodiy-innovatsion faollik darajasini oshirish;
- modulni o’qitish jarayoniga zamonaviy axborot-kommunikatsiya texnologiyalari va xorijiy tillarni samarali tatbiq etilishini ta’minlash;

- tadqiqot va tadqiqotnini tashkil etish uchun ma’lumot yig’ish metodologiyasi: birlamchi va ikkilamchi ma’lumotlar yig’ish va ushbu ma’lumotlarni tahlil qilish;

- tahlil etish natijasida ma’lumot tayyorlash: maqola, kitob va dissertatsiya shakldagi tahliliy materiallar yozish;

- Scopus va Science Direct xalqaro ilmiy-texnik ma’lumotlar bazasidan foydalanish va ilmiy maqolalarni yuqori impakt-faktorga ega jurnallarda chop etish;

Modul mavzu va topshiriqlari

Tadqiqot va tadqiqotnini tashkil etish uchun ma’lumot yig’ish metodologiyasi: birlamchi va ikkilamchi ma’lumotlar yig’ish va ushbu ma’lumotlarni tahlil qilish. Adabiyotlar sharhining maqsadi. Tadqiqotning uslubiy ta’minoti. Namuna va uning turlari. Ma’lumot to’plash tartibi. Sifatli usul. Miqdoriy usul. Aralash usul. Obьekt va ulardan turli xil tadqiqot usullarida foydalanish. Amaliy ishning jarayonlari.

Ma’lumotlarning tahlili. Ma’lumotni tahlil qilish uchun metod va yondashuvlar. Rejalashtirish, ma’lumotlar, vosita, tahlil o’rtasidagi boqliqlik. Tadqiqotning ishonchliligi va asosliligi.

Tahlil etish natijasida ma’lumot tayyorlash: maqola, kitob va dissertatsiya shakldagi tahliliy materiallar yozish. Scopus va Science Direct xalqaro ilmiy-texnik ma’lumotlar bazasidan foydalanish va ilmiy maqolalarni yuqori impakt-faktorga ega jurnallarda chop etish.

Modul bo‘yicha tinglovchilar quyidagi yangi bilim, ko‘nikma, malaka hamda kompetensiyalarga ega bo‘lishlari talab etiladi:

Tinglovchi:

- tadqiqot va tadqiqotni tashkil etish uchun ma’lumot yig’ish metodologiyasi: birlamchi va ikkilamchi ma’lumotlar yig’ish va ushbu ma’lumotlarni tahlil qilishni;
- ob’ekt va ulardan turli xil tadqiqot usullarida foydalanishni;

- ma’lumotni tahlil qilish uchun metod va yondashuvlarni;
- tahlil etish natijasida ma’lumot tayyorlash: maqola, kitob va dissertatsiya shakldagi tahliliy materiallar yozishni;
- tadqiqot va darsni tashkil etish uchun mahlumot yig’ish metodologiyasini;
- amaliy lingvistika yo’nalishlari sohalararo fanlar ekanligi va boshqa fanlar bilan chambarchas bog’liqligi va munosabatlarini;
- Mahlumotlar tahlil qilish usullarini;
- til bilim olish va saqlash, uni amalda qo’llash va uzatish manbai, tafakkurni va insonning dunyoqarashini shakllantiruvchi vosita ekanligini;
- o’rganilayotgan fanlarning terminologik apparati, qonuniyatlari va asosiy tushunchalarni;
- amaliy lingvistika yo’nalishlarining asosiy tamoyillari va ularning xususiyatlarini;
- amaliy lingvistika yo’nalishlarining asosiy tushunchalari haqida **bilimga** ega bo’lishi kerak

Tinglovchi:

- Peer-reveiwed jurnal tushunchasi va unda maqola nashr etish jarayyoni;
- lingvistika fani doirasida tadqiqotlar olib borish;
- lingvistika fanining amaliy aspektlarini sharhlash;
- lingvistika manbalari bilan ishlash;
- lisoniy material bilan ishlash;
- muayyan nazariy masalalarga oid fikrlarni bayon etishi, ayni fikrlarga nisbatan tanqidiy munosabatini shakllantirish va ifodalash;
- lingvistika vositalarini tilshunoslik nuqtayi nazaridan tahlil qilish;
- amaliy lingvistika yo’nalishlarining asosiy tushunchalariga ilmiy izoh bera olishni va ushbu tushunchalarini o’z ilmiy tadqiqotlarida qo’llay olish;
- lingvistika tadqiqiga yangi ma’lumotlarni kiritish **ko’nikmasiga** ega bo’lishi

Tinglovchi:

- chet tilini o‘qitishning xorijiy metodikasi tajribasini tahliliy o‘rganish, umumlashtirish, ularning yutuqlaridan ta’lim jarayonida foydalanish;
- eksperiment uchun metodni aniqlash va instrumentlarni tanlash;
- ilmiy maqola va uning sifat va samaradorligini aniqlash mezonlari ishlatish **malakalari**ga ega bo’lishi;

Modulni tashkil etish va o‘tqazish bo‘yicha tavsiyalar

“Tadqiqotlar olib borishda lingvistik metod va yondashuvlar” kursi nazariy va amaliy mashg‘ulotlar shaklida olib boriladi. Kursni o‘qitish jarayonida ta’limning zamonaviy metodlari, axborot-kommunikatsiya texnologiyalari qo‘llanilishi nazarda tutilgan:

- darslarda zamonaviy kompyuter texnologiyalari yordamida taqdimot va elektron-didaktik texnologiyalardan;
- o‘tkaziladigan amaliy mashg‘ulotlarda texnik vositalardan, ekspress-so‘rovlar, test so‘rovlari, aqliy hujum, guruhli fikrlash, kichik guruhlar bilan ishlash, kollokvium o‘tkazish, va boshqa interaktiv ta’lim usullarini qo‘llash nazarda tutiladi.

Modulning o‘quv rejadagi boshqa modullar bilan bog‘liqligi va uzviyligi

“Tadqiqotlar olib borishda lingvistik metod va yondashuvlar” moduli mazmuni o‘quv rejadagi Kommunikativ tilshunoslik va til kompetentsiyalari, til va ta’limga integrativ yondashuv: Post-metod davri, til kompetentsiyalarini baholash mexanizmlari o‘quv modullari bilan uzviy bog‘langan holda pedagoglarning til ko‘nikmalarini talab darajasida qo‘llay olish malakasini orttirishga xizmat qiladi.

Modulning oliy ta’limdagi o‘rni

Modulni o‘zlashtirish orqali tinglovchilar ilmiy maqola va tezislarni o’qib tahlil qilish malakasi va kasbiy salohiyatlarini rivojlantiradilar.

Modul bo‘yicha soatlar taqsimoti

№	Modul mavzulari	Tinglovchining o‘quv yuklamasi, soat	
		Auditoriya o‘quv yuklamasi	
		Jami	jumladan
			Amaliy mashg’ulot
1.	Defining primary research	2	2
2.	Working on 5 propositions	2	2
3.	The research article framework	2	2
4.	Finding primary research articles.	2	2
5.	Research Design	2	2
6.	Research Design (cont.)	2	2
7.	Research methods	2	2
8.	Results section	2	2
	Total	**16**	**16**

O’quv materiallari mazmuni

1. Mavzu: Defining primary research. How do we improve teaching? Reflection cycle. What is something you want to improve your class? Systematicity involved in research. Definition of research. Brown and Roger’s activities. Grounded analysis. Different definitions of the research. Coming with new definition of the research. Four phases of the process and their discussion**.** What kind of questions can we investigate with research? Reading abstracts. Find research question in them. Where from do the research question come from? What kind of question can be asked. Activity Reflective writing.

2. Mavzu: Work on 5 propositions. Teachers will work on five propositions about teacher-research. They will be divided into five groups in which each of them will investigate their own part. Then in Jigsaw they will be sharing their ideas.

3. Mavzu: The research article framework. The understanding of the research article framework. Ordering the parts of the article in small groups. Analysis of an exemplary article. Finding the parts of the article. In what order are they given? Analysis of good and bad articles. Introduction section.

4. Mavzu: Finding primary research articles. (Internet access required probably in library should be informed in advance). How to find relevant and reliable source for research in the Internet. Teachers will be searching sources for their investigation. How to specify your search? Activities with the articles.

5. Mavzu: Research Design. Method section of research article. Sample and its types. Trainees will be finding and defining samples in their own articles. Data collection procedures.

6. Mavzu: Research Design (cont.) Sample and its types. Examining of the research design in exemplary article and in the articles of trainees.

7. Mavzu: Research methods. Qualitative method. Quantitative method. Mixed method. Tool and their use in different research methods. The procedures of the study used.

8. Mavzu: Results section. Analysis of the data. Instruments for data analysis. The relationship between question, data, tool, analysis. Reliability and validity of the research.

Amaliy mashg’ulotlarni tashkil etish bo’yicha ko’rsatma va tavsiyalar

Amaliy mashg’ulotlarda tinglovchilar o’quv modullari doirasidagi ijodiy topshiriqlar, keyslar, o’quv loyihalari, texnologik jarayonlar bilan bog’liq vaziyatli masalalar asosida amaliy ishlarni bajaradilar.

Amaliy mashg’ulotlar zamonaviy ta’lim uslublari va innovatsion texnologiyalarga asoslangan holda o’tkaziladi. Bundan tashqari, mustaqil holda o’quv va ilmiy adabiyotlardan, elektron resurslardan, tarqatma materiallardan foydalanish tavsiya etiladi.

Dasturning axborot-metodik ta’minoti

Modullarni o’qitish jarayonida ishlab chiqilgan o’quv-metodik materiallar, tegishli soha bo’yicha ilmiy jurnallar, Internet resurslari, mulьtimedia mahsulotlari va boshqa elektron va qog’oz variantdagi manbalardan foydalaniladi.

Bloom’s taxonomy

"Taxonomy” simply means “classification”, so the well-known taxonomy of learning objectives is an attempt (within the behavioral paradigm) to classify forms and levels of learning. It identifies three “domains” of learning (see below), each of which is organized as a series of levels or pre-requisites. It is suggested that one cannot effectively — or ought not try to — address higher levels until those below them have been covered (it is thus effectively serial in structure). As well as providing a basic sequential model for dealing with topics in the curriculum, it also suggests a way of categorizing levels of learning, in terms of the expected ceiling for a given program. Thus in the Cognitive domain, training for technicians may cover *knowledge, comprehension* and *application*, but not concern itself with *analysis* and above, whereas full professional training may be expected to include this and *synthesis* and *evaluation* as well.

Knowledge (list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.)	➢ observation and recall of information ➢ knowledge of dates, events, places ➢ knowledge of major ideas ➢ mastery of subject matter

Comprehension (summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend)	➢ understanding information ➢ grasp meaning ➢ translate knowledge into new context ➢ interpret facts, com'are, contrast ➢ order, group, infer causes ➢ predict consequences
Application (apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover)	➢ use information ➢ use methods, concepts, theories in new situations ➢ solve problems using required skills or knowledge
Analysis (analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer)	➢ seeing patterns ➢ organization of 'arts ➢ recognition of hidden meanings ➢ identification of components

Synthesis (combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite)	➢ use old ideas to create new ones ➢ generalize from given facts ➢ relate knowledge from several areas ➢ predict, draw conclusions
Evaluation (assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize)	➢ compare and discriminate between ideas ➢ assess value of theories, presentations ➢ make choices based on reasoned argument ➢ verify value of evidence ➢ recognize subjectivity

2. **Jigsaw reading**

This is an approach to reading that involves the students in speaking and summarising skills. It is very useful when working with short authentic texts such as newspaper articles.

Jigsaw reading can be done in two ways

- Two separate stories
    - If you have two news stories that share a theme - for example two separate stories on crime - prepare comprehension questions for each story. Give one half of the class (Group A) one story, and the other half (Group B) the other. The students read their article, answer the questions and check understanding. Students then pair up with someone from the other group and tell them about their story, and listen to the other one. To help students remember their story you may get them to take notes. Alternatively, the students can keep the article with them to refer to. Be careful though, as lazier (or ingenious) students will either read the article aloud, or simply give it to their partner to read!!

- One story split in two
    - Some stories can be clearly divided in two. Follow the same procedure as above, but giving each group only one half of the story. When the students are recounting their half of the article, make sure that the student with the opening half goes first.

Once the students have orally exchanged stories, they should then read the other person's article.

As a refinement, you can give student B questions to quiz student A about their article.

Jigsaw reading is a great way to introduce speaking into a reading lesson. It provides a real opportunity for genuine communication. In real life, we may tell people about a news article we have read, so this is a classroom activity that is fairly authentic.

1. **Using Kahoot!**

What is “Kahoot!”?

Kahoot! is a game-based learning and trivia platform. What makes Kahoot! so great is that it has uses beyond the classroom; it can be used in offices and social settings, making it a hit for all ages. This means that some parents may be familiar with Kahoot! as well. Kahoot! can be used from any device (through the website or the app), making learning fun and inclusive in all contexts for all ages. Teachers can create multiple choice games related to class content that students can play as a class by entering the game code on their app or device. Kahoot! offers a multitude of other forms of games related to class content that can make learning fun.

Uses for “Kahoot!” in the Classroom

Instead of using a worksheet at the end of a lesson for assessment, consider using Kahoot! It’s a fun and effective way to measure which concepts your students understand fully — and which might need reinforcement. If you’re looking to end class on an exciting note, Kahoot! is a great way to have fun while also utilizing class concepts. Looking for a way to energize your students? Use Kahoot! as a bellringer or class starter to get students engaged at the beginning of class. You can also use Kahoot! before introducing a new concept as a form of pre-assessment to see how much students know about the new content. It can be used throughout a lesson to measure student engagement and understanding. This can be done by introducing content, then using Kahoot! to see what students understand and have them explain why the answer is correct.

Why Use “Kahoot!”?

Kahoot! offers many benefits in the classroom. Because of its flexibility, Kahoot! can be used in various subjects — even physical education. Kahoot! is a great way to keep students engaged because it focuses on social learning and makes it fun. It’s also simple to use because it works on any device and players don’t have to create an account. It is free for teachers and students.

III. AMALIY MASHG'ULOTLAR MATERIALLARI

Amaliy mashg'ulot 1

Defining primary research.

Plan.

1. **Classroom research. Introduction.**
2. **Types of classroom research**
3. **Classroom observation**
4. **Mixed methods of classroom observation**

Glossary: *Applied Linguistics, empirical research, systematic process, L1, L2, EFL, qualitative method, quantitative method, mixed method*

Forms of Primary Research

Primary Research versus Secondary Research

Most students are familiar with *secondary research*, even if they do not know what it is called. Secondary research is the kind of research you do in the library or online. When one is conducting secondary research, they are looking for sources of information that *other* experts, writers, and thinkers wrote about a subject. We call this kind of research 'secondary' because it relies on others to have collected the research and written about it.

This is in contrast to *primary research.* Primary research is conducted, not in the library or online, but in the world. When conducting primary research, a research will use one or more tools, or *methods*, to collect data directly from people or the things they are studying rather than from books or texts already written about those things or people. One example of this is the kind of research a journalist does. A journalist may look up information that has been written about the news they are investigating, but they will also go out and talk directly to other people about that news seeking out actual witnesses on the scene or officials in

charge. In the job of a journalist, this is especially important since their subject, the news, involves late breaking events that may not have been written about yet.

Note that although primary research and secondary research constitute different kinds of data collection, they go hand in hand. Most researchers will conduct both secondary research, collecting relevant information on their subject that has already been written and published, and primary research, collecting new data and evidence that no one else has collected before.

Primary Research Methods

Popular culture is rife with images of the solitary scientist locked up in her laboratory, combining the contents of test tubes or prodding a lab rat through a maze. Usually, such a scientist is engaged in one method of primary research called experimentation, in which a researcher will set up a series of tests or demonstrations in the controlled setting of a lab in order to test his or her hypothesis. What isn't made evident in popular culture is that scientists, scholars, and researchers can actually choose to engage in a variety of different forms of primary research, depending on their field of study and the kind of knowledge they want to discover. Other examples of primary research methods include *observation*, *interviews*, *focus groups* or *panels*, *surveys*, and *ethnography*. In this class, you will probably only conduct primary research using a couple of these methods. But learning about each of them will give you a better understanding of the kinds of research that scholars and experts might do. And since scholars and researchers also write to report their primary research, it will also help you better understand the studies, reports, and articles you find when you do secondary research.

Below some common methods of primary research are defined:

Observation

This method involves going out in the world and watching, using your five senses to collect data. This method was used in the first writing project for this class, where students examined the contents and rhetorical features of a film documentary in order to come to conclusions about the arguments made in it.

Here are other ways observation might be used:

- One might observe a group or organization, exploring how business is conducted or how people in the group communicate
- One might observe artwork or other man-made or natural objects in order to interpret that artwork.
- One might view and record observations from several people's Facebook pages to examine how this kind of social media commonly gets used.
- One might observe memorial spaces in public parks at various times in a day to record how the public makes use of those spaces.

Observation is great for inquiry in which you either can't ask questions (for instance, a monument or painting won't talk back) or because you want to collect information on how something works without interfering by participating yourself or asking questions for which you may or may not receive the best answers. At the same time, observation means you can only observe one or a few examples, thus it is hard to say that anything you observed is true for most or all situations.

Planning Observational Research

The plans a research makes to conduct observation depends on the kind of data she or he wants to collect. Observational data can be *qualitative* or *quantitative*.

For **qualitative** data, you describe, in words, what you see, taste, touch, hear, and/or smell as well as what these observations may mean. One common way to

do such qualitative observational research is to use the DIE method – Describe, Interpret, Evaluate.

1. *Describe* means that you watch, using your five senses, and write down everything you see, taste, feel, hear, or smell. You do not make any assumptions or come to any conclusions about what you are describing, but simply record what is physically observed.
2. You *interpret* only afterward, figuring out after careful observation and description who, what, where, when, why, and how based on what you have observed.
3. After that, you can *evaluate*, determining how the things you observed relate to the ideas you are investigating and, in particular, to your research question(s).

This strategy allows you to carefully distinguish between what is actually being observed, the reasons the phenomena you are observing are happening, and what you think it all means.

Another strategy to conduct qualitative observational research, which can be used alone or in conjunction with the DIE method is a dual-entry notebook. On each page of a dual-entry notebook, you create two parallel columns. In the left column, you describe what you observe (remember the five senses), and in the right column, you analyze and interpret what that descriptive data might mean. This allows you to jump back and forth between description and analysis, while distinguishing between what is actually being observed and what the significance of it all might be.

Quantitative observation usually involves *tallying* – simply making a mark every time the phenomena you are observing happens. This allows you to calculate the frequency or number of anything being observed. To do this, you must select periods of time in which to collect data and decide beforehand a certain set

behaviors or phenomena you will count during each observation period. After that, of course, you must observe and tally those behaviors or phenomena. After you collect these numerical results you can interpret the data and evaluate it in terms of your research question(s).

Whichever kind of observation you perform, it will require you to make a plan with to decide what kinds of things you will look for when you observe (what kind of phenomena fits the bill for the research question you're trying to answer). It will also often require that you plan certain times and/or place in which to do your observations. This is especially the case when you plan to observe things that happen a different times or day and/or in various locations.

When doing observational research, it can often be useful to record what you are observing, either photographing or video-recording it. This is useful because it allows you to look at it again and again. Keep in mind, though, that if a researcher records people in a way that would make them identifiable by others, they must gain permission to use those images or footage from the individuals recorded.

Interviewing

Interviews involve one-on-one sessions with individuals, in which you ask open-ended questions. You collect their broad, open-ended answers much like you do with observation, without coming to conclusions or assumptions about what the person is saying. Only afterward do you analyze the questions and relate it to the subject and your research question(s).

Interviews come in a couple different varieties. One version is a *representative* interview, in which you interview people who are affected by or experience a certain problem or issue. Another version is an *expert* interview, in which you interview people who are experts, scholars, professors, or professionals in a field related to your topic of research.

It is even possible to combine interviews with observation, by asking interview respondents to view something (like a video or a set of images) and then ask questions about what they think or noticed about the phenomena or artifacts they viewed.

Interviews are quintessentially *qualitative*, leading to complex understandings and viewpoints of one or a small group of people. Generally, the answers are in depth and nuanced because the respondent has some time to construct his or her answers carefully and add clarification if needed. Another good thing about interviews is that they allow you develop specific questions tailored to the individuals you are interviewing and to change your questions or come up with new questions based on the respondent's previous answers. In this way, the interview becomes sort of a conversation; the information you collect adjusts and changes according to what you discover at that moment. Other the other hand, interviewing limits the number of people from whom you can collect information, so it isn't as good for coming to conclusions about what most or all people think.

Planning Interview Research

You can conduct interviews in person or via writing (email, chat, instant message, etc.). Interview data can be collected via the interview respondent's writing, by written notes you take as the interviewer, or sound-recording or video-recording. Part of planning an interview requires you to decide how you'll conduct the interview and how you'll collect the answers.

In general, an interview is conducted face-to-face or live over the phone. This approaching to interviewing allows you to adjust questions and come up with new ones as the conversation proceeds and new ideas emerge. It can be challenging when it comes to collect data, though. Will you take notes to record the respondent's answers? If so, you may need to halt the interview at times to get

the information recorded or ask the respondent to confirm what they said. Will you record the interview? In this case, you must get permission from the respondent to do so and you must take time to listen to the interview later in order to take notes on it. Something similar can also be done via a teleconferencing tool like Skype or even through instant messaging.

Interviews can also be conducted via email, where you send the set of questions to the respondent and they answer them on their own time. This eliminates the need to plan a time to meet and talk to the respondent. It might also lead to longer, more in-depth answers since the respondent will have the time to think about and write down their responses. What's more, once the respondent replies, all the data is already collected in the email they send back. On the other hand, an email interview does not allow an interviewer to rephrase questions or add new ones. If a respondent didn't understand a question, there isn't a way to rephrase to get a better answer.

To conduct interviews of multiple respondents, you also will need to come up with a common set of questions to ask each person so that the same kind of information can be collected and compared. These questions must be phrased in such a way that they are understandable to the people you are interviewing. In addition, you must plan ahead by contacting participants to interview, set up times and places to meet them, etc.

Surveys

Surveys involve developing a series of short, easy to answer, multiple choice or multiple answer questions that are distributed to a large number of people. Usually, surveys are used to collect *quantitative* data; a researcher will total up each kind of answer for each question and calculate the mean (average), median (middle), and mode (most common) of those answers. As well, other statistical analysis can be done on survey data to mathematically determine how significant

or remarkable certain answers are. In any case, the numerical data collected from a survey is then interpreted, looking for answers they provide to research question(s).

Surveys are great for collecting information about large groups of people, since you can distribute surveys widely, collect them as a group, quickly total up answers, and do calculations. Because of this, you can begin to make conclusions based on how representative your survey sample is of the larger group you are investigating. A good survey sample means that you can assume that even people you did not survey will likely answer in the same way as those you did survey.

On the other hand, you cannot collect very complex information through a survey since the people who take the survey are automatically limited in the kinds of answers they can give and the questions and answers have to remain general enough to refer to and be understandable by all people.

Planning Survey Research

Surveys will require a set of survey questions applicable to the research question(s), identification of a sample population, a way to get surveys out to that sample population, and time to collect returned surveys and calculate the data.

It can actually be quite tricky to phrase the questions and answers in a survey effectively. Since all the question need to be understandable to a large number of people, a researcher must be careful to phrase the questions in simple terms and provide explanations for more complex ideas or terms that respondents might not understand. Since most questions in a survey are multiple choice, researcher also needs to be sure they have provided all the possible answers respondents may want to give to each question, or even have an "Other" option in case the answer a respondent might give isn't listed. Some of the questions asked might be demographic questions – questions about respondents' age, gender, race,

political or religious affiliation. These questions help a researcher determine whether the people they are surveying matches they population they want to collect data on.

There are various ways to distribute surveys: a paper form that is passed out and collected, an in-person survey in which questioned are asked and responses are collected face-to-face, or an online form that is distributed via email or some other digital media. If using online tools to write and distribute a survey, you can use tools like freeonlinesurveys.com or surveymonkey.com.

Below is a table breaking down on each method of primary research and their major features? (Appendix 1)

Qualitative vs. Quantitative analysis

Criteria	Qualitative	Ouantitative
Purpose	Understand and interpret social interactions	Test hypotheses, check the cause and effect. Develop predictions for the future
Studied group	Small, selected intentionally	Larger and selected randomly
Data type	Words, images, objects	Numbers and statistics
Data form	Open-ended responses, interviews, participant observations, field notes	Precise measurements using structures and validated instruments for data collection.
Type of data analysis	Patterns, features, themes identification.	Statistical relatioships identification
Researcher's role	Researcher may be known to participants in the study and participants's characteristics may be known to the researchers.	Researcher and their biases are not known to the participants in the study. Participant characteristics are hidden.
Results	Particular findings, less generalizable	Generalizable findings, can be applied to the other populations.

QualitativeDataAnalysis.net

Discussion questions:

1. How do we improve our teaching?

2. What`s something you want to improve in your class?
3. How do you know?
4. What is research?
5. What is your reflection on research?
6. What kind of question can we investigate in the research?

Amaliy mashg'ulot 2

Theme: Work on 5 propositions.

Plan:

1. **Teachers will work on five propositions about teacher-research.**
2. **They will be divided into five groups in which each of them will investigate their own part.**
3. **Then in Jigsaw they will be sharing their ideas.**

Keywords: primary research, secondary research, action plan, article framework, abstract, method, sample, data collection, question, variable, construct.

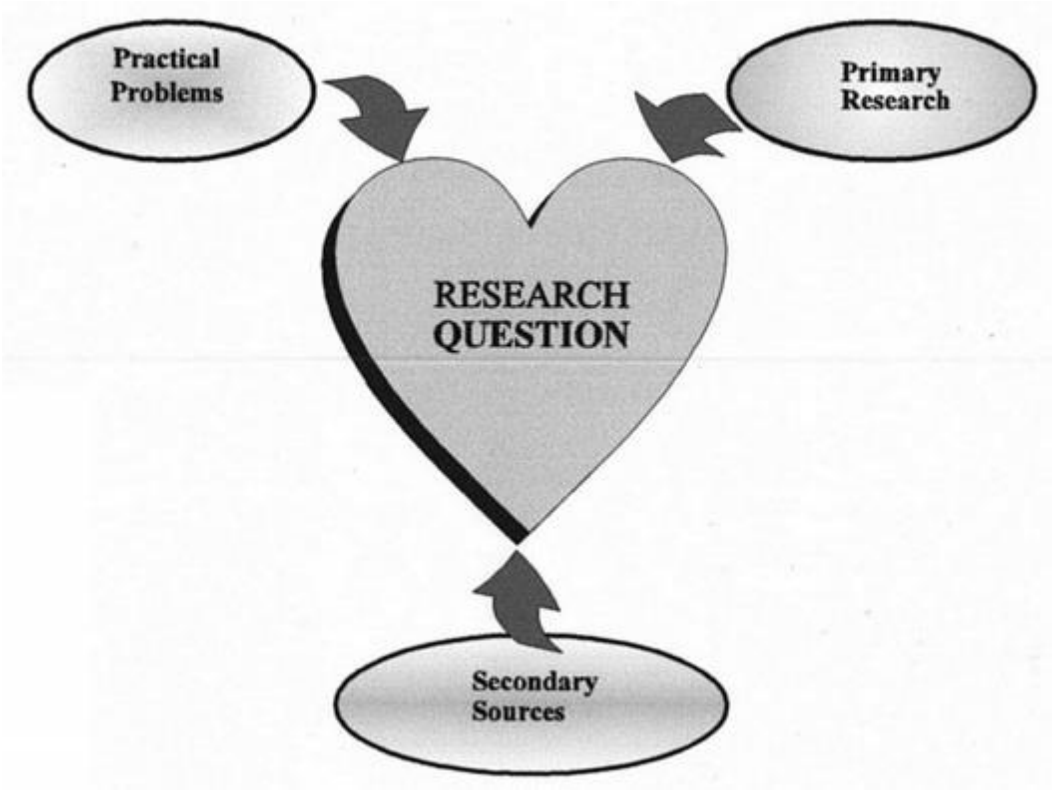
1. *Jigsaw reading. Listeners are working on five propositions (Freeman)*
2. *Discussion. What is research?*

Listeners are given slips of papers. They should brainstorm their reflection on the research. Teacher collects papers.

3. *Discussion. Listeners watch video on research process and try to pull pout four phases of the process.*
4. *Discussion. What kind of question can we investigate with research? How do you know?*

Listeners are given time to think of the questions that are testable. Then with the whole group, teacher and listeners are discussing the questions.

5. *Discussion. What could be the sources for research question?*



6. *Questions for discussion.*

   What kind of questions do you want to investigate?

   What some questions do you come across in your class?

7. *Activity: Reflective writing.*

Teacher provides listeners with several questions. In pairs, they choose the question for their analysis. Listeners are given time to think and reflect (Freeman, 56, Exercise).

FIG. 1.2. Sources for answers to research questions.

8. Working on article.

Listeners are distributed an article by Pica. They should find some research questions in it. The group is divided into small groups, each group pick one question. Brainstorm what they think the answers are and why, then they go to Pica and find the sections, discuss if there are differences. Class presentation. (Appendix 2)

9. Discuss the following questions

Amaliy mashg'ulot 3

THEME: The research article framework

Plan:

1. **The understanding of the research article framework.**
2. **Ordering the parts of the article in small groups.**
3. **Analysis of an exemplary article.**
4. **Finding the parts of the article.**

5. **In what order are they given?**
6. **Analysis of good and bad articles.**
7. **Introduction section.**

Keywords: *construct, data collection, Qualitative, quantitative, mixed methodology, tool*

The Review of research article framework (group race)**.** Review each section (e.g. requirements) and participants share their findings**.** Importance of methods section. Qualitative, quantitative, mixed methodology. **S**ample. Research design. Define construct, Review/ analyze your articles/exemplar articles. Data collection. Categorization of the tools. Relationship between data and tool.

1. Running dictation.

Teacher sticks the slips of papers with different information on different parts of the room. The group is divided into several smaller groups. The subgroups come with the article framework in the end. Check. Requirements (Lee & Wallace, Perry)

Title

Abstract

Previous research

Method

Discussion

Results

Conclusion

References

2. Activity. Analysis of the article

Teacher distributes an exemplar article to the group. They analyze each part and discuss in pairs.

3. Activity. Working with computer.

Teacher explains how to make a search for scholarly article and explains the difference between peer-reviewed and predatory sources. Basing the search on the construct listeners make their search. Some do in pairs, some individually. (examples of the websites in Perry)

4. Jigsaw reading. Research methods

Research Methods

Research methods is a broad term. While methods of data collection and data analysis represent the core of research methods, you have to address a range of additional elements within the scope of your research.

The most important elements of research methodology expected to be covered in business dissertation at Bachelor's, Master's and PhD levels include research philosophy, types of research, research approach, methods of data collection, sampling and ethical considerations.

Research Design

Different textbooks place different meanings on research design. Some authors consider research design as the choice between qualitative and quantitative research methods. Others argue that research design refers to the choice of specific methods of data collection and analysis. In your dissertation, you can define research design as a general plan about what you will do to answer the research question. Important elements of research design include research strategies and methods related to data collection and analysis.

Research design can be divided into two groups: exploratory and conclusive. Exploratory research, according to its name merely aims to explore specific aspects of the research area. Exploratory research does not aim to provide final and conclusive answers to research questions. The researcher may even change the direction of the study to a certain extent, however not fundamentally, according to new evidences gained during the research process.

Data collection

There are two types of data – primary and secondary. Primary data is a type of data, which never existed before; hence, it was not previously published. Primary data is collected for a specific purpose, i.e. they are critically analyzed to find answers to research question(s). Secondary data, on the other hand, refers to a type of data that has been previously published in journals, magazines, newspapers, books, online portals and other sources.

Dissertations can be based solely on the secondary data, without a need for the primary data. However, the opposite is not true i.e. no research can be completed only using primary data and secondary data collection and analysis is compulsory for all dissertations.

Primary data collection methods can be divided into two categories: qualitative and quantitative.

The main differences between qualitative and quantitative research methods can be summarized in the following points:

Firstly, the concepts in quantitative research methods are usually expressed in the forms of variables, while the concepts in qualitative research methods are expressed in motives and generalizations.

Secondly, quantitative research methods and measures are usually universal, like formulas for finding mean, median and mode for a set of data, whereas, in qualitative research each research is approached individually and individual measures are developed to interpret the primary data taking into account the unique characteristics of the research.

Thirdly, data in quantitative research appears in the forms of numbers and specific measurements and in qualitative research data can be in forms of words, images, transcripts, etc.

Fourthly, research findings in quantitative research can be illustrated in the forms of tables, graphs and pie-charts, whereas, research findings in qualitative studies is usually presented in analysis by only using words.

Sampling

Sampling is a principle that specifies the conditions and guides the process of selecting the members of population to participate in the study and to contribute as sources for primary data. The choice of sampling method determines the accuracy of research findings, reliability and validity of the study and has immense implications on the overall quality of the study.

Ethical Considerations

Regardless of your choice of research methods, you are obliged to address ethical aspects of writing a dissertation in a proactive manner. Here you have to state that you have avoided misconducts during that research process and your dissertation is free from contradictions on ethical grounds and this statement must be true.

Section [Length]	Purpose	Verb Tense	Elements
Abstract [200-250 words]	Mini-version of the paper	Simple-past – refers to work done	• Principal objectives • Methods used • Principal results • Main Conclusions
Introduction [500-1,000 words] **Literature Review** [1,000-2,000 words]	Provides rationale for the study	Present – refers to established knowledge in the literature	• Nature & scope of the problem • Review of relevant literature • Hypothesis • Approach (and justification for this approach • Principal results • Main conclusions
Method & Materials [500-1,000 words] • Sampling • Data Collection • Measurement	Describes what was done – experiment, model, or field study	Simple past – refers to work done	• Description of materials • Description of procedure in logical order • Sufficient detail so that procedure can be reproduced
Results [500-1,500 words] • Analysis	Presents the data, the facts – what you found, calculated, discovered, observed	Simple past – refers to what was found, observed	• Your results • Your observations during experiments/fieldwork • Your observations about the results (e.g., compare/contrast between experiments) • Results of calculations using the data, such as rates or error
Discussion [1,000-1,500 words] • Evaluation	• Shows the relationships among the facts • Puts results in context of previous research	Present – emphasis on established knowledge, present results	• Trends, relationships, generalizations shown by the results • Any exceptions, outlying data (and why) • How your results agree disagree with previous studies, and why
Conclusions	Summarizes your principal findings	Present – emphasis on what should now be accepted as established knowledge	• Conclusions should relate back to the introduction, the hypothesis • Summary of evidence supporting each conclusion • Implications, the significance of your results or any practical applications
Title [8-15 words]	Draws readers' interest		

Discussion questions:

1. What is data?
2. How do you get data?
3. From whom do you collect data?

4. What tools can be used for your questions (Lesson 2)?

5. What is the relationship between tool and data?

Amaliy mashg'ulot 4

Theme: Finding primary research articles.

Plan:

1. **How to find relevant and reliable source for research in the Internet.**
2. **Teachers will be searching sources for their investigation.**
3. **How to specify your search? Activities with the articles.**

In 1962, William R. Parker wrote: "In terms of the number of pupils and teachers, of timetable hours and geographic extent, the teaching of English as a second language is the biggest educational undertaking in the world today" (quoted in Darian, 1972, p. 149). At present, the scope and impact of teaching English to speakers of other languages (this is how the acronym TESOL is to be understood throughout this article) is even greater than that of Parker's time. Like its growth as a distinct field of education, the knowledge base of TESOL has also become noticeably diverse. Scholarly journals have been launched across the globe to create and disseminate research-based knowledge among those involved in TESOL. However, much of the debate in TESOL literature has revolved around the issue of appropriate teaching methodologies. Toward the end of the nineteenth century, language teaching practitioners faced much confusion and bewilderment because of an apparent conflict between the new and the old ideas of language teaching. For example, in the beginning of twentieth century, a fairly detailed situation of language teaching at American schools was revealed by the Report of the Committee of Twelve (1900). The National Educational Association requested the formation of the committee, chaired by Professor Calvin Thomas, then president of the Modern

Language Association of America. The committee investigated "the position of the modern languages in secondary education...to make recommendations for methods of instruction, training of teachers, and other questions connected with the teaching of the modern languages in the secondary schools and colleges" (Titone, 1968, p. 75). The committee found the conditions "somewhat chaotic and bewildering" and made "a critical review of the contemporary methods and some pertinent recommendations and proposals" (p. 75). The Report of the Committee of Twelve "reveal[ed] a thoroughly up-to-date awareness of the day's methodological trends" (p.76). As evident in the Committee's emphasis on the methods of language teaching, TESOL practitioners and theorists have always used various research findings to support their preferred teaching method(s). Thus, research plays significant roles in the field of TESOL, especially when it comes to teachers' knowledge of effective teaching. In the pages that follow, I first present TESOL practitioners' views on research and a dichotomy between qualitative and quantitative approaches to research. Then, I briefly discuss seven research orientations currently predominant in TESOL. Drawing on sociocultural theories, I also discuss how engaging in action research may be beneficial to teachers not only for their professional development, but also for their students' increased learning. I conclude the article with a recommendation the TESOL practitioners engage in action research more frequently than they currently do. Understanding and Using Research Simon Borg (2009) carried out a study in order to analyze the conceptions of research held by 505 teachers of English from 13 countries. The study explored issues such as English language teachers' perceptions of research, how often the teachers read published research, how often they do research, what they think about teachers' research engagement, and the like. The study elicited the participating teachers' conceptions of research in two ways: first, they were asked to evaluate a number of scenarios, and then comment on the features of good research. Borg collected the data by using questionnaires and follow-up interviews. To understand the state of

research in TESOL, Borg's findings are very significant. Among 495 teachers who reported on the frequency of reading published research, only 15.6% often read published research, 51.9% did it sometimes, 28.7% did it rarely, and 3.8% never did so (Borg, 2009). The main reasons for rarely or never reading published research were a lack of time, a lack of practical relevance, and inaccessibility to research publications. With regard to teachers' engagement in research, Borg (2009) mentions that "a total of 493 teachers reported how frequently they did research. Of them, 8.1 per cent said they never did it, 37.3 per cent said they did it rarely, 41 per cent sometimes, and 13.6 per cent often" (p. 371). The three main reasons for doing research for those who did it often or sometimes were (1) to look for better instructional methods, (2) to solve pedagogical problems, and (3) to develop professionally. On the other hand, teachers who rarely or never did research also mentioned some reasons for not doing so. The three main reasons were (1) a lack of time (as is the case for not reading published research), (2) most of their colleagues did not do research (indicative of peer-influence), and (3) a lack of sufficient knowledge about research methods. Another significant reason was that doing research was not a part of their job responsibility. In short, although the benefits of teachers' engagement in research abound in the literature (Cochran-Smith & Lytle, 1993; Pine, 2009; Borg, 2010; Burns, 2010), the reality is that "teacher research—systematic, rigorous enquiry by teachers into their own professional contexts, and which is made public—is a minority activity in ELT" (Borg, 2009, p. 377). (Note that ELT stands for English Language Teaching, which is a European equivalence to TESOL). This resonates with a qualitative approach to research, but it helps us gauge where the field of TESOL is in terms of various orientations to research.

(Internet access required…probably in library should be informed in advance)

This class is practical and it is delivered in computer room.

Discussion questions:

- What is literature review?
- Where does literature review come from?
- What is data?
- How do you get data?
- From whom do you collect data?
- What tools can be used for your questions (Lesson 2)?
- What is the relationship between tool and data?

Open-ended questions

Savol-javob

1. Define primary data.

Primary data is a type of data, which never existed before; hence, it was not previously published. Primary data is collected for a specific purpose, i.e. they are critically analyzed to find answers to research question(s).

2. Define qualitative research method and give the tools for this method.

Qualitative research is a type of social science research that collects and works with non-numerical data and that seeks to interpret meaning from these data that help us understand social life through the study of targeted populations or places. Data is collected from open-ended responses, interviews, observation, focus groups, **content analysis** of visual and textual materials, and **oral history**.

3.*What methods can be used in empirical reseach?*

Qualitative, quantitative, mixed

4.What tools can be used t collect quantitative data?

Surveys involve developing a series of short, easy to answer, multiple choice or multiple answer questions that are distributed to a large number of people. Usually, surveys are used to collect *quantitative* data

Interviews are a method of data collection that involves two or more people exchanging information through a series of questions and answers. The questions are designed by a researcher to elicit information from interview participant(s) on a specific topic or set of topics. Typically interviews involve an in-person meeting between two people, an interviewer and an interviewee. But as you'll discover in this chapter, interviews need not be limited to two people, nor must they occur in person.

Amaliy mashg'ulot 5

Theme: Research Design

Plan:

1. **Method section of research article.**
2. **Sample and its types.**
3. **Finding and defining samples in their own articles.**
4. **Data collection procedures.**

The research design is a framework for planning your research and answering your research questions. Creating a research design means making decisions about:

- The type of data you need
- The location and timescale of the research
- The participants and sources
- The variables and hypotheses (if relevant)
- The methods for collecting and analyzing data

The research design sets the parameters of your project: it determines exactly what will and will not be included. It also defines the criteria by which you will evaluate

your results and draw your conclusions. The reliability and validity of your study depends on how you collect, measure, analyze, and interpret your data.

A strong research design is crucial to a successful research proposal, scientific paper, or dissertation.

Step 1: Consider your priorities and practicalities

For most research problems, there is not just one possible research design, but a range of possibilities to choose from. The choices you make depend on your priorities in the research, and often involve some tradeoffs – a research design that is strong in one area might be weaker in another.

Examples

A qualitative case study is good for gaining in-depth understanding of a specific context, but it does not allow you to generalize to a wider population.

A laboratory experiment allows you to investigate causes and effects with high internal validity, but it might not accurately represent how things work in the real world (external validity).

As well as scientific considerations, you also need to think practically when designing your research.

- How much time do you have to collect data and write up the research?
- Will you be able to gain access to the data you need (e.g. by travelling to a specific location or contacting specific people)?
- Do you have the necessary research skills (e.g. statistical analysis or interview techniques)?

If you realize it is not practically feasible to do the kind of research needed to answer your research questions, you will have to refine your questions further.

Step 2: Determine the type of data you need

You probably already have an idea of the type of research you need to do based on your problem statement and research questions. There are two main choices that you need to start with.

Primary vs secondary data	
You will directly collect original data (e.g. through surveys, interviews, or experiments) and then analyze it.	You will analyze data that someone else already collected (e.g. in national statistics, official records archives, publications, and previous studies).
This makes your research more original, but it requires more time and effort, and relies on participants being available and accessible.	This saves time and can expand the scope of your research, but it means you don't have control over the content or reliability of the data.

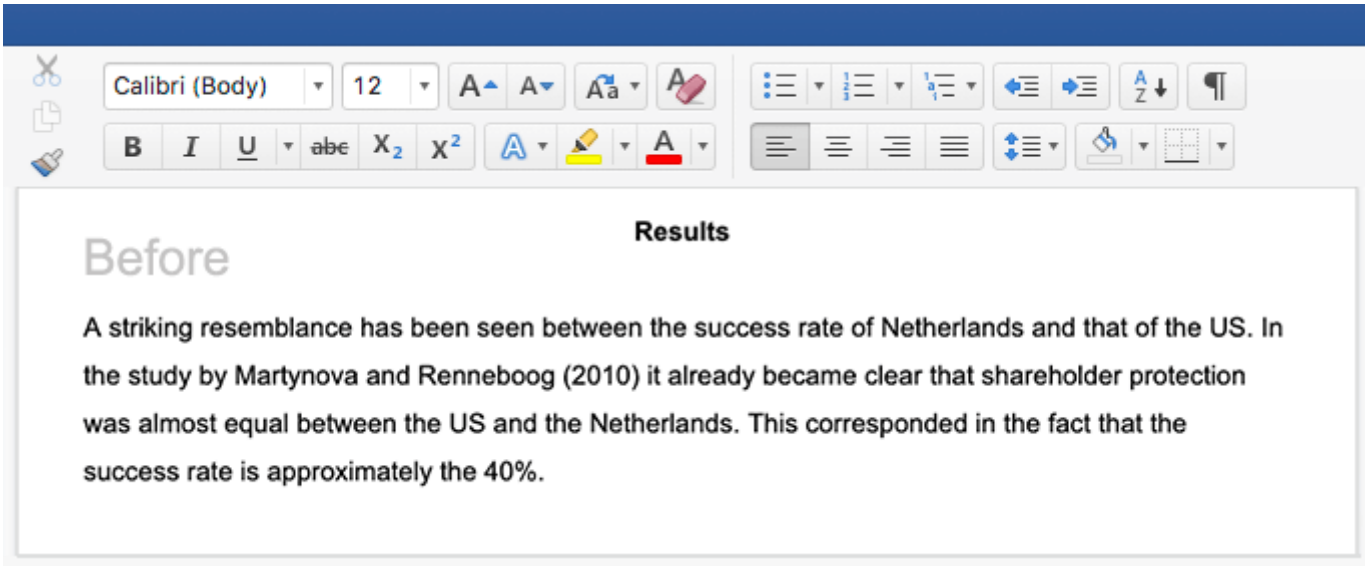
Qualitative vs quantitative data	
If your objectives involve describing subjective experiences, interpreting meanings, and understanding concepts, you will need to do qualitative research. Qualitative research designs tend to be more flexible, allowing you to adjust your approach based on what you find	If your objectives involve measuring variables, finding frequencies or correlations, and testing hypotheses, you will need to do quantitative research. Quantitative research designs tend to be more fixed, with variables and methods determined in advance of data collection.

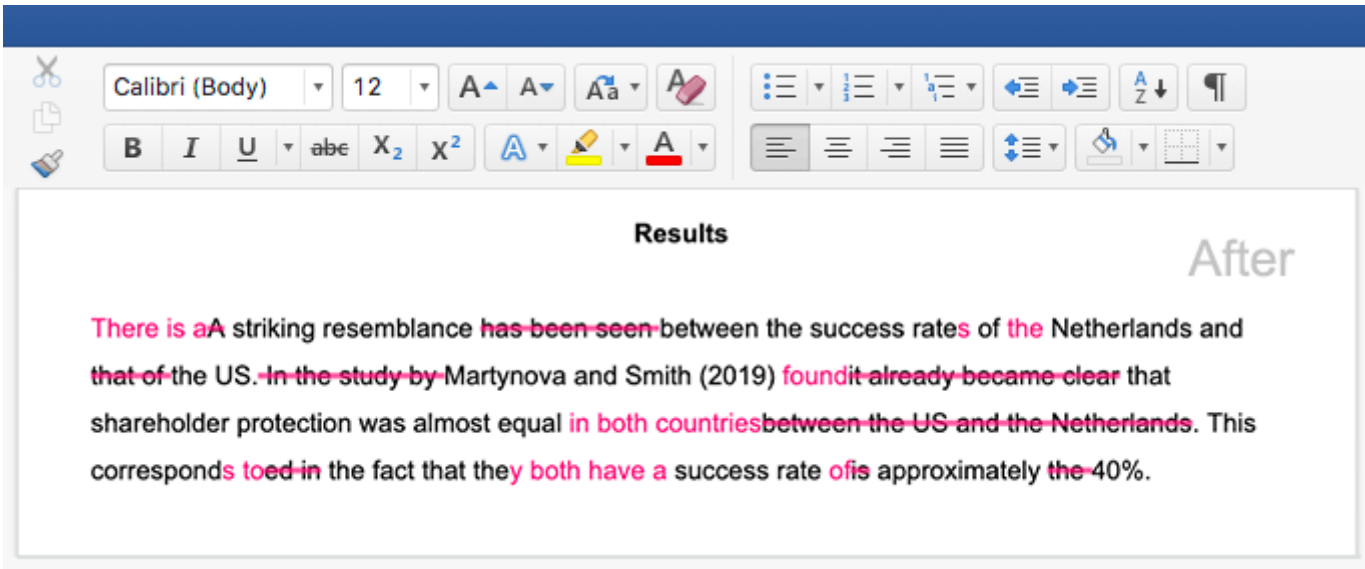
throughout the research process.	

Note that these pairs are not mutually exclusive choices: you can create a research design that combines primary and secondary data and uses mixed methods (both qualitative and quantitative).

What can be proofreading do for your paper?

Scribbr editors not only correct grammar and spelling mistakes, but also strengthen your writing by making sure your paper is free of vague language, redundant words and awkward phrasing.





Step 3: Decide how you will collect the data

Once you know what kind of data you need, you need to decide how, where and when you will collect it.

This means you need to determine your research methods – the specific tools, procedures, materials and techniques you will use. You also need to specify what criteria you'll use to select participants or sources, and how you will recruit or access them.

Research methods	
Surveys	• How many respondents do you need and what sampling method will you use (e.g. simple random or stratified sampling)? • How will you distribute the survey (e.g. in person, by post, online)? • How will you design the questionnaire (e.g. open or closed questions)?
Interviews	• How will you select participants? • Where and when will the interviews take place? • Will the interviews be structured, semi-structured or unstructured?
Experiments	• Will you conduct the experiment in a laboratory setting or in the field? • How will you measure and control the variables? • How will you design the experiment (e.g. between-subjects, within-subjects, double blinding)?
Secondary data	• Where will you get your sources from (e.g. online or

	a physical archive)? • What criteria will you use to select sources (e.g. date range, content)?

Step 4: Decide how you will analyze the data

To answer your research questions, you will have to analyze the data you collected. The final step in designing the research is to consider your data analysis methods.

Quantitative data analysis

To analyze numerical data, you will probably use statistical methods. These generally require applications such as Excel, SPSS or SAS.

Statistical methods can be used to analyze averages, frequencies, patterns, and correlations between variables. When creating your research design, you should clearly define your variables and formulate hypotheses about the relations between them. Then you can choose appropriate statistical methods to test these hypotheses.

Qualitative data analysis

Analyzing words or images is often a more flexible process that involves the researcher's subjective judgements. You might focus on identifying and categorizing key themes, interpreting patterns and narratives, or understanding social context and meaning.

When creating your research design, you should consider what approach you will take to analyzing the data. The main themes and categories might only emerge after you have collected the data, but you need to decide what you want to achieve in the analysis.

For example, do you simply want to describe participants' perceptions and experiences, or will you analyze the meaning of their responses in relation to a

social context? Will your analysis focus only on *what* is said or also on *how* it is said?

Step 5: Write your research proposal

The research design is an important component of your dissertation or thesis proposal. It describes exactly what you plan to do and how you plan to do it, showing your supervisor that your project is both practically feasible and capable of answering your research questions.

Read the guide on how to write a research proposal and make sure you have included all of the steps above in the research design section. Note that, in a proposal, the steps of your research that have yet to be completed should be written in the future tense. The research design or methodology section of your completed paper, on the other hand, describes the research steps in the past tense.

Discussion questions:

1. What is secondary data?
2. What is primary data and where from we can find it?
3. What is the research process?
4. Say the stages of research?

Amaliy mashg'ulot 6

Theme: Research Design (cont.)

Plan:

1. **Sample and its types.**
2. **Examining of the research design in exemplary article and in the articles of trainees.**

Sampling Strategies for Making Generalizations

There are many strategies used to achieve a representative sample. Because the manner in which a sample is chosen is so important, published studies in applied linguistics should inform the reader how the samples were selected. The following is a list of the more common sampling strategies and the rationales used to warrant them.

The most desired strategy, yet rarely achieved, is simple random sampling. This method attempts to ensure that every member of the target population has an equal opportunity for being chosen. If successfully obtained, such samples can control unwanted influences from extraneous variables. As mentioned in chapter 3, these are variables that could impact the variables being studied and produce spurious results. The reason simple random sampling controls the impact of these nuisance variables is that it dissipates their effect throughout the sample. For example, if a researcher is not interested in whether males behave differently than females, yet gender could affect the dependent variable in some undesirable way, the researcher would want to ensure that the sample consisted of approximately half males and half females. One way to do this is to obtain a sample randomly. If the sample is randomly chosen (and large enough), there is a high probability that both genders will be equally represented, which would wash out any gender effect when the data from the two groups were combined.

However, simple random selection on its own does not guarantee a representative sample; sample size is also a consideration. Obviously, a sample of one person would not represent a population of language students even though randomly selected. The target population might consist of males and females, but a sample of one is not representative because only one of the genders is represented. If the sample of one is a male, but the dependent variable does not behave with males as it does with females, then the findings would be misleading. To avoid

these two problems, you need to use a larger sample. The maxim in research that aims to make generalizations is the larger the sample, the better. In chapter 7, when I discuss some statistical issues, I show the relationship between sample size and the risk of getting a nonrepresentative sample. Suffice it to say here that the larger the random sample, the greater the probability of getting a representative sample.

The negative impact of overall small sample size is exacerbated if there is any attrition (i.e., loss of participants).2 An example of how this might work is Taguchi's (1997) study, which looked at the effects of reading a passage repeatedly for slow, beginning L2 readers. The research design used required three subgroups for reading ability level, among other things. Sixteen participants were used in the total sample, and they were divided into three groups: "Three students were assigned to Level 3, six students to Level 4, and seven students to Level 5". The chance that such small subgroups were representative of a larger group is questionable based on sampling error.3 However, related to the topic at hand, one subject was excluded for not responding appropriately. Fortunately, this happened for Level 5, where there were seven participants. Had this occurred for Level 3, the cell size would have been reduced to two subjects, making this level even less representative.

When the sample size is too small and/or simple random sampling cannot be done, other sampling strategies need to be used. This is especially true when the population consists of subgroups such as males/females, various language proficiency levels, and different ethnic backgrounds, which the research wants to control. In this scenario, one of two forms of stratified random sampling can be used: proportional or nonproportional (Gall et al,1996).

Proportional stratified random sampling attempts to choose cases that represent the proportion of each of the subgroups. For example, suppose a foreign language program is made up of three language levels: low, intermediate, and advanced. In the low and high groups, we have two classes of 15 each. In the

middle group, we have six classes of 15. If a researcher were to sample 30 students using the simple random procedure, s/he could easily end up with a sample that would not represent these proportions. If the main intent were to generalize the findings to the whole group in that particular foreign language program, the sample would need to reflect these proportions. Therefore, a representative sample should have approximately 20% from each of the low and high groups (i.e., 30/150) and 60% from the middle level. To ensure that these proportions are obtained, the researcher would randomly select six participants (20%) from the low group and six from the high group. The remaining 18 would be randomly selected from the intermediate level. Now s/he would be able to make valid inferences from the sample to the target population.

However, if the main intent were to compare the subgroups with one another, the researcher needs to have equal numbers of participants for each group. To do this, s/he should use a nonproportional stratified random sampling strategy. That is, the researcher will randomly sample the same number of participants from each of the levels. In the previous example, it would mean 10 participants from each level.

The following study exemplifies the use of the nonproportional stratified sampling strategy. Arriaga, Fenson, Cronan, and Pethick (1998) compared the language skills of low- and middle-income toddlers. They compared all of the 103 toddlers (approximately equal sexes) available to them in the low-income group with three independent random samples from a larger pool of middle-income participants. Although the proportion of middle income to low income was almost 10 to 1, they randomly chose three samples of 103 from the middle-income pool. They chose three different samples to ensure that they did not, by chance, obtain an atypical sample from the middle-income toddlers pool. However, they also made sure that they had the same number of males and females as the lowincome group by randomly selecting from the middle-income group the same number of boys

and girls for each set of 103 middle-income participants. With these samples, they could make reasonable comparisons between the two income levels.

In practice, having access to all members of the entire population is often impossible due to time or financial constraints. Instead researchers access participants from a population that is available. This strategy is referred to by Gall et al. (1996) as convenience sampling. For example, if my target population is all learners of EFL who attend an English-medium university, but I only have access to a sample from learners of EFL who attend the English-medium university where I teach, I use this group because it is convenient.

Whether one can apply their findings from a convenience sample to a larger target population depends on how well one can show that the sample corresponds to the larger population on important characteristics. This is done by providing clear descriptions of how the sample shares these features. Often the researcher gathers this information through surveys and tests prior to the implementation of the study. From the many studies that I and my students have seen, our conclusion is that the majority of studies use convenience sampling when selecting samples. One such study that clearly used a convenience sample was done by Byrnes, Kieger, and Manning (1997), who investigated teachers' attitudes toward students from different language backgrounds. They selected 191 regular-classroom teachers who participated in teacher-education courses taught in three states in the United States: Arizona, Utah, and Virginia.

Most likely, the teacher-education courses were either taught by the researchers or someone close to them. However, Byrnes et al. also stated that, although their sample was one of convenience, an effort was made "to reflect a range of language-diversity experiences that teachers might encounter". Clearly, they were establishing a link between their sample and the target population to which they want to generalize their findings.

I think it is safe to say that when a study does not identify how the sample was selected—and many do not—we can assume that the method used was convenience sampling. For instance, Baker and MacIntyre (2000) examined the role gender and immersion play in L2 on nonlinguistic outcomes such as attitude, motivation, and anxiety. They provided a concisely written description of their participants by stating the numbers of males or females, whether they were in immersion or nonimmersion settings, and the age range of each group. The participants were taken from Grades 10, 11, and 12 and were all studying French. However, nothing is said about the manner in which the sample was chosen. Neither is anything said as to whether all of the participants came from the same school. I assume they did. I have to also assume that the participants must have been conveniently available to the researchers for use in the study. Nevertheless, knowing this information helps understand the degree to which we can generalize results to the larger population of male/female high school students who are immersed/ nonimmersed in the French language.

Closely related to convenience sampling is the use of volunteers as a sampling strategy. Volunteers are participants who have been solicited and haveagreed to participate in a study. They differ from a convenience sample in that they are not under any obligation to participate in the study, whereas the former usually consists of students who are required to be participants of a research study as partial fulfillment of their courses. Volunteers are often paid for their services, whereas participants in convenience samples are not. When all attempts fail to find participants using other strategies, using volunteers is often the only way researchers can go.

However, research has shown that using volunteers frequently leads to a sample that is not representative of a target population (Gall et al., 1996). Findings have shown that in the West (Gall et al., 1996), volunteers tend to be better educated, more motivated, more outgoing, higher in need achievement, and from a higher socioeconomic level. Gall et al. Pointed out that if any of these qualities

could possibly impact the variable(s) under investigation, you would have to treat the findings of the study with some reservation. Dehaene-Lambertz and Houston (1997) provided us with an example of using volunteer participants and some of the problems that can occur.

Based on previous research findings suggesting that infants can differentiate between native and foreign languages, the researchers assessed the amount of linguistic information infants required to make this discrimina tion. In their first experiment, the sample consisted of 14 infants from American-English-speaking parents living in Eugene, Oregon, and 12 from French-speaking parents from Paris. Parents had to sign a consent form for their children to participate in this study. The researchers went on to report that they had to exclude 14 participants due to participants not being able to complete the study (nine American-English and five French). The question immediately arises as to whether the remaining families who volunteered their 2-month-olds possessed qualities that would enhance or distract from the listening test that was administered. In addition, would there have been different results if the 14 infants who were excluded continued in the study? Dehaene-Lambertz and Houston realized this and answered these questions by doing a second experiment reported in the same paper. Another study done by Onwuegbuzie, Bailey, and Dailey (2000) illustrates the attention that must be given to the makeup of volunteers to increase the likelihood of obtaining a representative sample. Their study examined the age-old issue of finding what variables best predict foreign language achievement. One hundred eighty-four students studying various foreign languages at a U.S. midsouthern university volunteered to participate in the study. They were required to sign an informed consent document, which is now required by law in the United States for anyone participating in a research study. The researchers then listed a number of descriptive statistics that revealed information about their language proficiency, level of course, age, level in the university, program major, course load, previous language training, countries visited, and percentage of family whose L1 was not

English. The researchers apparently wanted the reader to have enough information to judge whether their participants are fairly representative of foreign language learners at the university level. The researchers were careful to explain in their Discussion section that their findings were just “a step nearer” to supporting the notion that language achievement can be predicted given the right cognitive and motivational information.

Let me encourage you regarding your attitude toward studies using volunteers or convenience samples. You should not think that such studies have little value. Rather, you need to take the findings from such studies with the understanding that they need to be replicated with different samples. I think it is safe to say that few studies use samples that pass all of the criteria for a good sample. For this reason, the consumer needs to look for similar studies using different samples to see whether the results are repeated. If so, you can have more confidence in the answers to your questions.

In summary, whatever sampling paradigm a researcher uses, s/he shouldgive attention to precision in describing why a sample was chosen and what steps were taken to ensure that the best sample was selected. The more precise the description, the more credence can be given to the interpretation and application of the results. For further reading on sampling theory, I recommend Gall et al. (2002) and Krathwohl (1998).

In Exercise 4.1, you were asked to find a study that used an information rich sampling paradigm. Exercise 4.2 provides an opportunity to find a study that used the representative sampling paradigm. After completing this exercise, compare the results of the two exercises. Note the similarities and differences.

The Representative Sampling Paradigm

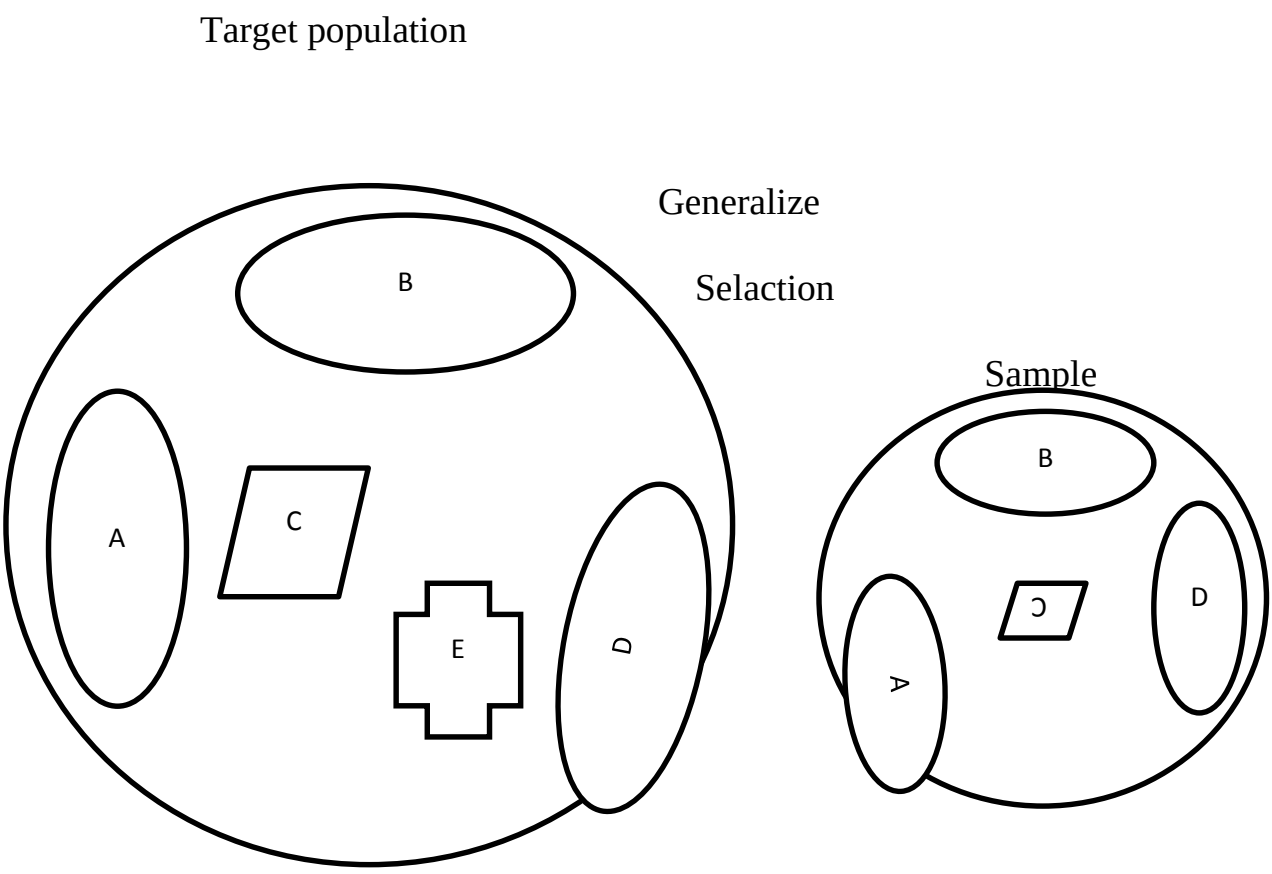
In the representative sampling paradigm, the goal of the researcher is to generalize the findings and interpretations of the study to a larger population. The sample is a portion of a larger population. The word population usually means

everyone in a country or city. In research, this word has a more technical use; although similar, population means all the members of the group of participants/objects to which the researcher wants to generalize his or her research findings. This is referred to as the target population. In other words, the criterion for defining a target population is determined by the group of people to which the researcher would like to generalize the interpretations of the study. For example, the population might be all learners of English as a foreign language (EFL), or it might be a more limited group of all learners of EFL who attend an English-medium university. For another study, the target population may be entirely different.

Typically, having access to the entire target population to which researchers want to generalize their findings is impossible. For example, having access to all learners of EFL who attend English-medium universities throughout the world is, in practice, impossible. However, the researcher may have access to English-medium universities in his or her own country. Whatever is available for use becomes the experimentally accessible population (Gall et al., 1996). It is to this population that the findings of a study can be directly generalized, not to the entire target population. The only time a researcher could make inferences from the findings of his or her study to the target population is when she can show that the experimentally accessible population possesses similar characteristics as the larger target population. For the rest of the book, I use the phrase target population with the understanding that I am referring to the experimentally accessible population. Selecting a representative sample is important for making use of the findings of a study outside of the confines of the study. This is because the degree to which the results of a study can be generalized to a target population is the degree to which the sample adequately represents the larger group—the degree to which a sample represents a population is determined by the degree to which the relevant attributes in the target population are found in the sample.

Figure 4.1 illustrates the relationship between the sample and the population. I have used different graphic symbols to represent different attributes of a population. These attributes could be gender, age, level of education, level of language proficiency, and so on. Notice that the attributes in the sample (A, B, C, D, F) almost match exactly the attributes in the population; however, Attribute E is missing in the sample. In this case, the sample is not 100% representative of the population, but it is very close. Most likely we could conclude that the population was representative enough to make tentative generalizations. However, there would always remain caution due to the missing Attribute E.

The degree to which findings of a study can be generalized to a larger population or transferred to similar situations is referred to as external validity (or transferability; Miles & Huberman, 1994). To achieve this type of validity, researchers must demonstrate that the samples they use represent the groups to which they want to apply their findings. Otherwise, without this important quality, the findings are of little use outside of the study. The more representative the sample is to the population, the higher the external validity. In other terms, the more similar the characteristics of the sample is to other situations, the better the transfer of conclusions.



Amaliy mashg'ulot 7

Theme: Research methods.

Plan:

1. **Qualitative method.**
2. **Quantitative method.**
3. **Mixed method.**
4. **Tool and their use in different research methods.**
5. **The procedures of the study used.**

Qualitative research is a type of social science research that collects and works with non-numerical data and that seeks to interpret meaning from these data that help understand social life through the study of targeted populations or places.

People often frame it in opposition to quantitative research, which uses numerical data to identify large-scale trends and employs statistical operations to determine causal and correlative relationships between variables.

Within sociology, qualitative research is typically focused on the micro-level of social interaction that composes everyday life, whereas quantitative research typically focuses on macro-level trends and phenomena.

Methods

Qualitative researchers use their own eyes, ears, and intelligence to collect in-depth perceptions and descriptions of targeted populations, places, and events.

Their findings are collected through a variety of methods, and often a researcher will use at least two or several of the following while conducting a qualitative study:

- Direct observation: With direct observation, a researcher studies people as they go about their daily lives without participating or interfering. This type of research is often unknown to those under study, and as such, must be conducted in public settings where people do not have a reasonable expectation of privacy. For example, a researcher might observe the ways in which strangers interact in public as they gather to watch a street performer.
- Open-ended surveys: While many surveys are designed to generate quantitative data, many are also designed with open-ended questions that allow for the generation and analysis of qualitative data. For example, a survey might be used to investigate not just which political candidates voters chose, but why they chose them, in their own words.
- Focus group: In a focus group, a researcher engages a small group of participants in a conversation designed to generate data relevant to the research question. Focus groups can contain anywhere from 5 to 15 participants. Social scientists often use them in studies that examine an event or trend that occurs within a specific community. They are common in market research, too.
- In-depth interviews: Researchers conduct in-depth interviews by speaking with participants in a one-on-one setting. Sometimes a researcher approaches the interview with a predetermined list of questions or topics for discussion but allows the conversation to evolve based on how the participant responds. Other times, the researcher has identified certain topics

of interest but does not have a formal guide for the conversation, but allows the participant to guide it.

- Oral history: The oral history method is used to create a historical account of an event, group, or community, and typically involves a series of in-depth interviews conducted with one or multiple participants over an extended period.
- Participant observation: This method is similar to observation, however with this one, the researcher also participates in the action or events to not only observe others but to gain the first-hand experience in the setting.
- Ethnographic observation: Ethnographic observation is the most intensive and in-depth observational method. Originating in anthropology, with this method, a researcher fully immerses themselves into the research setting and lives among the participants as one of them for anywhere from months to years. By doing this, the researcher attempts to experience day-to-day existence from the viewpoints of those studied to develop in-depth and long-term accounts of the community, events, or trends under observation.
- Content analysis: This method is used by sociologists to analyze social life by interpreting words and images from documents, film, art, music, and other cultural products and media. The researchers look at how the words and images are used, and the context in which they are used to draw inferences about the underlying culture. Content analysis of digital material, especially that generated by social media users, has become a popular technique within the social sciences.

While much of the data generated by qualitative research is coded and analyzed using just the researcher's eyes and brain, the use of computer software to do these processes is increasingly popular within the social sciences.

Such software analysis works well when the data is too large for humans to handle, though the lack of a human interpreter is a common criticism of the use of computer software.

Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon.

Your goal in conducting quantitative research study is to determine the relationship between one thing [an independent variable] and another [a dependent or outcome variable] within a population. Quantitative research designs are either **descriptive** [subjects usually measured once] or **experimental** [subjects measured before and after a treatment]. A descriptive study establishes only associations between variables; an experimental study establishes causality.

Quantitative research deals in numbers, logic, and an objective stance. Quantitative research focuses on numeric and unchanging data and detailed, convergent reasoning rather than divergent reasoning [i.e., the generation of a variety of ideas about a research problem in a spontaneous, free-flowing manner].

Its main characteristics are:

- The data is usually gathered using structured research instruments.
- The results are based on larger sample sizes that are representative of the population.
- The research study can usually be replicated or repeated, given its high reliability.

- Researcher has a clearly defined research question to which objective answers are sought.
- All aspects of the study are carefully designed before data is collected.
- Data are in the form of numbers and statistics, often arranged in tables, charts, figures, or other non-textual forms.
- Project can be used to generalize concepts more widely, predict future results, or investigate causal relationships.
- Researcher uses tools, such as questionnaires or computer software, to collect numerical data.

The overarching aim of a quantitative research study is to classify features, count them, and construct statistical models in an attempt to explain what is observed.

Things to keep in mind when reporting the results of a study using quantitative methods:

1. **Explain the data collected** and their statistical treatment as well as all relevant results in relation to the research problem you are investigating. Interpretation of results is not appropriate in this section.
2. **Report unanticipated events** that occurred during your data collection. Explain how the actual analysis differs from the planned analysis. Explain your handling of missing data and why any missing data does not undermine the validity of your analysis.
3. **Explain the techniques** you used to "clean" your data set.
4. **Choose a minimally sufficient statistical procedure**; provide a rationale for its use and a reference for it. Specify any computer programs used.
5. **Describe the assumptions** for each procedure and the steps you took to ensure that they were not violated.
6. **When using inferential statistics**, provide the descriptive statistics, confidence intervals, and sample sizes for each variable as well as the value

of the test statistic, its direction, the degrees of freedom, and the significance level [report the actual *p* value].

7. **Avoid inferring causality**, particularly in nonrandomized designs or without further experimentation.
8. **Use tables to provide exact values**; use figures to convey global effects. Keep figures small in size; include graphic representations of confidence intervals whenever possible.
9. **Always tell the reader what to look for in tables and figures**.

NOTE: When using pre-existing statistical data gathered and made available by anyone other than yourself [e.g., government agency], you still must report on the methods that were used to gather the data and describe any missing data that exists and, if there is any, provide a clear explanation why the missing data does not undermine the validity of your final analysis.

Before designing a quantitative research study, you must decide whether it will be descriptive or experimental because this will dictate how you gather, analyze, and interpret the results. A descriptive study is governed by the following rules: subjects are generally measured once; the intention is to only establish associations between variables; and, the study may include a sample population of hundreds or thousands of subjects to ensure that a valid estimate of a generalized relationship between variables has been obtained. An experimental design includes subjects measured before and after a particular treatment, the sample population may be very small and purposefully chosen, and it is intended to establish causality between variables.

Introduction

The introduction to a quantitative study is usually written in the present tense and from the third person point of view. It covers the following information:

- **Identifies the research problem** -- as with any academic study, you must state clearly and concisely the research problem being investigated.
- **Reviews the literature** -- review scholarship on the topic, synthesizing key themes and, if necessary, noting studies that have used similar methods of inquiry and analysis. Note where key gaps exist and how your study helps to fill these gaps or clarifies existing knowledge.
- **Describes the theoretical framework** -- provide an outline of the theory or hypothesis underpinning your study. If necessary, define unfamiliar or complex terms, concepts, or ideas and provide the appropriate background information to place the research problem in proper context [e.g., historical, cultural, economic, etc.].

Methodology

The methods section of a quantitative study should describe how each objective of your study will be achieved. Be sure to provide enough detail to enable the reader can make an informed assessment of the methods being used to obtain results associated with the research problem. The methods section should be presented in the past tense.

- **Study population and sampling** -- where did the data come from; how robust is it; note where gaps exist or what was excluded. Note the procedures used for their selection;
- **Data collection** – describe the tools and methods used to collect information and identify the variables being measured; describe the methods used to obtain the data; and, note if the data was pre-existing [i.e., government data] or you gathered it yourself. If you gathered it yourself, describe what type of instrument you used and why. Note that no data set is perfect--describe any limitations in methods of gathering data.
- **Data analysis** -- describe the procedures for processing and analyzing the data. If appropriate, describe the specific instruments of analysis used to

study each research objective, including mathematical techniques and the type of computer software used to manipulate the data.

Results

The finding of your study should be written objectively and in a succinct and precise format. In quantitative studies, it is common to use graphs, tables, charts, and other non-textual elements to help the reader understand the data. Make sure that non-textual elements do not stand in isolation from the text but are being used to supplement the overall description of the results and to help clarify key points being made. Further information about how to effectively present data using charts and graphs can be found **here**.

- **Statistical analysis** -- how did you analyze the data? What were the key findings from the data? The findings should be present in a logical, sequential order. Describe but do not interpret these trends or negative results; save that for the discussion section. The results should be presented in the past tense.

Discussion

Discussions should be analytic, logical, and comprehensive. The discussion should meld together your findings in relation to those identified in the literature review, and placed within the context of the theoretical framework underpinning the study. The discussion should be presented in the present tense.

- **Interpretation of results** -- reiterate the research problem being investigated and compare and contrast the findings with the research questions underlying the study. Did they affirm predicted outcomes or did the data refute it?

- **Description of trends, comparison of groups, or relationships among variables** -- describe any trends that emerged from your analysis and explain all unanticipated and statistical insignificant findings.
- **Discussion of implications** – what is the meaning of your results? Highlight key findings based on the overall results and note findings that you believe are important. How have the results helped fill gaps in understanding the research problem?
- **Limitations** -- describe any limitations or unavoidable bias in your study and, if necessary, note why these limitations did not inhibit effective interpretation of the results.

Discussion questions:

1.What is data?

2.Where from do you derive your data?

3.What is included in introduction sections?

4. Which section contains secondary research**?**

Amaliy mashg'ulot 8

Theme: Results section.

Plan:

1.Analysis of the data.

2.Instruments for data analysis.

3.The relationship between question, data, tool, analysis.

4.Reliability and validity of the research

Numerical Versus Verbal Data

Some people think that numerical data are more scientific—and therefore more important—than verbal data because of the statistical analyses that can be performed on numerical data. However, this is a false conclusion. We must not forget that numbers are only as good as the constructs they represent. In other words, when we use statistics, we have basically transferred verbally defined constructs into numbers so we can analyze the data more easily. We must not forget that these statistical results must again be transferred back into terminology that represents these verbal constructs to make any sense.1 Consider the following statement by Miles and Huberman (1994) as an argument for the importance of verbal data:

We argue that although words may be more unwieldy than numbers, they render more meaning than numbers alone and should be hung on to throughout data analysis. Converting words into numbers and then tossing away the words gets a researcher into all kinds of mischief. You thus are assuming that the chief property of the words is that there are more of some than of others.

Focusing solely on numbers shifts attention from substance to arithmetic, throwing out the whole notion of "qualities" or "essential characteristics."

Nevertheless, be careful not to swing to the other side of the pendulum, thinking that verbal data are superior to numerical data. Both types of data have their place and are equally important. Miles and Huberman provided a powerful discussion on how the two types of data complement each other. This concurs with my position presented in chapter 5 of this book.

Common Procedure

In almost all studies, all of the data that have been gathered are not presented in the research report. Whether verbal or numerical, the data presented have gone through some form of selection and reduction. The reason is that both verbal and numerical data typically are voluminous in their rawest forms. What you see reported in a research journal are results of the raw data having been boiled down into

manageable units for display to the public. Verbal data commonly appear as selections of excerpts, narrative vignettes, quotations from interviews, and so on, whereas numerical data are often condensed into tables of frequencies, averages, and so on. There are some interesting differences, however, which I describe in the following two sections.

Discussion questions:

1.What is target population?

2.Define simple random sampling?

3.Where can we find ideas for research questions?

4.What is observation?

5. What elements are there in the cycle of research?

IV. MUSTAQIL TA'LIM MAVZULARI

1. Statistical analysis of qualitative data.
2. The role of dialogue journals in writing developments
3. The role of dialogue journals in critical thinking development
4. Using Listener Judgement to Investigate Linguistic Influence on L2
5. The impact of Mother Tongue Instructions on the Development of Billiteracy
6. Understanding the nature of research
7. How to locate Research
8. Understanding where data come from: Sample
9. Understanding research design
10. Understanding research results
11. Discerning consumer of research
12. Sampling terminology
13. Collecting and evaluating verbal data
14. Collecting an evaluating numerical data
15. Understanding descriptive statistics
16. Understanding inferential statistics
17. Constructing a literature review
18. Analysis of numerical data

V. GLOSSARY

Accuracy	In survey research, accuracy refers to the match between a sample and the target population. It also indicates how close a value obtained from a survey instrument or assessment is to the actual (true) value.
Action Research	Action research conducted to solve problems, inform policy, or improve the way that issues are addressed and problems solved. There are two broad types of action research: participatory action research and practical action research.
Alternative Hypothesis	The experimental hypothesis stating that there is some real difference between two or more groups. It is the alternative to the null hypothesis, which states that there is no difference between groups.
Analysis of Covariance (ANCOVA)	Is an advanced form of ANOVA (analysis of variance). While ANOVA is used to test for differences in the means of two or more groups, ANCOVA removes the effect(s) of one or more continuous variable(s) before testing for the group differences. For example, in an analysis that examines differences in child outcomes by type of child care, the analyst may want to remove the effects of parental education.
Analysis of Variance (ANOVA)	A statistical test that determines whether the means of two or more groups are significantly different.

Anonymity	An ethical safeguard against invasion of privacy whereby the researcher is unable to identify the respondents by their responses.
Association	The relationship between objects or variables. Two variables are positively associated when the values of one increase as the values of the other increases. They are negatively associated when the values of one decrease as the values of the other increase. Income and education are usually positively associated and student absentism is generally negatively associated with student achievement.
Attrition	Attrition occurs when participants drop out of a longitudinal study or panel study over time. If particular types of study participants drop out at a higher rate than other types of participants, attrition can introduce bias that can potentially threaten the internal and external validity of a longitudinal study and the internal validity of an experiment with treatment and control groups.
Average	A single value (mean, median, mode) representing the typical, normal, or middle value of a set of data.
Average Treatment Effect	The average treatment effect (ATE) measures the difference in the mean (average) outcome between the individuals or other units (e.g., classrooms, schools) assigned to the treatment and those assigned to the control. For example, in a study of the effects of a preschool reading intervention, the ATE would be the difference in average reading scores for children who received the intervention (treatment group) and the average

	reading scores for those who did not (control group).
Applied linguistics	The application of insights from theoretical linguistics to practical matters such as language teaching, remedial linguistic therapy, language planning or whatever.
Areas of linguistics	Any of a number of areas of study in which linguistic insights have been brought to bear, for instance sociolinguistics in which scholars study society and the way language is used in it. Other examples are psycholinguistics which is concerned with the psychological and linguistic development of the child.
Case Study	An intensive investigation of the current and past behaviors and experiences of a single person, family, group, or organization.
Categorical Data	Variables with discrete, non-numeric or qualitative categories (e.g. gender or marital status). The categories can be given numerical codes, but they cannot be ranked, added, multiplied or measured against each other. Also referred to as nominal data.
Categorical Data Analysis	Categorical data classify responses or observations into discrete categories (e.g., respondents' highest level of education is often classified as less than high school, high school, college, and post-graduate). While there are many techniques for analyzing such data, 'categorical data analysis' usually refers to the analysis of one or more categorical dependent variables and the relationships to on or more predictor variables (e.g., logistic regression).
Causal Analysis	An analysis that seeks to establish the cause and effect relationships between variables.

Chi-Square Test	There are several different Chi-square tests in statistics. One of the more commonly used is the Chi-square test of independence. It is used to determine if there is a statistically significant association between two categorical variables. The frequency of each category for one variable is compared across the categories of the second variable, such as in a n x n cross tabulation. It is the null hypothesis for this test that there is no association between the two variables (i.e., the distributions of the two variables are independent of each other). The alternative hypothesis is that there is an association. For example, a Chi-square test could be used to examine whether parents' decision to delay their children's entry to kindergarten (delay vs. do not delay) is statistically significantly associated with their child's sex (male vs. female).
Cluster Analysis	Cluster analysis is a multivariate method used to classify a sample of subjects (or objects) in such a way that subjects in the same group (called a cluster) are more similar (e.g., in terms of their personal attributes, beliefs, preferences) to each other than to those in other groups (clusters).
Cluster Sampling	A type of sampling method where the population is divided into groups, called clusters. Cluster designs are often used to control costs. For example, researchers first randomly select clusters of potential respondents, and then respondents are selected at random from within the pre-identified clusters. The researcher randomly selects several counties or groups of counties and then draws a random sample of households from

	within the selected counties. Cluster sampling is often used in education and early childhood research. Researchers sample schools/programs and then students/children enrolled in the selected schools/programs. Clustered sampling designs necessitate the use of special variance estimation techniques.
Codebook	Information on the structure, content, and layout of a data set. The codebook typically provides background on the project, describes the study design, and gives detailed information on variable names and variable value codes. User's manuals and user's guides are examples of codebooks.
Construct Validity	The degree to which a variable, test, questionnaire or instrument measures the theoretical concept that the researcher hopes to measure. For example, if a researcher is interested in the theoretical concept of "marital satisfaction," and the researcher uses a questionnaire to measure marital satisfaction, if the questionnaire has construct validity it is considered to be a good measure of marital satisfaction.
Control Group	In an experiment, the control group does not receive the intervention or treatment under investigation. This group may also be referred to as the comparison group.
Convenience Sampling	A sampling strategy that uses the most easily accessible people (or objects) to participate in a study. This is not a random sample, and the results cannot be generalized to individuals who did not participate in the research.
Correlation	The degree to which two variables are associated. Variables are positively correlated if they both tend to increase at the same time. For example, height and weight are positively correlated

	because as height increases weight also tends to increases. Variables are negatively correlated if as one increases the other decreases. For example, number of police officers in a community and crime rates are negatively correlated because as the number of police officers increases the crime rate tends to decrease.
Data	Information collected through surveys, interviews, or observations. Statistics are produced from data, and data must be processed to be of practical use.
Data Analysis	The process by which data are organized to better understand patterns of behavior within the target population. Data analysis is an umbrella term that refers to many particular forms of analysis such as content analysis, cost-benefit analysis, network analysis, path analysis, regression analysis, etc.
Data Collection	The observation, measurement, and recording of information in a research study.
Dependent Variable	The outcome variable. A dependent variable is something that depends on other factors. Researchers often try to find out what causes changes in the dependent variable. For example, in a study of factors associated with children's scores on standardized tests, children's scores would be the dependent variable.
Descriptive Statistics	Basic statistics used to describe and summarize data. Descriptive statistics generally include measures of the average values of variables (mean, median, and mode) and measures of

	the dispersion of variables (variance, standard deviation, or range).
Extraneous Variable	A variable that interferes with the relationship between the independent and dependent variables and which therefore needs to be controlled for in some way.
Likert Scale	A Likert Scale is a type of rating scale used to measure attitudes, values, or opinions about a subject. Survey respondents are asked to indicate their level of agreement or disagreement with a series of statements. The responses are often scaled and summed to give a composite measure of attitudes or opinions about a topic.
Literature Review	A comprehensive survey of the research literature on a topic. Generally the literature review is presented at the beginning of a research paper and explains how the researcher arrived at his or her research questions.
Mean	A descriptive statistic used as a measure of central tendency. To calculate the mean, all the values of a variable are added and then the sum is divided by the number of values. For example, if the age of the respondents in a sample were 21, 35, 40, 46, and 76, the mean age of the sample would be (21+35+40+46+76)/5 = 43.6
Median	A descriptive statistic used to measure central tendency. The median is the value that is the middle value of a set of values. 50% of the values lie above the median, and 50% lie below the median. For example, if a sample of individuals are ages 21, 34, 46, 55, and 76 the median age is 46.

Mode	A descriptive statistic that is a measure of central tendency. It is the value that occurs most frequently in the data. For example, if survey respondents are ages 21, 33, 33, 45, and 76, the modal age is 33.
One-Way ANOVA	A test of whether the mean for more than two groups are different. For example, to test whether the mean income is different for individuals who live in France, England, or Sweden, one would use a one-way ANOVA.
Ordinal Data	Data that are categorical, but that can also be ranked (ordered). However, the distance between the categories is not known and may not be equal. For example, parents might rate their satisfaction with their child's child care provider as "very dissatisfied," "dissatisfied," "satisfied," and "very satisfied." using numerical values of 1, 2, 3 and 4, respectively. A parent with a satisfaction score of 1 is more dissatisfied than a parent with a score of 2, but not necessarily twice as dissatisfied. And the difference between scores of 1 and 2 and scores of 3 and 4 are not necessary the same.
Paired T-Test	This test, which is sometimes called the dependent sample t-test, is usually used to determine whether the mean difference between two sets of observations for the same subjects is zero. In a paired sample t-test, each participant or subject is measured twice. It is often used to determine whether an intervention brought about a change in some characteristic of respondents (e.g., respondents' math knowledge). To perform a paired t-test, respondents' math knowledge would be measured prior to the intervention, then the intervention would be performed (e.g., teaching a class on math), then respondent's

	math knowledge would be measured after the intervention. The change from before to after the intervention is used to assess whether the intervention was successful.
Qualitative Research	A field of social research that is carried out in naturalistic settings and generates data largely through observations and interviews. Compared to quantitative research, which is principally concerned with making inferences from randomly selected samples to a larger population, qualitative research is primarily focused on describing small samples in non-statistical ways.
Questionnaire	A survey document with questions that are used to gather information from individuals to be used in research.
Random Sampling	A sampling technique in which individuals are selected from a population at random. Each individual has a chance of being chosen, and each individual is selected entirely by chance.
Range	A measure of how widely the data (values) for a specific variable are dispersed or spread. The larger the range the more dispersed the data. The range is calculated by subtracting the value of the lowest data point from the value of the highest data point. For example, in a sample of children between the ages of 2 and 6 years the range would be 4 years. When reporting the range, researchers typically report the lowest and highest value (Range = 2 - 6 years of age).
Research Method	The approaches, tools, and techniques that researchers use to study a problem. These methods include laboratory experiments, field experiments, surveys, case studies, focus

	groups, ethnographic research, action research, and so forth.
Sample	A group that is selected from a larger group (the population). By studying the sample the researcher tries to draw valid conclusions about the population.
Statistic	A measure of the characteristics of a sample (e.g., the mean is a statistic that measures the average of a sample). It gives an estimate of the same value for the population from which the sample was selected.
Target Population	The population to which the researcher would like to generalize her or his results based on analysis of a sample. The sample is selected from a target population.
Two-Way ANOVA	A statistical test to study the effect of two categorical independent variables on a continuous outcome variable. Two-way ANOVAs analyze the direct effect of the independent variables on the outcome, as well as the interaction of the independent variables on the outcome.
Variable	A measurable attribute or characteristics of a person, group or object that varies within the sample under investigation (e.g. age, weight, IQ, child care type). In research, variables are typically classified as dependent, independent, intervening, moderating, or as control variables (See definitions elsewhere in glossary).

VI. ADABIYOTLAR RO'YXATI

1. Zoltan Dorneyi. Reseach Methods in Applied Linguistics. Qualitative, quantitative and Mixed Methodologies – Oxford, 2007
2. Michale J. Wallace. Action Research for Language Teachers. Cambridge Teacher Training and Development. - Cambridge, 1998
3. Teresa Pica. Questions from the language Classroom: Research perspective. – Tesol quarterly (28-1), 1994
4. Tony Wright and Rod Bolitho. Language awareness: *a missing link in language teacher education? - ELT Journal Volume 47/4 October 1993 © Oxford University press 1993*
5. Belikov V.I., Krisin L.'. Sotsiolingvistika. –M., 2001.
6. Brayt U. Vvedenie: parametri sotsiolingvistiki // Novoe v lingvistike. Vi'. VII. –M., 1975.
7. www.uz.ref.uz
8. www.kitoblar.uz
9. http://dissertation1.narod.ru
10. www.uzswlu.datasite.uz
11. www.philology.ru
12. www.ewiki.info
13. www.bestreferat.ru
14. www.bankreferatov.ru
15. www.studentex.com
16. www.linguistlist.org
17. www.polyglot-learn-language.com