Abstract

In accord with its global aim, the paper designs a set of assumptions which propose logically complex nature of co-operative interaction of knowledge parts and ‘adding-new-knowledge’ strategy which reflects not only conscious knowledge production but also its organization since ‘…a teacher does not know his subject in the sense of being prepared to teach it until he knows it in a focused and organized way. The procedurally sequential steps of other assumption, in its own turn, emphasize the transformational nature of the process of teaching. Moreover, the perspective of shifting from a view of learning centre on teachers and their dispensation of a predetermined and fragmented content body of knowledge- ‘teacher lectures/student swallows’- to guided inquiry stems from concern that mastery of discrete subject disciplines does not prepare students to be problem solvers and information users, is based on the assumption that learning should be active, meaningful, purposeful and holistic. We also propose a few possible cases plausible on the basis of a sampled language data, which fall under the reasons, ways and connections as well as the scope of interdisciplinary and interdisciplinarity knowledge organization.

Keywords
Language, assumption, teaching, learning, teacher, student, interdisciplinary model, holistic
Özet

Evrensel hedeflerine uygun olarak, bu makale dili oluşturan bir dizi karmaşık ve ortak etkileşimsel varsayımın mantıksal bir şekilde ortaya koyarak, sadece bilinçsel bilgi üretimini değil aynı zamanda o bilginin organizasyonunu geliştirecek yeni bir strateji geliştirmektedir. Öğretmen, öğreteceği konuya hazırlanma anlamında o konuyu tam olarak kavrayıcıyada kadar bilmez. Öğretim sürecinin dönüşümsel doğasına vurgu yapılmaktadır. Ayrıca, öğretmen merkezli öğretimden öğrenci merkezli öğrenmeye ‘öğretmen öğretir, öğrencileri özümser’ gibi yönlendirilmiş bir bakış açısıyla öğrencileri karşılaştıkları problemleri çözmemelerini amaçlayan, öğretimin aktif, anlamlı, amaca uygun ve daha bütüncül olması üzerine odaklanmaktadır. Bu çalışmada ayrıca, toplanan dil verilerini temel olarak gerçekleştmesi mümkün durumlarla ilgili interdisipliner bilgi organizasyonu üzerine bir dizi öneriler öne sürülmüştür.

Anahtar kelimeler

Dil, varsayıım, öğretim, öğrenme, öğretmen, öğrenci, interdisipliner model, holistic

1. INTRODUCTION

A. The aim

This paper will focus on the contemporary framework of language teaching/learning strategies, starting with a broad-ranging discussion of the various functions and forms it can take in the context of interdisciplinarity and then consider the possible roles that the teacher and the learner can play in the realization of this procedure.

It will also be argued that a restricted conception of both the problem and the terms recently developed with the intention of making the phenomenon more applicable is not contrary to its original interpretation. It does not claim to possess any significant heuristic advantages over more traditional approaches, either. Consequently, the reigning question will be: what can ‘to practise interdisciplinarity’ mean to-day?

B. Background: conflicting notions

We will not attempt to sketch in detail the unfolding of the ‘knowledge evaluation’ debate over the years. In this regard a couple of valuable introductions have already been published here
the authors discuss not only some core problems; they also display outstanding contributions in the field of “evaluation” theory and practice. Principally sharing these views and approaches, we, in our own turn, will concentrate on a reconstruction of the initial stages of the theoretical discussion and try to provide a new perspective for an evaluation of the phenomenon in the context of interdisciplinarity.

In the past 50 years or so the body of theoretical knowledge concerning all the levels of language as well as some language-related fields (e.g. psychology, sociology, logic, etc.) has increased greatly and led to considerable complications in the teaching policy. The newly developed curricula and syllabi, timely realized school reforms and active teaching methods and other strategic priorities have revolutionized the education system, also modifying and updating the school atmosphere. But the mentioned huge steps have not been ‘almighty’ in all the spheres of teaching and the theoretical findings are too far from being realized both for applied and teaching purposes. Moreover, the fact that language teachers throughout the world have been feeling a growing discomfort in the area of planning the content of both theoretical and practical aspects of English is universally acknowledged and it has become one of the most controversial problems of the present education system.

The debate on ‘evaluation of the acquired knowledge’ so far has spawned a surprising and confusing variety of terminological variants and mutations: taxonomy, variables, etc. Yet this terminological inflation is not a fertile elaboration of a sufficiently defined and agreed upon concept but rather indicative of a contest for meaning.

The basic disagreement about ‘evaluation’ is whether it should be regarded as a general method of controlling the knowledge acquired or as an inherent quality in constructing specific knowledge bodies. The least contentious meaning of ‘evaluation’ designates any allusion in one aspect specific knowledge to another teachable knowledge. Such kind of ‘knowledge construction hierarchy’ serves as a handy label for signalling some sort of ‘knowledge interconnectedness’. What complicates the matters is that ‘evaluation’ though a very useful and productive procedure, often serves as a synonym for ‘deconstruction’, as something of a weapon to be used in the contemporary struggle over meaning- at each level separately, all in all as a time-bound feature to deregulate controlled dissemination and celebrate misteaching. It can be avoided by reexamining the dimensional conventions of ‘communication’ which suggests ‘togetherness, joining, cooperation and mutuality’. According to some others communication is
also definable as ‘a mutual exchange between two or more individuals which enhances cooperation and establishes commonality’. These ‘cooperations’ or ‘mutual exchanges’ in turn, are the conventions that enable communicators to share some meaningful information. These conventions also imply that communicators are not in all cases represented by two or more physical individuals. The most important features of communication are its dynamism and dependency on the negotiation of meaning. Therefore, the ‘sides’ can always ‘come together’, the only obligatory term being that the communication process member(s), no matter, one or both of them, achieve the necessary mutual understanding. It’s for this reason that we come together and communicate with the ideas of this or that literary work, understand its imagery and figurative items, decipher proper connotative and multiple meanings, provided that we decode the writer’s/poet’s standards, personality and historical background properly (the work speaking for its creator and acting as the second member of the mutual process). But it can hardly occur unless we (the reader and the poem or any other literary work) communicate with each other through the suggestions of the latter and its adequate interpretation. Such a methodological position would liberate any one interdisciplinary remodelling of the teachable knowledge from its ‘prison-house evaluation’ and allow us, the teachers of English, to evade the anxiety of influence and make language/knowledge resume its dialogue with reality.

No discipline knowledge exists in isolation; it is always connected to a ‘universe of disciplines’. Whenever a new knowledge comes into being it relates to previous levels for prior knowledge, and in this way it becomes the precursor of subsequent (inter) disciplinary knowledge. What can be said for the production of knowledge also applies to its reception. No teaching act can consider a single knowledge in isolation. Rather it is an experience with a retrospective as well as a prospective dimension. This means for the discipline: it is a part of interdisciplinarity which becomes possible through each discipline’s remarking the other one, commenting it, displacing it, prolonging it and finally, reassuming it. Subsequently, every discipline is always subjected to a process of repetition. It exists as a perennial interplay between identity and difference. And that constitutes its interdisciplinarity.

C. Methodological assumptions

Our belief is that theoretical knowledge is essential to continue and reinforce the development and improvement of teaching/learning process since putting any theoretical
procedure into practice means putting a particular set of principles and values into practice.

The underlying premise is that language learning will be facilitated if students become more aware of both the possible strategies and the powerful theoretical knowledge which they can consciously select and apply during language learning and language use. The view taken is that the most efficient way for learners’ awareness to be heightened is to have teachers provide strategies-based instruction to students as a part of the foreign language curriculum.

This section describes the rationale for exploring a cognitively based theory in a language teaching/learning. We suggest that teaching/learning cannot be understood without addressing the interaction between language and cognition, and indicate that at present this interaction is only poorly understood. We go on to discuss the way in which cognitive theory addresses specific language comprehension and knowledge production processes.

The approach taken in our work is that language teaching/learning is best understood as a complex cognitive skill. Anderson distinguishes between ‘what we know about’ or ‘static information’ in memory, and ‘what we know how to use it’, or ‘dynamic information’ in memory. All of the things we know about constitute “declarative knowledge”, and the things we know how to do are ‘procedural knowledge’.

The term ‘cognitive skill’ is used by Anderson to refer to the ability to perform various mental procedures. Our ability to understand and generate language or apply our knowledge of rules to solve a problem would be examples of procedural knowledge. Anderson argues that all complex cognitive skills are production systems, which can be used to represent specific procedures in any domain (grammar, historical phonetics, theoretical grammar, lexicology) as well as general strategies, or domain-independent (inter-level, interdisciplinary) problem-solving procedures.

Much of the difficulty of teaching/learning is derived from a complete or partial ignorance of the role of conscious knowledge in the mental development of students, what, in turn, is directly connected with inadequate promotion of general understanding of the structure of a subject matter.

The aim of the present paper (to evaluate the structure of language knowledge in a way that would permit many other things to be related to it meaningfully) presupposes that any conscious evaluation and use of theoretical or practical knowledge should be realized in the context of the following assumptions:
1. Amongst the widely accepted factors in teaching/learning, the so-called ‘co-operative interaction of the parts of knowledge-body’ is most fruitful and includes items suggesting that these specifically structured components generally agree and are helpful and positive in understanding each other. In this co-operation the sides evaluate each other’s potential and thus decide whether they could benefit from each other’s capacities. The correlation matrix of such evaluation measures elaborating the conventionally assigned ‘labour division system’ among the parts of knowledge-body can also help us determine several other implicit factors which in furtherance could adequately impact the teaching/learning process.

2. The co-operative strategy of ‘adding -new knowledge’ by means of evaluation reflects not only conscious knowledge production but also its organization. Given the necessity of this co-operative knowledge producing and organizing strategy, the teacher is responsible for signalling the proper establishment of the procedurally backgrounded positions of teachable information. It may be worth pointing out that a teacher does not know his subject, in the sense of being prepared to teach it, until he knows it in a focused and organized way. Therefore we also argue that presenting knowledge clearly is, in fact, working out the best possible organization for teaching it.

3. The interaction of knowledge parts in teaching/learning is very complex and there is clear variety in the organizational patterns even within the same level. What remains constant is the assumption: learning is not a mere additive process. It is transformational, and we do not need to cram our students’ heads with aspect-specific or partially relevant knowledge and rules; rather, we need to help them learn how to acquire and seek connections between them and, finally, instead of being engaged in learning isolated facts, become realizers of major concepts and general principles.

2. INTERDISCIPLINARY KNOWLEDGE ORGANIZATION

A. Reasons and ways

One of the widely used reasons for an action is a form of ‘question to answer’ organization, since the teacher/learner asks “why?” and, in the course of his discussion, answers the question. ‘Question to answer’ organization may be used in interpreting facts of the past or present- What was the given method worked out for? What does it imply? Why do we apply it here?-, or in predicting future developments on the basis of the known facts and continuing
tendencies- What’s going to become of the pronunciation of ‘individual’ or “How do you do?” and the like in future?; or in analyzing a current teaching problem- Is componential analysis resulting in positive findings at the levels of Morphology and Syntax, or is it restricted to one of those levels only? Does the use of such theoretical knowledge simplify the process of teaching/learning? If ‘Yes’, why? If ‘No’, what’s the argument? Do we gain or lose by applying the interdisciplinary potential?”

Such ‘question to answer’ procedures are frequently evaluative; on the basis of the results of the procedural analysis, the student arrives at his own, procedurally testified judgement. ‘Problem solution’ starts with the statement of a problem, analyzes the problem, and suggests a solution or several solutions. For ex., a teacher discussing the comparative degree variants of the ‘old’ or ‘long’ or interrelationship of ‘strong-strength- to strengthen’ might conclude that a combination of diachronic and synchronic information would do much to solve the problem, and not delay it to an indefinite period where the problems (vowel gradation and infinitive forming devices) might have been forgotten completely or the teacher would have to interpret it once more.

One of the first steps in the teacher/learner relationship is deciding exactly what the teacher’s intention is in introducing this or that knowledge: whether it is simply to inform and also to evaluate or persuade or entertain. Probably the best practical procedure for the teacher is to ask himself these questions about any device for interesting the student. A lesson, which is partly evaluative or persuasive, may well begin not with a statement of principle or fact, but with an example, a series of examples, which in no way can be explained by the existing knowledge. In such cases effective use of “borrowed” methods may have not only persuasive and informative, but also entertaining value (‘woman’, ‘husband’-historical explanation of the content of the words and the gender belongingness of the former, the use of ‘shall’ and ‘will’ or the comparison of “What is time?” and “What is the time?” cases, etc.).

B.Ways and conventions

Contrast, or comparison, or a combination of the 2 may also be the basic pattern on which language knowledge is organized. A teacher may, for example, compare and contrast the componential and oppositional analyses in various ways. But if they are complex, they are broken into their main parts and compared part by part. Analogy, i.e. the extended comparison in which
something unfamiliar is compared to something familiar, is also a useful device for clarification. E.g. the above mentioned Componential and Oppositional analyses are often closely related (the right-member of the Oppositional analysis is usually composed on the findings of the Componential analysis), and sometimes used singly, sometimes- in combination.

In case interdisciplinarity is based on the principle of repetition, the following questions arise:

1. Which kind of repetition is sufficient to ensure “interdisciplinarity”?
2. Who decides whether a repetition is a reflection of interdisciplinarity or not?
3. To which evaluative conventions is an interdisciplinary repetition subjected?

All these questions can hardly be answered exhaustively here. But to make ourselves minimum clear, we think reasonable to briefly clarify the above-mentioned issues.

Which kind of contribution constitutes a discipline as an interdisciplinary one? - An answer to this question may start from a consideration of the “functional and/or content identity” criteria. For one could hold that these material identities of the disciplines whose connections even with their context independent meanings as the modern semiotics presupposes, already provide sufficient conditions enabling us to speak of interdisciplinarity. If this qualitative principle of interdisciplinarity seems to be hardly acceptable how can one understand the (im) possibility of changing for the degrees of comparison of the adjectives such as ‘whitish, extreme, supreme, wooden, golden’, etc or the pronunciation of ‘o’ in ‘move, love, home’ displaying the same phonetic position if to lay aside the historical evolution of the mentioned structures? As for the contextual or situational intersection of these criteria, it remains to decide which number of such intersections of a specific size and quality make a discipline an interdiscipline: one, several, multiple? The interdisciplinarity norm being based on one’s personal ability and experience, the result is often combinatorial arbitrariness. Yet this empirical reconstruction of an individual interdisciplinarian will be rather complicated as it is not clear whether he should be an educated person or somebody with an average knowledge, or with only the so-called practical knowledge.

Here one could also object that its restriction to the competence level prevents it from being planned and realized in the same way and quality. Such an approach rounds up a range of evaluative attitudes what also prove that the emphasis may vary from a segmental notion of interdisciplinarity to a holistic one. Interdisciplinarity for all these volumes (no matter, logically justified or not) can engender a multitude of possible combinations. And they clearly show that such ‘translations’ or ‘transformations’ concern not only the content, but also the structural
planes of the disciplines that are to be brought together systematically, what in itself requires a linguistic strategy. E.g. a transformation may affect the whole discipline (doubling of one-syllable final consonants in verbs and adjectives) or only part of it (functional synonymy embracing contextually conditioned grammatical and lexical variants). Evidently, teachable knowledge transformations break the related disciplines down into fragments and by means of interconnecting; rearrange them in a different order. In this respect disciplines border and are based on each other/one another, or transform each other/one another, and even retreat into the other related disciplines.

C. The scope

Interdisciplinary transformations can take place both within the horizontal (syntagmatic) and vertical (paradigmatic) axes. Syntagmatic interdisciplinarity, when multiplied, results in interdisciplinary series, while paradigmatic interdisciplinarity, when multiplied, creates interdisciplinary transformations (expansions or reductions).

Syntagmatic interdisciplinarity can be modelled on the following transformational paradigm:

a. one discipline = one discipline (e.g. grammar and phonetics; grammar and lexis; phonetics and the history of English; general linguistics and any practical language discipline; theoretical grammar and practical grammar, etc.);

b. one discipline = more than one discipline (e.g. general linguistics research methods = grammar, lexis, phonetics, History of English, etc.)

At present, paradigm (a) is the basis of interdisciplinarity. University Grammar of English, for instance, gave rise to a multitude of successors that form a specific grammar, that of interdisciplinary character. Azar, Murphy as well as Hewings and Hudford and Swan initiated slightly differentiated types of interdisciplinary Grammar which mark a shift from pure structural grammar material to fragmentary, content-oriented interpretation of grammatical items under the umbrella of notional interdisciplinarity. M. Swan’s mentioned Grammar is illustrating the complexity of one possible interdisciplinary paradigm and hence creates functionally relevant, and sometimes even interchangeable and complementary alternatives in grammar and lexis. E.g. the interpretation of the conditionals by Murphy and Azar can be traced down through several successive levels.
(a) The interdisciplinary version of the conditionals is distributed as follows:
   a.1. the beginner’s level- real conditional clauses;
   a.2. the intermediate level- unreal conditionals and wish sentences (the subjunctive mood);
   a.3. The advanced level- the so-called implied conditionals and the other limited number of indirect means of “condition”.

The spectrum of interdisciplinarity reveals the following types:

A. Co-operation of two practical disciplines- e.g. Grammar and Lexis: five books; some questions, etc.
   Phonetics and Lexis: house- houses; wolf- wolves, etc.

   Temporality is a factor of prime importance in this type. It can easily be converted to (B) or brought back to its initial position. This entails the levelling of all temporal differences. Provided this view is accepted, any (A) type interdisciplinarity can be related and converted to the (B) type interdisciplinarity. (wolves- wolf; houses- house).

   Regardless of this differentiation, the interdisciplinarian is absolutely free to trace relations between texts and it is the major factor that causes interdisciplinarity. Such an attitude suits the creative teacher, not the discerning scholar.

B. one of the disciplines ‘works’ for the two- extreme, wooden, whitish, golden, supreme (lexis or the lexical meaning is working for both Grammar and itself) or “I am reading” (“reading” is standing both for the grammatical meaning of continuity and the lexical units “now” or “at the moment”), etc.

C. Co-operation of a practical discipline with a theoretical one:
   General Linguistics – Grammar;
   General Linguistics- Lexis;
   General Linguistics – Phonetics;
   History of English – Grammar;
   History of English - Lexis;
   History of English – Phonetics (city, cow), etc.

D. Co-operation of more than two disciplines:
   Grammar – Phonetics- History of English (rise- rose- risen- rising –verb type, gradation, pronunciation peculiarities of “rise, rising and risen”)
Another striking pattern of a highly productive and frequent interconnectedness of General Linguistics and Grammar in the field of revealing the interlevel links is lying through the following transformations of definite implicit or explicit meanings: procedural knowledge in these cases is provided by applying the information-processing operations of General Linguistics, such as expansion and reduction which otherwise can be termed “relativization, nominalization, condensation” and other types of transformation as well as functionally equivalent paraphrases.

Subsystem transformation potential can also be clarified by these operations as follows:

I.1. verb (the finites) = verbals or non-finites (infinitive and infinitive constructions; gerund and gerundial constructions; participle and participial constructions - the reduction type transformations, including functional relevance of the verbals, verbal constructions and proper subordinate clauses);

2. the verbals or non-finites = verb (the finites) - expansion type transformations;

3. adjectives = verbs (expansion type transformation - a clever boy = the boy is clever).

II. In the field of notional or content-based interdisciplinarity- expression of suggestions, requests, commands or threats by means of the indirectly used imperative sentences, the conditionals, tense forms, some lexical modals, the negative sentence forms, etc (Instead of wasting the time here, you could go home; If you will open the door, I’ll be greatful to you, etc.).

These oversimplified analyses reveal only part of the complexities as well as potential involved in interdisciplinarity. Any additions, subtractions and permutations that accompany each stage of transformation have been disregarded here. The spectrum of interdisciplinarity is sure to broaden with every analysis of the extant series (e.g. by theoretical performances, transformation and functional versions), what, in fact, is both the power and the richness of language. All the more difficult is the task for us, the teachers or instructors, whatever you call it, to ignore and disentangle the threads of the interdisciplinary fabric, since it would mean to abolish the whole for the sake of “glorifying” the isolated or considerably weakened parts of language.
D. Contextualization of Interdisciplinarity

It’s by no means a contextual accident that Azar’s implied condition appears as the most complex link in the ‘labour division’ chain of Grammar-Lexis in the field of the conditionals. It incorporates a multiple interdisciplinarity, both material and structural. One more thing should be emphasized: Grammar and Lexis-based interdisciplinarity in no way means the successive existence of the two; on the contrary, they either exist simultaneously, or only one of them works for the two. Their various strata are superimposed upon each other. Whenever the members of such interdisciplinarity disagree with each other, the harmony of its complex relationships is disturbed. The principal means of effecting this disturbance is contextualization of either lexical or grammatical meaning (e.g. a. A lion is a dangerous animal; b. A lion is lying under the bush over there) in one case, and syncretism and suspension, in the other (boys- boy’s–runs) where the violation of “one-to-one” correlation principle between phonetics and grammar is vivid. Therefore disruption and discontinuity of expression and content planes are often regarded as symptoms of interdisciplinarity. This alleged ambiguity often found within one and the same level, can be clarified by means of the use of the higher level potential (compositional analysis for interpretation of the Present progressive tense in cases such as “I am seeing the doctor tomorrow morning” against “I see the doctor now” or “After the earthquake they are living in Isparta” against “They live in Isparta”). If to compare “I am writing” with “I write”, the grammar of the former is more powerful than that of the latter where interdisciplinary relation of grammar and lexis is inefficient, while in “I am writing”, grammar, in the absence of the temporal lexical element ‘now’ or ‘at the moment’ makes the adequate use of the ‘subject-verb’ combination relevant for the sentence completion.

Summary

The suggested ‘interdisciplinary model’ takes as its starting point ‘the global functional dominance’, what, in fact, as a pragmatic concept conditions and regulates any one harmonious interaction of language aspects, since the cumulative effect of a number of courses with related objectives can become more powerful than the mere sum of those taken one at a time. Moreover, we are convinced that structuring of a subject with its interconnectedness with the
other related subjects would mean much not only from the point of time and energy economy, but also the quality of teaching/learning process with all its variables (attendance, motivation, etc.).

We also argue that interdisciplinary teaching/learning context helps relate various aspects of the specialty and doing so, it gives increasingly deeper meaning to what otherwise might be a large number of unconnected specifics. Too many cases in our everyday teaching convince that parts are more easily grasped and remembered in various relationships to each other (Grammar and Lexis, Grammar and Phonetics, Lexis and Phonetics, etc.) than in isolation. The student’s “procedural knowledge” and “operational capability”, in fact, become the main factors which maximize the reinforcement of his success and lead to greater interest toward the so-called problem materials, what also require higher cognitive skills such as application of the theoretical knowledge and/or methods as well as the analysis of the findings of these operations.

The heterogeneous nature of the research was in harmony with our prediction and the results merit further investigations to clarify the problem; they also suggest a new approach to curricula - syllabi and teaching-materials development in the field.

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