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Развитие навыков речевой коммуникации

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Учебно-методическая разработка для аспирантов

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**Предисловие.**

Строительным материалом любого научного текста, как известно, являются не отдельные слова, а сложные номинативные единицы языка, которые наряду со словосочетаниями включают в себя своеобразные синтагматические последовательности, выходящие за рамки словосочетаний вследствие того, что они образованы на основе предикативной связи.

Анализ выделенных предельных составляющих научной речи позволил выявить их определенную систематизацию по тематическому принципу. Так, предельные синтагматические единицы представляют собой определенную систему, объединяющую две основные группы. К первой группе можно отнести лексические образования, обеспечивающие языковое выражение относительно постоянных моментов содержания научного текста, таких, как проблема, исследование, анализ, теория, метод, подход, результаты и др. Ко второй группе принадлежат синтагматические последовательности слов, которые являются неотъемлемой частью композиционно-структурного состава научного текста и отражают специфику изложения научной мысли.

Все перечисленные выше номинативные образования в силу регулярности употребления приобретают репродуктивный характер и являются основой построения речи в стиле научного изложения. Именно поэтому при обучении языку научного общения важно ориентироваться не только на запоминание отдельных слов и словосочетаний, но и предельных синтагматических единиц, характерных для данного стиля речи. Это позволит более эффективно владеть навыками профессионального научного общения.

В предлагаемом методическом материале предельные синтагматические последовательности, образованные вокруг «опорных» слов, таких, как problem, hypothesis, theory и т.д., представлены в упражнениях, позволяющих активизировать их использование в речи. Списком даны синтагматические единицы, способствующие объединению научного текста в единое структурное целое.

В основе данной методической разработки лежат работы следующих авторов: Капина С.М. О науке языком науки; Богатырева С.Т. Выделение предельных синтагматических единиц в стиле научного изложения; Рейман Е.А., Константинова Н.А. Обороты речи английской обзорной научной статьи.

**Part I. Exercises**

***Problem***

*I. Compose sentences evaluating a problem.*

*a.* 1) … is a (very) fascinating problem.

 2) … is, without doubt, an attractive problem.

 3) … is obviously a (most) peculiar problem.

 4) … seems (to be) a (most) difficult problem.

 5) … has long been a challenging problem for scientists.

 6) … is of specific interest for scientists.

*b.* 1) The problem of … appears to be extremely important.

 2) The problem of … seems to be very complicated.

 3) The problem of … is, no doubt, of particular interest to … .

 4) Problems of … are of great importance.

 5) The problem of … appears to be far too involved.

*II. Compose sentences stating the subject with which a particular problem is concerned.*

1. The problem you have thus presented is concerned with … .
2. The problem we have outlined deals with … .
3. The problem the authors put forward bears chiefly on … .
4. The problem I am investigating now is concerned with … .
5. The core of the problem is … .

*III. Make statements about problems which in your opinion are difficult to solve, to present or to discuss.*

1. … involves considerable difficulties which, I think, cannot be soon overcome because…
2. … is too intricate to solve in the near future. It will take years to … .
3. … is far too involved to solve very quickly. It will require… .
4. … seems too difficult to discuss in detail.
5. … is not easy to investigate with the existing techniques.
6. … seems too complicated to present it in all its complexity.

*IV. Compose sentences indicating the time a problem was put forward.*

1. … was advanced quite a long (short) time ago.
2. … was put forward at the beginning of the 20-th century.
3. … was formulated as far back as the 1950’s.
4. … was raised in the mid (late) 80’s.
5. … has been posed only recently.

*V. Complete the following sentences.*

1. The above problem still remains poorly … .
2. The problem you have just outlined lies outside the scope of … .
3. The problem I am studying now is concerned chiefly with … .
4. The main aspect of the problem is … .
5. The essence of the problem is … .
6. The problem, as can be seen, is how to … .
7. The problem, as I can figure it out, involves … .
8. The problem under consideration was advanced by … .
9. The problem under discussion can be described as follows … .
10. The problem the authors have raised is within the limits of … .
11. The problem you mention here seems … .
12. The problem, as we have just seen, is rather difficult to … .
13. The problem thus presented bears on … .

*VI. Name some problems that can be regarded as*

1. fundamental ones,
2. most challenging ones,
3. most obscure ones in: nuclear physics, plasma physics, mathematics, quantum physics, solid state physics, biology and your field.

Introduce your statements wherever possible by: In my opinion; To my knowledge; It’s common knowledge that; In all probability; Probably; Obviously.

Example: In my opinion the problem of … is a very complicated one in solid state physics.

*VI. State the subjects with which the basic problems in your field are concerned and point out the difficulties they involve.*

***Information***

*I. Compose sentences showing availability or lack of information.*

1. Some information is available on … .
2. There is sufficient information at present about … .
3. There is detailed information nowadays regarding … .
4. The above studies provided certain information bearing on … .
5. There is no reliable information in literature about (on) … .
6. No information is available relating to … .

*II. Compose sentences indicating the sources of information.*

1. This information has come from (stems from) … .
2. Some information now available in the literature on … was provided by … .
3. Most of the information available in the literature on … was obtained from … .
4. Almost all the information about … is furnished by … .
5. Much of our information regarding these phenomena comes from … .

*III. Compose sentences showing the content of the information available or obtained as well as the possible conclusions it allows or does not allow to draw.*

1. The information on … indicates that … .
2. The information the authors have presented here suggests that … .
3. The information obtained from these studies is sufficient to suggest that … .
4. All this information led the authors to assume that … .
5. The information on … can be used as a basis for further intensive research in this area.

*IV. Speak about all the available information on your problem mentioning also the information that is still needed.*

***Knowledge***

*I. Make statements about lack of knowledge, insufficient knowledge of certain problems or in certain areas.*

1. We (still) do not possess sufficient knowledge of … .
2. So far we have little knowledge of … .
3. Until recently we had no knowledge of … .
4. There is (still) some lack of knowledge as far as … is (are) concerned.
5. There are still gaps in our knowledge of the true nature of … .
6. Until recently there were certain (many) deficiencies in our knowledge of … .
7. At present our knowledge of … still remains (is obviously incomplete, insufficient, uneven).

*II. Complete the following sentences showing the sources of knowledge of certain problems, phenomena or knowledge in certain areas of study.*

1. Our present knowledge of … stems from … .
2. Some of the knowledge in the above area has resulted from … .
3. The bulk of our present knowledge of … has been obtained from … .
4. Knowledge of … can be furnished by … .
5. Most of our knowledge of … is based on … .
6. Our current knowledge of … comes from the pioneer works by … .

*III. Name the fundamental researches past or present that have largely contributed to the knowledge of basic problems in your field.*

1. Work by … has been a valuable contribution to our present knowledge of … .
2. These investigations have added a great deal to our knowledge of … .
3. This research has largely contributed to the knowledge of … .
4. Those studies filled in (helped to fill in) the gap (certain gaps, many gaps) in our knowledge of …
5. Due to this fundamental research our knowledge of … became more complete.

***Method***

*I. Compose sentences characterizing a method (technique or procedure).*

1. The method of … is (most) adequate for the study of … .
2. The method used seems appropriate for the evaluation of … .
3. This is, without doubt, the most valid and practicable method of … .
4. Some more powerful methods are now available for the analysis of … .
5. The method described is most suitable for … .
6. The above technique is in wide use in … .
7. These methods are no longer used in experiments on … .

*II. Name some of the methods, techniques or experimental procedures in your field of research.*

1. The above technique (s) is (are) also known as … .
2. The technique we have used is commonly known as … .
3. The procedure I have described is generally referred to as … .
4. The procedure they followed is generally called … .

*III. Compose sentences showing differences and similarities of a method.*

1. The method they used differs (greatly) from … .
2. The technique the authors applied has something (little, much) in common with … .
3. The newly-developed method is slightly (altogether) different from … .

*IV. Compose sentences stating the advantages and disadvantages of a method as well as its possibilities.*

1. One of the advantages of this technique is that it allows … .
2. The above method has many (few, no) advantages over … .
3. The method of … has certain limitations as compared with … .
4. The technique we employed enabled us to … .
5. The technique, as we have seen, has one essential limitation in that it requires … .

*V. Name a familiar method, technique or procedure of which you could say that it:*

1. … allows … (observation, evaluation, determination);
2. … allows (enables) us to … (compare, detect, identify);
3. … makes it possible to… (evaluate, examine, measure);
4. … is capable of … (providing, producing, revealing);
5. … has one (several) limitation(s) in that it requires … ;
6. … has many applications in … ;
7. … fails to…(detect, reveal, provide);
8. … is rather ineffective because of its (relatively) small sensitivity;
9. … is based on(essentially) the same principles.

*VI. Give a description of the technique and the experimental procedure you have followed in your research. Use one of the patterns below:*

1. The experimental procedure we followed is like this … .
2. The above technique can briefly be outlined as follows.

***Experiment***

*I. Compose sentences stating the purpose of the experiments performed or undertaken.*

1. We performed this series of experiments with a view to determine … .
2. The authors carried out these experiments in order to evaluate … .
3. They made this set of experiments to measure … .
4. The above experiments were performed with a view to confirm … .
5. One of the aims of the experiments described here was to reveal … .

*II. Compose sentences stating a general result of the experiments performed.*

1. Experiments by N. and his associates show(ed) a variety of changes in … .
2. Recent experiments in this area have shown a correlation between … .
3. The present series of experiments (have) demonstrate (d) that changes are due to … .
4. These experiments on … (have) indicate (d) that these phenomena are interrelated.
5. Our experiment confirmed the assumption (hypothesis) that … .
6. Recent experiments with … provide (d) some new information (further data) concerning the mechanism of … .
7. These experiments involving … failed to demonstrate any correlation between (changes in) … .

*III. Compose sentences stating a conclusion from the experiments performed.*

1. As a result of these experiments we concluded that … .
2. As a result of those preliminary experiments we came to a conclusion that … .
3. These experiments led the authors to conclude that … .
4. As can be concluded from these experiments … .

*IV. Speak about your recent experiments stating what they have demonstrated as well as the conclusions you have made.*

***Study (Investigation, Research)***

*I. Compose sentences stating the importance of studies of a particular problem.*

1. Studies of … (may) provide valuable information about … .
2. Detailed studies of … (may) contribute to a better understanding of … .
3. Fundamental research of … (may) bring us nearer to the understanding of … .
4. Thorough examination of … (may) help to fill in certain gaps in our knowledge of … .
5. Research into the structure and function of … may throw (shed) light on … .
6. Multidisciplinary studies of … play a very essential part in … .
7. More extensive studies using … technique(s) are needed for they … .

*II. Compose sentences evaluating studies (investigations, researches).*

1. The detailed study of … is extremely promising and stimulating too.
2. The fundamental research into … was extremely important and highly successful.
3. The studies of … had far-reaching implications and brought about further intensive research in the area.
4. The investigation of … was rather inadequate and therefore inconclusive.
5. Previous studies in the field of (area of)…were only tentative ones and therefore insufficient.
6. This investigation of … was rather incomplete and confined to only one aspect of the problem.

*III. Compose sentences stating the aim of the studies (investigations, researches).*

1. The (chief) aim of the present research is to obtain some results which … .
2. The main purpose of this investigation was to obtain some knowledge of … .
3. The object to our research has been to find whether …. .
4. The above study was undertaken (chiefly) with a view to clarify certain details concerned with …
5. Their pioneer studies were intended to provide evidence for … .
6. The authors carried out their investigations in order to … (test the validity of the model …, verify some basic data about … , check the hypothesis … ).
7. The ultimate goal of this fundamental research is to define more clearly the role of … .
8. The present investigation is an attempt to get an insight into the mechanism responsible for … .
9. We attempted the research hoping to obtain experimental evidence for … .
10. The laboratory undertook these studies in the hope of getting more information about … .
11. The present study was intended to cover various aspects of … .

*IV. Compose sentences showing limitations of studies (investigations, researches) undertaken.*

1. Our preliminary studies of … did not suggest that … .
2. The studies performed with this technique failed to reveal that … .
3. Recent research into the nature of … did not provide any evidence in favour of …
4. Further investigation on … does not support (confirm) the assumption (idea, opinion)

 that … .

1. Most recent observations show (ed) no interaction between … (changes in…, increase in …, evidence of …).

*V. Give a detailed account of the study you have performed mentioning among other things the nature of the problem, the purpose of the research, the overall result and conditions.*

***Work***

*I. Compose sentences stating the purpose of the work.*

1. The purpose of the present work is to estimate … .
2. The purpose of the work done during the last few years was to determine … .
3. The object of the above studies has been to demonstrate … .
4. The object of the preliminary work is to examine the properties of … .

*II. Compose sentences expressing the aims of some particular work.*

1. This comprehensive work is (was) undertaken with a view to obtain new data

in favour of … .

1. The author’s recent work is intended to provide more evidence for … .
2. The above fundamental work shed some light on the origin and nature of … .
3. We undertook this work in the hope of obtaining further information about … .

*III. Compose sentences giving a general estimate of the work done.*

1. The above work on … stimulated much further research in the area.
2. This comprehensive work on … demonstrated some similarity between … .
3. More work in this direction has shown no distinction between … .
4. The work we have done has shown that the phenomenon is due to … .

*IV. Compose sentences showing results of some particular work.*

1. The work recently done by … has led to the discovery of … .
2. Recent work in this area has resulted in the development of … .
3. This comprehensive work (has) brought about a determination of ( a solution of) … .
4. The author’s pioneer work (has) contributed to further progress on … .
5. Our work involving studies of … has added to the solution of the problem.
6. Further work in this field (has) failed to provide new information about … .

*V. Give a detailed account of the work you have accomplished by now or of the work you completed in the past.*

***Data (Results, Findings)***

*I. Complete the sentences using the following phrases to characterize the data:* ***of purely theoretical nature; of great practical interest; not only of theoretical value but of some practical importance; quite remarkable; only preliminary; not quite reliable.***

1. The results obtained from recent studies in this area are … .
2. The data presented by these authors proved to be … .
3. The data obtained from this series of experiments are … .
4. The results reported by … seem (to be) … .
5. The data reported in literature are … .
6. The data that have just been presented are … .

*II. Compose sentences showing the availability or lack of data.*

1. There are sufficient data in current literature about … .
2. There seem to be numerous data in recent publications concerning … .
3. There are few data on the influence of … .
4. No data are available at present regarding the origin of … .

*III. Compose sentences indicating the sources of data.*

1. The above results were obtained from recent studies of … .
2. Most of these data have been provided by experiments with … .
3. Some of our data were contributed by large-scale experiments on … .
4. Our data came from a series of experiments on … .
5. Some of the results were obtained in collaboration with … .

*IV. Complete the following sentences showing comparisons of results or data as well as their agreement with assumptions, theoretical predictions, other data.*

1. The above data are very similar to those … .
2. Their recent results are basically the same as those … .
3. Some of their earlier findings coincide with … .
4. The data we have obtained from these experiments are in keeping with … .
5. Most of the data reported in literature are consistent with … .
6. The results obtained with the technique are in good agreement with … .
7. As can be seen, some of the above data fit very well with … .
8. What the authors have demonstrated here provides further support for … .
9. The results of the present study together with the findings by other workers all favour … .
10. Here we present some findings which are somewhat (slightly, quite, altogether) different from those … (published elsewhere, reported in literature, obtained earlier by other workers).
11. Recent data concerning this phenomenon do not seem to coincide with … .

*V. Compose sentences stating the conclusions drawn on the basis of some results (facts, findings).*

1. These results (facts, findings) lead to us to think (assume, conclude) that … .
2. These and other findings have led the authors to conclude that … .
3. On the basis of these results the author came to a conclusion that … .
4. From the above data we conclude(d) that … .

*VI. Compose sentences showing the way results can be interpreted.*

1. The above data can be interpreted in terms of … .
2. These findings can be viewed in the light of the information already available … .
3. The results of these experiments can be viewed … (from another angle, from a different viewpoint) .

*VII. Give a detailed description of the results you have obtained from your recent investigation.*

***Evidence***

*I. Compose sentences showing availability or lack of evidence and its characteristics as well.*

1. There is now good evidence which suggests that … .
2. These experiments provided much evidence indicating that … .
3. The authors have presented (given) strong evidence for … .
4. Dr. N. has reported conclusive evidence for … .
5. Until now there is no evidence for… .
6. So far we have no clear evidence of … .
7. No further evidence is available in literature as to … .

*II. Compose sentences stating the sources of evidence.*

1. Good evidence (of …) has been obtained in experiments with … .
2. Sufficient evidence (for …) was obtained from the studies of … .
3. Further evidence in favour of … can be provided with the above technique.
4. Some evidence was provided as to the true nature of … .

*III. Compose sentences concerned with interpretation or possible evaluation of the evidence obtained.*

1. The evidence can (therefore) be regarded as fully consistent with … .
2. Their evidence may (therefore) be interpreted in terms of … (current concepts).
3. We can consider this evidence as … (quite conclusive, quite reliable, a merely tentative one, totally erroneous).
4. We have (every) reason (therefore) to treat this evidence as quite (fully) consistent with … (the existing views, theoretical predictions).

*IV. Characterize and give a possible interpretation of the evidence that is available in the literature on the problem you are investigating.*

***Assumption***

*I. Combine sentences to characterize an assumption.*

*a.* 1) Their basic assumption is … .

 2) The earlier assumption that we made was … .

 3) The assumption the authors proceeded from has proved to be … .

 4) What we thought (assumed) seems … .

*b.* 1) a merely tentative one;

 2) totally wrong;

 3) incorrect and, therefore, invalid;

 4) true only for specific situations;

 5) obviously inconsistent with suggestions by other workers.

*II. Compose sentences showing agreement or disagreement with an assumption.*

1. This is consistent with the assumption that … .
2. What we observed agrees with the assumption that … .
3. The evidence thus obtained fully agrees with the assumption that … .
4. These results are in good agreement with the assumption that … .
5. What the authors have reported here does not contradict the assumption that … .

*III. Compose sentences expressing support for a particular assumption or showing lack of support or limitations of an assumption.*

1. Our recent assumptions have been confirmed by … (a large body of experimental evidence, large-scale experimentation).
2. The assumption we proceeded from was supported by … (more than one set of experiments, experiments involving the use of … techniques).
3. We have been unable to confirm our previous assumption that … .
4. The authors failed to confirm their earlier assumption that … .
5. So far there is no evidence for the assumption that … .

*IV. Speak about the assumptions you make in your research.*

***Theory (Hypothesis)***

*I. Compose sentences indicating the time a theory (a hypothesis) was advanced (created).*

1. The theory of … was created (developed, constructed, elaborated, devised, formulated, advanced) in the 80’s (as early as 1970, as far back as 1950).
2. The above hypothesis was … (put forward, proposed, suggested) a long time ago (in the late 1960’s).

*II. Compose sentences stating by who a theory was developed (created).*

1. The theory of … originates with … (Maxwell).
2. The theory of … owes its origin to … (Einstein).
3. It was … (Dirac) who first predicated that … .
4. The theory of … was first advanced by … .

*III. Compose sentences showing the underlying idea of a theory.*

1. The above theory is based on assumption that … .
2. The underlying principle (concept, idea) of the theory is that … .
3. The basic concept of the theory is … .
4. Their working hypothesis is that … .

*IV. Compose sentences stating the purpose of a theory ( a hypothesis).*

1. The object of the above theory is to explain the mechanism of … .
2. Several hypotheses have been suggested to account for the origin of … .
3. We offer this hypothesis as a starting point for examining… (developing a useful approach to …).

*V. Compose sentences showing the content of a theory ( a hypothesis) or the resulting conclusion.*

1. According to the theory by … .
2. As follows from the above theory … .
3. These workers suggested a hypothesis according to which … .
4. The authors elaborated an alternative theory (hypothesis) according to which … .
5. The hypothesis postulated by B. holds that … .
6. All these hypotheses imply that … .
7. The newly-developed theory predicts that … .

*VI. Compose sentences evaluating a theory ( a hypothesis).*

Introduce the sentences by: As I have said; As we could see; As has been shown; As might be expected; I realize that … ; Thus we can see that … .

1. this hypothesis is (seems, appears to be) very attractive ( fairly convincing, quite reliable, fully compatible with well-established facts).
2. they (the authors) put forward (elaborated) a new theory which can be regarded as (advantageous in some respects, quite explicit and clearcut, fully competent).
3. what you have outlined here has … (many strong points, some attractive features).

*VII. Compose sentences showing advantages of a theory ( a hypothesis) and its application.*

1. The theory you have referred to seems satisfactory for the explanation of … .
2. The hypothesis suggested by N. is best suited for the elucidation of …
3. They have proposed a theory which seems adequate to explain the discrepancy … .
4. What has been outlined here is most suitable in … ( these situations).
5. This theory can be applied to account for the factors responsible for … .

*VIII. Compose sentences containing criticisms of a theory ( a hypothesis).*

1. The above theory (hypothesis) is … (obviously wrong now, quite meaningless nowadays, is no longer valid).
2. The theory developed by these workers can hardly be regarded as … ( a realistic one, a truly reliable one).
3. The hypothesis we used (proceeded from) is … (strongly argued nowadays, regarded improbable at present).

*IX. Compose sentences showing invalidity or incorrectness of a theory (a hypothesis).*

1. We no longer use this theory because it fails to account for … .
2. We cannot fully rely on the hypothesis of … because it does not explain the mechanism of … .
3. They gave up their theory because it has … (several weak points, a number of limitations, many deficiencies).
4. In the light of recent findings their theory seems incorrect, therefore, it can hardly be

applied in … .

*X. Give a detailed critical account of some theory mentioning among other things its attractive features and strong points if any.*

 **Part II**

**The following phrases can be used**

1. *to formulate the aim and purpose of research:*

The main concern of the book (article) is … ;

The present paper is concerned with … ;

The aim and purpose of the present chapter is … ;

The book is meant to show that … ;

The book aims at … ;

The purpose of the paper is twofold;

The analysis to be described in the article will concern mainly … ;

1. *to inform about well-known theories, concepts, facts:*

It is usually assumed at present that … ;

It is common knowledge that … ;

It is a matter of common observation that … ;

It is generally held that … ;

It is a well-known fact that … ;

It is a commonplace observation that … ;

It is now widely appreciated that … ;

1. *to refer to the above-mentioned facts:*

On the foregoing pages we have already said that … ;

As has been mentioned above … ;

It has been repeatedly pointed out that … ;

We stated earlier that … ;

It has long been debated whether … ;

It is apparent from the foregoing discussion that … ;

As discussed in the introduction … ;

As we have seen above … .

1. *to proceed from one point of discussion to another:*

The next point concerns … ;

This brings us to … ;

We shall now proceed to show that … ;

It follows from what has been said above that … ;

According to what I have already said … ;

In what follows we will represent … .

1. *to indicate different stages of exposition:*
2. *the starting point:*

It is usual to begin with … ;

What we are setting out to explain is … ;

We must start from the following … ;

It is natural to begin with … ;

The first step will consist in … ;

1. *turning to the next point:*

We shall now proceed to show that … ;

Then comes the next stage … ;

We can now turn to … ;

The next point concerns … ;

1. *additional remarks:*

It should be added in this connection that … ;

It requires an additional remark … ;

One more point to be made here … ;

1. *digression:*

It calls for a digression … ;

At this point digression is called for … ;

This brings us back to … ;

1. *elucidation:*

By this we mean that … ;

To clarify the point … ;

To elucidate the above point … ;

1. *illustration:*

These examples will suffice to show that … ;

This example illustrates well enough … ;

This may serve as a good example of … .

1. *to estimate an idea ( a theory, a hypothesis):*

It can hardly be doubted that … ;

We are absolutely certain that … ;

There is every reason to believe that … ;

It is hardly acceptable that … ;

It is possible to assume that … ;

It is not difficult to show … ;

It is found difficult to … ;

We have a reason to state that … ;

There is no point in assuming that … ;

It is necessary to … ;

It is worth noticing that … ;

To fix this idea more firmly it is useful to … .