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The quality of Second-Language Writing (Hebrew) among Arab students in Israel

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Abstract

The paper deals with the level of syntactic complexity of subordinate clauses in argument texts spontaneously produced in hebrew by Arab female freshmen specializing in the teaching of Hebrew at Academic College of Education in Israel. Syntactic complexity is examined by means of the relationships between main clauses and various types of subordinate clauses; by categorizing types of logical connections encoded; and by determining the complexity of the subordinate clause itself.

Our research revealed three categories of subordinate clauses arranged by their level of syntactic complexity: a. content clauses indicating a low level of complexity due to their role as mere providers of necessary information; b. Descriptive clauses indicating a high complexity level due to their free main clause placement; c. relative clauses expanding the nominal phrase and creating a high degree of compression.

We found that the types of logical connections encoded by the clauses are few, unvaried and at times lexically wrong or completely absent due to first language interference, or are repeated so as to validate the addressor's position in an argument text. Furthermore their subordinate clauses contained many contents units pointing to undeveloped segments of thought: a kind of brain storm the writer conducts with himself. This may be the beginning of understanding the differences between everyday speech (verb-based, syntactically complex, lexically sparse) and academic writing (noun-based, syntactically relatively simple, but lexically complex and dense/compact).

Keywords: Second-Language Writing (Hebrew), Academic writing, An argumentation text, Descriptive clauses, Subordinate clause, Relative clauses

Background

The status of Hebrew among Israel's Arab students

The State of Israel has two official languages, Hebrew and Arabic. Hebrew is the language of the majority and enjoys a position of clear dominance and preference (Amara 2002; Mar'i 2013; Shohamy & Spolski 2002) while Arabic is considered the language of the Arab minority, which constitutes about twenty percent of the country's populace.

In Israel's Arab school system Arabic is the first language and is formally taught from first through twelfth grade and also in a number of teachers' colleges while Hebrew since 1948 has been taught as a second language[1] whose study is compulsory between

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the third and the twelfth grades. Hebrew is also acquired in informal settings such as work places, public institutions and exposure to printed and electronic media.[2]

When Arab high school graduates in Israel attend local universities and colleges in which Hebrew is the language of instruction, they may encounter some difficulties due to an imperfect mastery of that language, even if they took five units (the maximum) of Hebrew in high school and obtained a passing grade in the matriculation exam. In other words, although Hebrew is a compulsory subject in Arab schools from a very young age, speakers of Arabic require many years in order to attain a high level of fluency in Hebrew.[3]

Cummins (Cummins 1986; Cummins 2008) maintains that cognitive skills and knowledge, especially linguistic knowledge acquired in one's first language, can be transferred to a second language if exposure to the latter is sufficient, if the motivation to learn it is high enough, and if the learning possesses basic knowledge of the target language above a threshold level.

In college they are expected have a level of proficiency in Hebrew similar to that of students for whom the latter is their native language: they must be able to understand lectures, take exams, make oral presentations and of course hand in written papers, all in Hebrew. Lecturers often express dissatisfaction with most Arab students' level of proficiency in Hebrew, especially when they are required to demonstrate academic competence and to submit written tasks in Hebrew.

Slobin (Slobin 1996) note that Learners of a second language find it difficult to internalize linguistic categories that they do not experience directly in their first language, because these are fixed in the speaker's infancy in accordance with the first language rather than with the environment. Grave & Kaplan (1989), in (Margolin & Ezer 2014) note that a mother language's grammatical and rhetorical norms affect written texts produced by students in their second language.

According to Margolin & Ezer (Margolin & Ezer 2014) Arab students when writing in Hebrew use Arab cultural and linguistic schemata based on intertwined parallel lines whose connections are very flexible, thus resulting in a text that lacks clarity. present study, too, we shall see that Arabic linguistic structures, in Standard Arabic as well as the colloquial, have a direct effect on written argumentation texts in Hebrew.[4]

Academic writing combines formal technical aspects with qualitative characteristics related to information processing, analysis and production. If for students at the beginning of their academic life this is a complex task, it is the more so for the subjects of the present study, Arab students producing an argumentative text in Hebrew, their second language.

Writing an argumentation text

Argumentation is one of the most basic linguistic discourse structures. Arab students are first exposed to argumentation texts in their second language, Hebrew, in primary school, as part of the official school curriculum (Ministry of Education 2011). Students' acquaintance with such texts increases and becomes more profound with time, reaching its apex with the matriculation examination in Hebrew in high school (ibid.). Such texts are encountered once more in college, where

argumentative writing is one of the main genres of theoretical discourse required of students.

The logical structure of the argument text according to the Aristotelian philosophical tradition is the product of a thinking process consisting of a number of stages through which the addresser goes: Claim – argumentation – conclusion.

Toulmin(Toulmin 1958)) developed the Aristotelian model, consisting of six argumentation components: claim – evidence supporting the claim – justifications linking the claim to the evidence – reinforcement of the justifications – restrictions that limit the claim – refuting evidence or counter-argument.The three first components are necessary for the arguments' logical structure while the latter three components help provide support for the claim, since they require the writer to carry out cognitive actions such as explanation, inference, situation assessment and analogy. Cognitively these actions involve generalizations of phenomena and situations, declaration of positions, abstraction of details and actions, summarization of various matters and the like ((Peled 2001):81), all of which are produced by, among others, complex syntactic structures suchy as cause-effect, generalization, abstraction, contrast, comparison, condition or concession; in other words, these are complex main clauses possessing logico-semantic connectors, expressing high levels of subordination and cohesion with respect to the flow of information, thus leading the reader to create a coherent mental map of the text.

In the present study we focus on connections that are marked by logico-semantic connectors between main and subordinate clauses. Such connections provide an indication of a text's difficulty level as well as its style and its register (Olshtain & Cohen 2005).

Argumentation texts are such that they give rise to complex discourse syntax. The term "syntactic complexity"[5] refers to complex main clauses that contain one or more clauses that are subordinate to the main clause. The term "clause" denotes a basic syntactic structure consisting of two syntactic units, a subject and a predicate, but may also be part of a broader main clause. Halliday note that (2014: 457) "The clause complex is of particular interest in spoken language, because it represents the dynamic potential of the system – the ability to 'choreograph' very long and intricate patterns of semantic movement while maintaining a continuous flow of discourse that is coherent without being constructional. This kind of flow is very uncharacteristic of written language". Chapter 3 in (Schleppegrell 2004)) show how feature are functional for constructing the kinds of text student are expected to read and write at school. It develops the notion of linguistic register and compare the linguistic features of school-based text with typical features of the register of informal interaction to show how different registers realize different social contexts.

Syntactic complexity can be measured at various levels. A more complex level implies more complex mental structures. Fruchtman (1971) points out that complex and complicated mental structures are signaled by subordination (rather than coordination), which has the advantage of presenting ideas in the form of a more precise expression. Livnat 2011: 86 is of the opinion that subordination constructions create more precise and better defined relationships among discourse units, and are therefore typically used in argumentation. Armon-Lotem (2005) notes that subordinated linguistic forms are thought to arise relatively lately in the process of language acquisition.

Different types of subordinate clauses require different processing efforts (Nir & Berman 2010), due to the existence of two distinct types of connection between the main clause and the subordinate clause. One type is a *logical connection* between the main clause and the subordinate clause. To this type belong *descriptive clauses* that reflect material logical relations such as cause, result and condition. Descriptive clauses can indicate a high degree of complexity as long as they reflect material logical relations to the main clauses. It thus depends on the quality of lexical-semantic knowledge possessed by writers in a second language.

The other type is a *syntactic connection* between the main clause and the subordinate clause, that is, *content clauses* (object clauses), or between a noun phrase and a subordinate clause, that is, *relative clauses* and other complement clauses. Relative and other complement clauses create a high degree of interconnection and density between the parts of the main clause by expanding the noun phrase and so contribute to a text's overall complexity. Content clauses, on the other hand, indicate a lower level of complexity, since their syntactic function is limited to conveying subcategorized complements. The content communicated by such a clause in necessary for understanding the idea conveyed by the text, and is therefore required. Structurally, however, this is a simple kind of complement construction, of a linear nature, with a syntactic rather than a logical connection, of the kind that appears at a relatively early stage in language development (Ravid & Shalom, Ts 2012:45).

Study objectives and research question

The study aimed to examine the academic competence of Arabic-writing students in Hebrew by measuring syntactic complexity of their academic writing.

The research questions are:

What is the logical-semantic relation between the main clause and the type of subordinate clause?
What characterizes the subordinate clause in terms of complexity in writing syntactically of Arab students?

We wish to determine the quality of argumentative writing in the second language that Arab students bring with them to college at the beginning of their academic studies in order to improve it, since these students will eventually become teachers of Hebrew as a second language in the Arab school system in Israel.

Results and Discussion

The relationship between the main clause and the type of subordinate clause

In Hebrew the subordinating conjunction between the main clause and the subordinate clause is usually ***she-*** (that).

Below three types of subordinate clauses: Descriptive clauses, relative clauses and content clauses. In many cases the production of subordinate clauses that begin with logico-semantic connectors are unnecessary in accordance to the rules of Hebrew main

clause syntax and that syntactic errors are made under the influence of the writer's native language-Arabic.

Descriptive clauses

Such clauses by their very nature represent a high degree of complexity, reflecting as they do a logical relationship with the main clause. Such clauses may represent a high degree of complexity if they reflect actual logical relations with the main clause and this, as already noted, depends on the writer's lexical knowledge when he or she produces logical-semantic relations in the second language.

Below are examples of descriptive clauses whose production fails to materialize this.

Concessive clauses Concession is a logico-semantic relationship which is usually defined as the converse of the causal relationship. While the latter determines a causal link between the clause's two parts, its concessive counterpart says that an expected causal connection between the two parts does not exist, that in fact what exists in the opposite of what is expected (Azar 1999:285).

The texts composed by the students in this study were indeed found to contain concessive clauses introduced by subordination, **but the clause's parts did not present a logical-semantic relation of concession**. Here is an example:

1. *Ramato ha-gevoha shel ha-psychometri ve-lamrot she-hu mivhan qashe, aval hu gem mivhan hashuv u-meshaqef, u-viglal ze tsarikh limtso mashehu dome va-halufi bimqomo be-rama doma aval yoter kala* (6)[6]
   The psychometric exam's high level *and despite the fact that* it is a difficult test, but it is also important and revealing, for which reason a similar alternative must be found, at a similar level but easier.

The concessive particle ***lamrot she***- ("despite the fact that") with which the concessive clause opens encompasses the statement that the test is *difficult*, but does not have a logico-semantic relation of concession to the main clause's second part, that the test is *important*.

Now a concessive clause does have the potential to promote the writer's persuasive aims (Livnat 2011:90) in an argumentation text, and in this case it even illuminates the problem which the student wishes to present. However, the logical relation here is not one of concession; rather, the causes that need to be addressed are mentioned.

This gives rise to the impression that the student here expresses a kind of brainstorming that he carries out within himself, and writes down partially developed ideas in an unfinished form, thus detracting from the completeness of his idea. This may be the beginning of understanding the differences between everyday speech (verb-based, syntactically complex, lexically sparse) and academic writing (noun-based, syntactically relatively simple, but lexically complex and dense/compact) and why an ability to speak a language does not necessarily entail an academic register.

Causal clause Causal clauses connect the two parts of the clause with a causal connection. **Here is an example in which a causal connector is used instead of one denoting result**:

1. *Yesh anashim she-ovrim oto bli qashot, ve-aherim lo ya'aviru oto biglal she-hu lo me'afsher otam livhor et ha-miqtsoa she-hem hashvu oto mat'im lahem* (12)

   Some people pass it without any difficulty and others will not pass it *because it* does not enable them to choose the profession which they think is fitting for them.

The causal clause which opens with *biglal she-* ("because") aims at explaining the idea, expressed in the main clause, that *others will not pass it*. However, the content of this clause implies that something is missing from the main clause, a phrase such as *with a sufficiently high grade* or the like, which would open the way towards a logico-semantic connection expressing result in a coordinate structure: ***therefore*** *it does not enable them to choose the profession which they think is fitting for them.*

Purpose clause

1. *Ani madgisha she-ha-mivhan ha-psikhometri hu tsarikh lihyot batul kedey she-ha-avira normalit u-zeman tov lahshov lifney lesamen teshuva* (20)

   I stress that the psychometric test should be abolished *in order for* the climate to be normal and plenty of time to think before putting down an answer.

Purpose phrases describe the aim of an action or an event. In the main clause in question the student insists that the psychometric test should be abolished. However, despite the fact that she speaks of abolition, she mentions actions and situations that should exist before and during the event. In other words, **there is no thematic connection between the main clause and the clause that begins with the subordinating particle *kedey she*** ("in order for").

The production of concessive, causal and purpose clauses requires a careful development and presentation of arguments, explanations and illuminations, in addition to the claims themselves (Peled 2001:55, 81). These require advanced thought structures and competence in the second language's lexicon and syntax.

We found that the logico-semantic connectors in the Hebrew of the students' compositions were restricted and very basic.

These connections were the following:

marking a relationship of concession: *lamrot she-* ("although") ; *afilu im* ("even if");
marking a relationship of causality: *ki, biglal she-* (non-standard), *aharey she-*, *mi-kevan she-* (all meaning: "because, since");
marking purpose: *kedey she-*, *kedey + infinitive*, *al menat* (all meaning: "in order to");

Relative and other complement clauses

In Hebrew a relative clause qualifies a nominal head, which may consist of a noun phrase, a noun or a pronoun. It can be connected to the head in two ways: A. By means of a relative pronoun (*she-, asher, ha-* or ø [asyndetic connection]) ; B. An oblique pronoun that agrees with the head in gender and number.

According (Halliday 2014: 494) "The typical defining relative clause, introduced by *who*, *which*, *that*, or in its so-called 'contact clause' form without any relative marker (e.g. *he told* in *the tales he told*), is elaborating in sense".

In Arabic relative clauses are different, being divided into two types depending on whether the head is definite or indefinite: A definite head is followed by a relative pronoun while an indefinite head is followed by an asyndetic relative clause.

In Hebrew relative clauses are syntactically connected to the noun phrase they modify. Their function is to transmit information about the head or to identify one previously mentioned in the discourse (Meshler 2011:177). Therefore they create connectedness and great denseness between the main clause parts and so contribute to the great complexity of the text as a whole. For example:

> *Ve-ani omeret et za mi-keyvan she-ani makira harbe anashim **she**-hem baharu tehumim u-maslulim **she**-hem bikhlal lo ohavim otam ve-lo mit'anyenim bahem. Ve-ze raq biglal she-eyn lahim et ha-tsiyunim **ha**-mevuqashim ba-mivhan ha-psikhometri shel ha-mikhlala o ha-universita o ha-tsiyun **ha**-mevuqash shel ha-tehum shal ha-maslul **sh**-hem hayu rotsim livhor bo (14)*

And I say this because I know **many people** *who* chose domains and courses *that* **they** do not like at all and that do not interest them, only because they do not have the scores *that* are needed in the psychometric exam for the college or the university, or the score *that* is required for the course *that* they would like to choose.

However, in many cases what the student wants to say is not consistent with use of the subordinating particle *she-*, since the following clause does not expand on the noun phrase.
Here are a number of examples:

A. *She-* (=that) used instead of another complementizer to begin a clause
   She- instead of the proper particle that introduces a purpose clause (*kedey she-*) (in order to)

   1. *Le-fi da'ati ha-mivhan ha-ze tsarikh levatel oto la'asot mashehu she-kol ehad yihye lo hizdamnuyot lilmod be-maqom yoter tov* (1)
      In my opinion this exam must be abolished and something else done *that* everyone will have an opportunity to study in a better place.

      She- instead of the proper particle that introduces a causal clause (*mi-peney she-*) (because)
   1. *Mivhan ha-psykhometri hashuv me'od le-khol ha-talmidim ha-mathilim et ha-limud ha-aqademi, she-hu mehaleq otam le-fi ha-rama shelahem* (12)
      The psychometric test is very important for all students who begin their university studies, *that* it divides them according to their level.

      She- instead of the proper particle that introduces a temporal clause (*ka-asher*) (when)

2. *Le-da'ati ze basis halash she-aqadema'i mithayev ve-livnot he-'atid shelo me'alav ve-lilmod mashehu she-lo ohev* (3)

    In my opinion this is a weak base *that* a college graduate commits himself and to build his future on it and to learn something that he does not like.

    She- instead of the proper particle that introduces a manner clause (*ke-fi she-*) (as)

3. *Biglal she-hamivhan lo ba-qalut she-anu hoshvim, ve-totsa'a mikakh anahnu hayavim liqro rov ha-zeman* (8)

    Because the test is not as easy *as* we think, and as a result we must read most of the time.

B. *She-* (=that) after a parenthetical phrase

   The subordinating particle *she-* often appears in student compositions after an expressed opinion. This is due to the fact that in the students' native language, Arabic, the construction *parenthetical + subordinating conjunction + noun phrase + verb* is quite common.

   In fact, in Arabic the subordinating conjunctions *inna* and its "sisters" can begin a main clause in order to stress it in its entirety (Margolin & Ezer 2014:171). In Hebrew the use of the subordinating conjunction *she-* in this context is a syntactic error.

   1. *Le-tsa'ari ha-rav she-harbe talmidim lo matslihim ba-mivhan ha-ze* (4)

       Unfortunately *that* many students do not succeed in this exam.

   2. *U-ve-khakh yots'im anashim u-mevaqshim levatel behina zo ki lefi da'atam she-hi lo meshaqefet et ha-nivhan* (11)

       And so people come out and ask that this test be abolished because in their opinion *that* it does not reflect the examinee.

C. *She-* (=that) after a modal verb

   In both written and colloquial Arabic modal verbs such as *want*, *can*, are followed by the particle *inna* + an imperfect verb, in contrast to Hebrew. Shatil 2008: 78 notes that Arabic has no infinitive and uses the imperfect instead.

   The syntactic structure in Hebrew: *pronoun + want + infinitive* (*ata rotse la'avor* = 'you want to pass").

   The syntactic structure in Arabic: *pronoun + want* (literally: *it is my wish*) + *that + imperfect verb* ("you want that you pass").

   The Arabic syntactic structure influences the text written in Hebrew, as in the following example:

   1. *Im ata rotse she-ta'avor bo ve-rotse she-teqabel ha-tsiyun she-biglalo tilmad, ata hayav lihyot haruts kol ha-zeman* (18)

       If you want *that* you pass and want *that* you get a grade that will allow you to study, you have to be studious all the time.

D. *She-* (=that) introducing and explanation

Students use the subordinating conjunction *she-* in order to elaborate on an idea expressed in an inclusive clause with two parts:

1. *Le-khol davar yesh hesronot ve-gam yitronont, zot omeret she-yesh et ha-tsad ha-tove u-ve-maqbil le-ze yesh et ha-tsad ha-sheni she-hu lo tamid ba le-tovatenu* (4)

    Everything has drawbacks and also advantages, that is, *that* there is the good aspect and at the same time there is the other aspect which does not always work in our favor.

2. *Ha-mivhan ha-ze efshar lihyot tov ve-ra' be-oto zeman, she-yesh anashim she-ovrim oto bli qashut, ve-aherim lo ya'aviro oto* (12)

    This exam can be good and bad at one-and-the-same time, *that* there are people who pass it without difficulty and others will not pass it.

To summarize, in many cases the subordinating conjunction *she-* does not involve the high level of complexity implied by the frequency of its occurrence. It is the influence of the writers' native language that accounts of this high frequency, resulting in substandard syntax and erroneous use of the lexicon.

Content clauses

The simplest kinds of subordinate clauses are content clauses that function as object. Such content clauses have a low complexity level due to their syntactic function, which merely conveys subcategorized complements needed for understanding the idea that the main clause communicates. Structurally this involves a simple, linear complement linked by a syntactic connection. Content clauses thus do not necessarily reflect a text's special syntactic qualities. Their production was not marked by any particular difficulties.

Object clauses serve as complements of modal verbs and adjectives that belong to closed groups: Verbs of saying and verbs of mental acts (Rubinstein 1971:77-79).

Verbs of saying were expected to occur frequently in our sample, due to the character of the genre being studied, namely argumentation texts in which the writer tries to convince the addressee to accept his or her position by undermining or bolstering certain positions in a rational manner, or at least expresses an explicit personal argument at this stage of writing. However, the variety of verbs and the number of occurrences was quite restricted, and the writing was found to be rather impersonal. The students who composed the texts did not place themselves in the position of the syntactic subject as expected, but chose rather to put nouns (*opinion*), demonstrative pronouns (*these*), an impersonal noun (*someone*) or constructed main clauses with no overt subject at all and a predicate in the third person. Here are some examples:

1. *Yesh de'ot she-omrot she-matrato shel ha-mivhan hi hagbalat kamut ha-studentim be-qavana* (6)

    There are *opinions* that *say*[7] *that* the test's aim is to limit the number of students on purpose.

2. *Ba-zeman ha-aharon ta'anot rabot nishma'ot neged ve-gam be'ad ha-behina ha-psikhometrit. Ele she-hem be'ad ha-behina to'anim she-hi meshaqefet et yekholet ha-*

> *mu'amad lehishtalev u-lehatsliah ba-limudim ha-aqademiyim. Ve-rabim to'anim*
> *she-ha-behina ha-psikhometrit eynena kli miyun tov* (7)
>> Lately many arguments have been given for and against the psychometric test.
>> *Those* who are for the test *claim that* it reflects the applicant's ability to be
>> integrated and to succeed in his academic studies. Many *claim that* the
>> psychometric test is not a good classification tool.

3. *Me-hagdarat ha-mivhan ha-psikhometri heleq yitlonenu she-ze oseq be-psikhologia*
   yoter ve-en lo hashpa'a al ma she-ani baharti lilmod (11)
   > From the definition of the psychometric test some *will complain that* it deals
   > more with psychology and does not affect what I chose to study.

4. *Yesh mishehu she-to'en she-ha-mivhan ha-psikhometri hu mivhan hashuv me'od le-*
   khol ha-anashim, va-aherim hoshvim she-hu lo meshaqef et ha-rama shel ha-
   anashim ha-ele (20)
   > There is *someone* who *claims that* the psychometric test is important for
   > everyone, while others think that it does not reflect the level of these people.

   > Only once does a student's own voice appear, through this use of the first
   > person singular:

5. *Ani madgisha she-ha-mivhan ha-psikhometri hu tsarikh lihyot batul kedey she-ha-*
   avira normalit u-zeman tov lahashov lifney lesamen teshuva (20)
   > I *stress that* the psychometric test needs to be abolished so that the atmosphere
   > will be normal and a good time to think before marking an answer.

The explanation for why students tended to avoid using the first person in verbs of saying is in our view to be sought in the different culture in which they were brought up, and also in the way in which argumentation texts are taught in high school. The students express their ideas hesitantly and using the first person would tend to transmit authoritativeness and assertiveness with respect to the content (Hyland 2001:217). It may well be that students at this stage think that they do not possess enough information on the subject, and may even be afraid of expressing their views openly because the teacher of their course will read what they write. This is not the case when they use verbs of mental acts, as we shall see now.

We assumed that students would also make frequent use of **verbs of mental acts**, because of the genre's nature. However, it is well-known that mental verbs are problematic in the language acquisition process, because of their abstract meanings (Ravid & Egoz-Liebstein 2012:225), which may bring about a reduction in the frequency of their use. The variety of mental verbs found in the texts in question is rather limited, and the number of occurrences is low. The verbs are the following: *hashav* ("think"), *ra'a* ("see"), *yada'* ("know"), *qiva* ("hope") and *shiqef* ("reflect"). The syntactic subject of these verbs, that is, the person who experiences the mental act, is the student himself. This is not surprising. After all, these verbs express thought and hopes, so that students do not hesitate to use them in the first person singular, in contrast to verbs of saying, which imply an authoritative and unambiguous statement. Here are the examples:

1. *Ani ro'e she-kol ha-mivhan ha-ze eno meshaqef ramat ha-yeda' etsel ha-talmid* (2).

I *see that* this entire test does not reflect the student's level of knowledge.

2. *Be-sofo shel davar ani meqava she-yimtse'u pitron she-yaqel al ha-talmidim*(4)

Eventually I *hope that* they will find a solution that will make it easier for the students.

3. *Ani hoshevet she-ani be'ad qiyumo shel ha-mivhan ha-psikhometri* (17)

I *think that* I am in favor of the existence of the psychometric test.

Complexity of the subordinate clause

Subordinate clauses may themselves consist of more than one clause which are subordinate or conjoined. In language development relations of conjunction, which are linear, precede the production of relations of subordination. As a result, the level of syntactic complexity may be reflected in the subordinate clause's content as well as the relationships among its components.

Subordinate clauses are indicative of complex and complicated mental structures. The advantage of subordination is that it expresses thoughts with greater precision (Fruchtman 1971:29). However, when subordinate clauses are long, clumsy and very wordy, they do not of necessity express exactly what the writer wants to say, and may in fact also contain grammatical errors. Too much verbiage is not always a sign of linguistic ability; it may indicate a pragmatic failure due to the writer's distrust of his or her own communicative skills (Schleifer 2014:190) or to the influence of one's native language when writing in a target language.

In our case specifically, Arab students when writing in Hebrew are affected by their native language, whose discourse is built of combinations of parallel lines with very flexible mutual connections (Margolin 2002; Margolin & Ezer 2014). They repeat connectives in order to validate their arguments, and so create disconnected parallel lines. Between these parallel lines there are missing links, which must be filled in by the addressee if he is to understand the discourse and recognize the conclusions that are to be derived from it.

Below are a number of examples for the complexity of subordinate clauses, arranged according to various structures that were found in the students' compositions:

A. Sequence of subordinate clauses: Subordination instead of coordination

Long and complex main clauses in which subordinate main clauses are subordinated to other main clauses make it difficult to perceive the main point and are therefore not effective as persuaders (Fruchtman 1971). They are even less effective if the wrong lexical choices are made, leading to an erroneous syntactic structure, since it is not a matter of expanding a noun phrase.

The complementizer she- *instead of coordination (logico-semantic linking connector)*

1. *Yesh ha-yom harbe qursim ve-hadrakhot she-yekholim la'azor le-talmidenu leshaper et ha-tsiyum she-olim harbe kesef* (3)

There are many courses and instructions toddy *that* can help our students improve their grade *that* cost a lot of money.

The complementizer she- *instead of coordination (logico-semantic contrasting connector)*

2. *Psikhometri ze ha-delet ha-rishona le-limudim aqadema'iyim she-yakhol lihyot mikhshol le-hemshkhiyut she-yakhol laharos ve-lishbor talmidim* (3)

B. Parallel subordinate clauses

In the following main clauses there are sequences of subordinate clauses, each of which is linked to the same main clause through a repetition of the complementizer. Repetition is a characteristic feature of persuasive-emotional speech, typically used by orators who make use of emotional rhetorical devices.

In the examples below we find relative clauses that expand a noun phrase functioning as the subject of the main clause (*harbe talmidim* "many students" and *talmida* "student f.", respectively), following which the student skips the predicate and continues on to a new main clause.

1. *Harbe talmidim she-nisu la'asot oto kama pe'amim she-bizbezu shanim bishvil lehagia' la-miqtsoa' she-ratsu lilmod ba-mikhlala u-va-sof nishberu ve-lo him-shikhu ve-halkhu le-miqtso'ot she-lo ratsu otam az le-da'ati ze basis halash she-aqadema'I mithayev ve-livnot he-atid shelo me'alav ve-lilmod mashehu she-lo ohev* (3)

   Many *students who* tried to do it a number of times *who* wasted years in order to be accepted into the subject *that* they wanted study at college and in the end they gave up and did not continue and went into subjects *that* they did not want, so in my opinion this is a weak basis on which a college graduate commits himself to build his future and to study something that he does not like.

2. *Talmida she-qibla be-hamesh yehidot be-safa anglit tsiyun 90 ba-tikhon ve-hi asta et ha-mivhan ha-psikhometri ve-qibla tsiyun namukh lakhen hamivhan ha-ze lo mar'e lanu et ha-rama shel ha-talmida* (1)

   A *student who* received a grade of 90 in English in high school *and* did the psychometric test *and* got a low grade *therefore* this test does not show us that student's level.

C. Other subordinate clauses

Below we quote a number of long subordinate clauses that are syntactically and conceptually flawed because of inappropriate logico-semantic connectors (ex. 1). In other cases the main clause's theme is removed from subject position in favor of a semantically empty demonstrative pronoun (ex. 2) and a topicalized structure that is interrupted by a subordinate clause (ex. 3).

1. *Yesh talmidim she-yots'im me-ha-tikhon bi-memuta' bagrut gavoah ve-yesh lahem zaka'ut mele'a ve-hem nitqa'im ba-mivhan ha-psikhometri* (10)

   There are students *who* graduate from high school with a high matriculation grade average *and* they have full qualification *and* they get stuck in the psychometric test.

   The relative clause is used to expand on the noun *talmidim* ("students"). It consists of three coordinate clauses that are connected linearly by means of the conjunction *ve* ("and"): " graduate from high school with a high matriculation grade average *and* they have full qualification *and* they get stuck in the psychometric test". However, what is required here is a conditional conjunction ("and still") instead of the last "and".

2. *U-le-da'ati zo hi ha-be'aya ba-psikhometri ze she-lekhol she'ela yesh zeman katsar az ha-be'aya hi lo raq ba-homer, u-qlitat ha-homer teluya ve-khamuvan ze shone me-ehad le-ehad aval mi-behinat zeman ha-behina zo hi ha-be'aya ha-iqarit she-goremet leqabel tsiyunim lo kol kakh tovim ze she-lo maspiqim liftor et kol ha-she'elot ve-khu* (4)

> And in my opinion this is the problem with the psychometric it's *that* every question is given little time so the problem is not just the material, and the assimilation of the material depends, and of course differs from one person to another, but with respect to the time in the exam, that is the main problem *that* results in mediocre grades, it's *that* one does not manage to answer all the questions and so on.

The demonstrative pronoun (*zo* = this is) is in subject position while the content noun (*ha-be'aya* = "problem") is moved out into the position of predicate in the main clause, with the result that another demonstrative pronoun (*ze* = *that*) is produced, followed by a subordinate clause. The structure is as follows:

Main main clause + *ze* + *she-* + *clause*:
  zo hi ha-be'aya ba-psikhometri + *ze* + *she-lekhol she'ela yesh zeman katsar*
  this is the problem with the psychometric it's *that* every question is given little time
  zo hi ha-be'aya ha-iqarit ... + *ze* + *she-lo maspiqim liftor et kol ha-she'elot*
  that is the main problem *that* results in mediocre grades, it's *that* one does not manage to answer all the questions

In Arabic the demonstrative pronoun (*zo*) is placed before the head. This word order exists in Hebrew as well, in certain styles, such as *ze ha-ish* ("this man") in Rabbinic Hebrew (Shatil 2008:79), but is not considered standard usage in contemporary academic writing. If the semantically empty demonstrative pronoun in subject position is elided and replaced by a content noun ("the main problem"), followed by a copula and a predicate clause, the main clause's meaning would be much clearer: ***Ha-be'aya** ba-psikhometri hi she-le-khol she'ela yesh zeman katsar* ("**the problem** with the psychometric is that every question is given a short time").

Conclusion

In this paper we presented three types of subordinate clauses: Descriptive clauses, relative and complement clauses, and content clauses. These possess differing degrees of syntactic complexity and differing efforts at processing texts with a clearly argumentative structure.

In many cases the production of subordinate clauses that begin with logico-semantic connectors seems at first glance to create a high degree of syntactic complexity. However, an examination of the subordinate clauses shows that they are unnecessary in accordance to the rules of Hebrew main clause syntax and that syntactic errors are made under the influence of the writer's native language.

We found that the logical connections encoded by these clauses are few in number and restricted in variety. On occasion they are used contrary to the lexical rules. As for the subordinate clauses themselves, they were found to contain structures of several

content units, but the ideas in these units are not well developed, consisting of unfinished and partial ideas, some quite repetitive, reflecting a kind of brainstorming which the student carries out with him/herself.

Our study thus describes the connection between the argumentative genre and syntactic characteristics from a developmental perspective. It takes considerable experience and cognitive effort to produce an argumentation text that is coherent, original, clear, rhetorically well-organized and containing well-developed logical thoughts even in one's native tongue, let alone in a second language.

The Arab freshmen students of the Department of Hebrew Language and Linguistics at the Beit Berl Academic College may be said to be at an advanced stage of acquisition of Hebrew as a second language.

The most reliable indicator for the acquisition of a language is the learner's ability to produce an intelligible message, that is, to write in the target language in a way that an addressee will understand (Salsa-Murcia & Olshtain 2014). An examination of the syntactic complexity of subordinate clauses as carried out in the present study highlights one of the greatest obstacles to good writing among Arab students at the start of their academic studies.

In order to cope with the fact that linguistic patterns are acquired at a very early stage by native speakers, and that different linguistic sensibilities are difficult to develop at a later stage when they are needed for the acquisition of a second language (Slobin 1996), students must be exposed to Hebrew as much as possible; reading, listening and speaking skills in Hebrew should be promoted among them; and they should be given meta-linguistic lessons on the syntactic complexity of Hebrew subordinate clauses and on the differences between Hebrew and Arabic in their uses. Such lessons can provide linguistic knowledge that would enhance Arab students' linguistic awareness and foster their academic writing skills in Hebrew in the present as well as in the future, when they become teachers of Hebrew in Israel's Arab schools.

Method

The subject population consisted of twenty Arab female freshmen specializing in the teaching of Hebrew at Academic College of Education in Israel. The average age of the students is 22.86. All finished high school, and have a high school diploma.

All students tested in matriculation in 5 Hebrew study units (The highest level), and their writing ability in Hebrew is medium.

As part of their studies in the Department of Hebrew Language and Literature the students took a course on "Reading Comprehension and Written Expression" in the academic school year 2013/2014. This is a compulsory course of two hours per week for freshmen, whose purpose is to provide students with the requisite skills to produce and to analyze theoretical texts.

In the very first lesson of the course we asked students to compose a spontaneous argumentation text in Hebrew on the subject of "The Psychometric Examination", a topic which we considered appropriate and very relevant for the participants, since they had themselves had the experience of doing that examination just a few months previously, as part of the admission requirements to their college. We therefore expected to derive significant theoretical content relating to personal and general knowledge.

The instruction the students were given was as follows: "Whether the psychometric exam should be retained or abolished is an issue that adults are debating. Everyone has their own views on the matter. Think about this subject, the causes and the results, and write a composition that presents your position on it". The students were given forty-five minutes to complete the task, about one-half of a lesson.

We thus possess twenty handwritten texts, each between one-half and one folio page.

We got all the subordinate clauses; classified the types of logical connections encoded by the clauses; Checked the lexical aspect of the connecting word and characterized the complexity of the subordinate clause itself for the purpose of creating a convincing and cohesive text in the second language.

Endnotes

[1]The term "second language" denotes the acquisition of a language that is not the speaker's native language but is spoken in his/her environment, in contrast to a "foreign language".

[2]The level of acquisition of Hebrew is not uniform among Arabs. Young people are more proficient in Hebrew than the more elderly; men more than women, mainly because of workplace accessibility; and Arabs living in mixed cities more than those who live in exclusively Arab towns. In addition, knowledge of Hebrew is better among the Druze, who do compulsory service in the army, and in Arab towns that are near major population centers (Amara 2002:87).

[3]Studies around the world have shown that it takes at least seven years for speakers of a second language to attain academic competence, that is, the competence needed for university study, while the socio-cultural competence needed for everyday communication can be acquired within a year or a year-and-a-half (Schleifer 2014:186).

[4]See also (Shahadeh 1998:170), who mentions the overt and hidden effects of Standard and colloquial Arabic on Arab students' written Hebrew, and also (Henkin 1997: 336), who notes the influence of Arabic on Hebrew in raising the stylistic register.

[5]Syntactic complexity may also be measured by variables such as main clause length, number of clauses, coordination and subordination relationships, and complexity of the noun phrases.

[6]The number in brackets is the number of the composition from which the example is taken. The example main clauses are presented as they were written, with no editing. The bold/italicized words are those under discussion.

[7]For more on the students' need to use verbs of saying in academic writing for the purpose of relying on experts and quoting or paraphrasing what they say, see (Manor & Schlesinger 2012).

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References
Amara, M. 2002. Hebrew among Israel's Arabs: Sociolinguistic aspects. In *Te'uda 18*, ed. S. Yizreel, 85–105. Tel-Aviv University: Speaking Hebrew.

Armon-Lotem, S. 2005. The acquisition of subordination: From preconjunctionals to later use. In *Perspectives on language and language development: Essays in honor of Ruth. A. Berman, 192-204*, ed. D. Ravid and H. Bat-Zeev Shyldkrot. Dodrecht: Kluwer.

Azar, M. 1999. On the concessive in contemporary Hebrew. In *Studies on ancient and modern Hebrew*, ed. S. Sharvit, 285–303. Ramat-Gan: Bar-Ilan University Press (in Hebrew).

Cummins, J. 1986. Empowering minority student: A framework for intervention. *Harvard Educational Review* 56(1): 18–36.

Cummins, J. 2008. BICS and CALP: Empirical and theoretical status of the distinction. In *Encyclopedia of language and education*, Literacy, vol. 2, 2nd ed, ed. B. Street and N.H. Hornberger, 71–83. New York: Springer.

Fruchtman, M. 1971. Coordination and subordination as a criterion for the style of writing types. *Hebrew Computational Linguistics* 2: 29–45 (in Hebrew).

Grabe W, and Kaplan R. B. 1989. Writing in a SecondLanguage: Contrastive Rhetoric. in: David. M. Johnson and D. H. Roen (Eds.) Richness in Writing: Empowering ESL Student, New York, London: Longman: 263–283.

Hyland, K. 2001. Humble servants of the discipline? Self-mention in research articles. *English for Specific Purpose* 20: 207–226.

Halliday, M.A.K. 2014. *Halliday's Introduction to Functional Grammar. Fourth edition. Revised by Christian M.I.M. Matthiessen*. London and New York: Routledge Taylor & Francis Group.

Henkin, R. 1997. *Between Arabic and Hebrew in Rahat in the Negev: Preliminary survey on mixed office language*, 363–381. Jerusalem: Masorot – Mehqarim be-masorot ha-lashon u-vi-leshonot ha-yehudim.

Livnat, Z. 2011. *The rhetoric of the scholarly paper*. Ramat-Gan: Bar-Ilan University.

Manor, R., and Y. Schlesinger. 2012. Dynamism in presentational texts of different addressers. *Helqat lashon* 43–44: 392–410.

Margolin, B. 2002. On inter-cultural cohesion patterns. *Script* 5–6: 81–99 (in Hebrew).

Margolin, B., and H. Ezer. 2014. The quality of argumentative writing among Jewish (L1) and Arab (L2) students in Israel's colleges of education. *Helqat lashon* 46: 157–178.

Mar'i, A. 2013. Wallah OK: A linguistic portrait of the Arabs in Israel, R. Rosental (ed.). Jerusalem: Keter Publishers (in Hebrew).

Meshler, Y. 2011. On the emergence of patterns from discourse: The relative clause family. *Leshonenu* 73: 167–207 (in Hebrew).

Ministry of Education. 2011. Hebrew as a second language in Arab schools for the three age groups, grades 3 through 12. In *Ministry of Education, Pedagogical Secretariat, Department for Curriculum Planning and Development*. Jerusalem: Tal.

Nir, B., and R.A. Berman. 2010. Complex syntax as a window on contrastive rhetoric. *Journal Pragmatics* 42: 744–765.

Olshtain, E, & Cohen, E. 2005. Logical connectors in Hebrew: How well do eighth graders master them? In *Perspectives on language and language development, essays in honor of Ruth A. Berman*, Ravid, D, & Shyldkrot, H.B. (eds.), pp. 315-326**.**

Peled, N. 2001. *Spoken and written genres*. MOFET Institute.

Ravid, D., and T. Egoz-Liebstein. 2012. Mental verbs in the Hebrew lexicon. *Helqat lashon* 43–44: 224–241 (in Hebrew).

Ravid, D, & Shalom, Ts. 2012. Standards for the assessment of writing in seventh grade, Report presented to the Yad Hanadiv Foundation (in Hebrew).

Rubinstein, A. 1971. *The verb phrase*. Tel-Aviv: Hakibbutz Hameuhad (in Hebrew).

Salsa-Murcia, M., and E. Olshtain. 2014. Discourse-based approaches: A new framework for teaching and learning a new language. In *Topics in language teaching in Israel, part I*, ed. S. Donitsa-Schmidt and A. Inbar-Lurieh, 98–121. MOFET Institute: Kalil.

Schleifer, M. 2014. Linguistic and socio-cultural aspects in the production of written and spoken discourse among learners of Ethiopian background in Israel. In *Topics in language teaching in Israel, part I*, Donitsa-Schmidt, S. & Inbar-Lurieh, A. (eds.), 185-200 (in Hebrew).

Schleppegrell, M.J. 2004. The Language of Schooling: A Functional Linguistic Perspective. Lawrence Erlbaum Associates, Inc.

Shahadeh, H. 1998. The Hebrew of Israel's Arabs. *Leshonenu la-am* 49(4): 168–180 (in Hebrew).

Shatil, N. 2008. The Arabs in Israel: Linguistic influences and Hebrew acquisition methods. *The New Hed Ha-ulpan* 93: 70–88 (in Hebrew).

Shohamy, E., and D. Spolski. 2002. From uni- to multi-lingualism? Language education policy in Israel. In *Te'uda 18*, ed. S. Yizreel, 115–128. Tel-Aviv University: Speaking Hebrew.

Slobin, D.I. 1996. From thought and language to thinking for speaking. In *Rethinking linguistic relativity: Studies in the social and cultural foundation of language*, Gumperz, J. & Levinson, S. (eds.), 17, 70-96.

Toulmin, S. 1958. *The uses of argument*. Cambridge: Cambridge University Press.