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**ACQUISITION OF TENSE AND ASPECT  
BY  
ARABIC-SPEAKING LEARNERS  
OF  
ENGLISH AS A SECOND LANGUAGE**

A thesis  
submitted in partial fulfillment  
of the Requirements  
for the degree  
of  
Doctor of Philosophy

By  
Suleiman Saleem Mazyad  
University of Durham  
Department of Linguistics and English Language  
October 1999

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27 JAN 2000

This thesis is dedicated to my late brother Tawfiq whose pride in this effort would have equaled my own.

# **ABSTRACT**

## **Acquisition of Tense and Aspect By Arabic-Speaking Learners of English as a Second Language**

Suleiman Saleem Mazyad,  
University of Durham, 1999.

This thesis examines the acquisition of tense-aspect morphology in 90 adult Arabic-speaking learners of English grouped into three levels of proficiency (experimental group), against 25 adult native speakers (control group). The study examines the Aspect Hypothesis, which claims that verb inflections in early interlanguage systems function primarily as markers of lexical aspect regardless of tense. The study also attempts to clarify how developing inflections align with aspect categories and how this association varies across proficiency level, as well as considering Arabic L1 influence on the acquisition process. Five operational tests were applied to the data to assess three dimensions of lexical aspect, which interact to form Vendler's (1967) four aspectual categories. Repeated measure MANOVA and chi square tests indicate: (1) significant interdependence of verb morphology and lexical aspect at the elementary and intermediate levels: '-s' associates with statives, '-ing' with activities, and PAST with achievements and accomplishments; (2) significant independence of tense morphology from lexical aspect at the lower advanced level; (3) that the association of inflections with tense increases with proficiency level; and (4) a significant effect of Arabic L1 transfer occurs in terms of progressive marking on punctual and telic events and the use of the Arabic past simple tense for the English present perfect at the elementary and intermediate levels. The study argues for the accessibility of innate universal aspectual values by adult L2 learners, and relates the results to cognitive operating principles, to the prototype model of language acquisition (Andersen and Sharai, 1994), and finally to Bickerton's (1981) Language Biogram Hypothesis (LBH).

## Declaration

This thesis, which I submit for the degree of Doctor of Philosophy at the University of Durham, is my own work and is not the same as any which has previously been submitted for a degree in this or any other university.

Suleiman Saleem Mazyad

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## Acknowledgement

An academic undertaking as demanding as the present study cannot be realized by the efforts of the researcher alone, but necessarily draws upon the knowledge and experience of others too many to list. There are some, however, who must be mentioned by name.

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# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

The logical problem of language acquisition has provided the impetus for research investigating first language (L1) and second language (L2) acquisition within the framework of Principles and Parameters (Chomsky, 1981, 1986, 1988; Hornstein and Lightfoot, 1981; White, 1985a, 1989, 1991). The problem revolves around the question of how learners come to master the complex properties of the grammar of their native languages on the basis of input that is degenerate and underdetermined and in the absence of crucial negative evidence (Hornstein and Lightfoot, 1981; Lakshmanan, 1994; White, 1985a, 1989, 1991). As such, there is a mismatch between the kind of input available to L1 acquirers and their ultimate attainment. This is to say that, despite certain properties of language not being explicit in the input, L1 learners end up with complex grammar that goes far beyond the input, resulting in knowledge of grammaticality, ungrammaticality, and various complexities and subtleties of grammar (White, 1989). How, then, is the acquisition of such competence possible?

Hornstein and Lightfoot (1981:13-14) argue that our linguistic knowledge is innately available, independently of linguistic experience. This innate knowledge permits language acquisition to circumvent the environmental deficiencies in taking root. Environmental stimulus is impoverished and is only one component in the development of the ability eventually attained. These authors postulate that the learner's final ability is determined by "genetically encoded principles, which are triggered or activated by environmental stimulus"

(p.13). These principles cannot be language-specific, but must be universally available. Thus, it is this substantial innateness which makes acquisition possible under the prevailing condition of impoverished input.

Chomsky (1981:7) holds that the core grammar of any language is given by Universal Grammar (UG) as a set of principles, with possibilities of parametric variation. The values of certain parameters can only be determined by primary data from the language. "In a highly idealized picture of language acquisition, Universal Grammar is taken to be a characterization of a child's pre-linguistic state. Experience...serves to fix the parameters" (p.7). Chomsky (1988:63) explains the acquisition of parameters as follows:

The principles of UG have certain parameters, which can be fixed by experience in one or another way. We may think of the language faculty as a complex and intricate network of some sort associated with a switch box that can be in one of two positions. Unless the switches are set one way or another, the system does not function. When they set in one of the possible ways, then the system functions in accordance with its nature, but differently, depending on how the switches are set. The fixed network is the system of principles of universal grammar; the switches are the parameters to be fixed by experience. Acquisition of a language is in part a process of setting the switches one way or another on the basis of the presented data, a process of fixing the values of the parameters (Chomsky, 1988:63).

Assuming that L1 acquisition is mediated by innate universal principles, the question arises as to whether adult L2 learners still have access to the principles and parameters of UG. Currently there are three different hypotheses regarding the accessibility of UG by adult L2 learners: (i) 'No access to UG', (ii) 'Direct access to UG', and (iii) 'Indirect access to UG' (Cook, 1988; White, 1989, 1991). The differences between these positions can be traced in part to whether the focus is on the relative lack of success of L2 learners (their ultimate attainment rarely approaches that of native speakers) or their success (they acquire many complex properties of language which are not obvious in the input or explicitly



taught) (White, 1991:126). As is implied in the above quotation, adults do not usually succeed acquiring their L2 100%.

The first position ('No access to UG') assumes that UG is no longer available to adult L2 learners. In this view, the learning mechanisms underlying adult L2 acquisition are substantially different from those underlying L1 acquisition. The L1 functions as an initial "template" and the L1 settings are transferred directly to the developing L2 grammar (what Sharwood Smith, 1988, calls 'parasitic development'). The proponents of this position are Bley-Vroman (1989, 1990), Clahsen (1990) Clahsen and Muysken (1986, 1989), and Schachter (1988).

In contrast is a position which assumes that adult L2 grammars are constrained by UG principles in the same way as child L1 grammars are (Mazurkewich, 1984). This claim represents the strongest form of the hypothesis that UG is available to adult L2 learners, and indicates that L1 plays no role in the interlanguage (IL) grammar.

The third position proposes that UG principles are available to adult L2 learners through the mediation of the L1 (Schwartz, 1987; Schwartz and Sprouse, 1994, Vainikka and Young-Scholten, 1994; White, 1985b, 1988, 1991). According to Vainikka and Young-Scholten (1994), the L1 mediation is only at the start, and for lexical projections. As White (1991:127) suggests, this position is consistent with two different assumptions about the essential availability of UG. On the one hand, the L1 might play a role and UG be unavailable. UG is then dead as an active force in L2 acquisition, although aspects of it encoded in the L1 can still be tapped. Thus, L2 learners might give the impression of having access to complex and subtle knowledge due to their ability to tap this knowledge as encoded in the L1. On the other hand, attributing a role to the L1 is consistent with the claim of essential availability of UG (e.g., Flynn, 1987; White, 1988b). White claims, for instance, that the L2 learner may use principles and parameter

settings from the L1 initially as an interim way of dealing with the L2 data. However, the learner is not assumed to be necessarily “stuck” with L1 parameter settings; rather, parameter resetting to the L2 value is possible, given appropriate L2 input interacting with a still active UG.

A rather new area is the acquisition of tense and aspect. People tend to consider inherent lexical and grammatical aspects as being outside the compass of UG. A series of studies in L1 acquisition of various languages has provided evidence that children acquiring an L1 are strongly influenced by the semantic aspect inherent in the verb to which verb morphology is attached. Children use present inflection with statives, progressive inflection with activities and past inflection with achievements and accomplishments. So early development of tense and aspect morphology is strongly influenced by lexical aspect inherent in the verb or predicate, with tense distinctions being neglected. This tendency (which has come to be known as the Aspect Hypothesis) (Andersen and Shirai, 1994) has been observed in L1 acquisition: French (Bronchart and Sinclair, 1973), Italian (Antinucci and Miller, 1976), Greek (Stephany, 1981), and English (Bloom, Lifter, and Afitz, 1980; Shirai and Andersen, 1995), among others (see Chapter 4, section 4.1 for elaboration). The same tendency has also been observed in SLA: French (Kaplan (1987), English (Bardovi-Harlig, 1998; Collins, 1998; Jabbari, 1998; Robison, 1990, 1995), Spanish (Andersen, 1991; Ramsay, 1990), Dutch (Housen, 1994), and Japanese (Shirai and Kurono, 1998) (See Chapter 4, section 4.2 for elaboration.)

This tendency is also observed in the present work. We investigated the acquisition of tense-aspect morphology by 90 adult Arabic-speaking learners of English as a second language (AS) grouped into three levels of proficiency: 40 elementary, 25 intermediate, and 25 lower advanced. These students had been exposed solely to classroom instruction for 6;0 to 7;6 (years; months). In particular, we focused on how AS used verb inflections with verb types in the early stages of language acquisition, with a view to clarifying how verb



morphology aligns with inherent lexical aspect and how this association varies across proficiency levels. In other words, we tested the Aspect Hypothesis, replicating earlier findings in terms of Vendler's (1967) four-way classification of aspectual categories, thus following a traditional approach (e.g., Bardovi-Harlig, 1998; Collins, 1998; Jabbari, 1998; Shirai and Andersen, 1995; among others), and using data-elicitation tasks similar to Jabbari's (1998), namely, grammaticality judgement task (GJT), gap-filling task (GFT), and story re-telling task (RT).

The present research shows that there is an innately universal element which must be at work in adult L2 learners. In their acquisition of tense-aspect morphology, the adult L2 learners in this study, who have a mature L1 grammar, have reactivated their innate knowledge of universal aspectual values (namely punctuality, telicity, and dynamicity) in order to acquire tense-aspect morphology in the elementary and intermediate levels, and have used it as a starting point for the acquisition of tense and grammatical aspect in the lower advanced level. As verb inflections emerge in the interlanguage, they are unevenly distributed across all aspectual categories of verb, redundantly marking inherent lexical aspect but not tense or grammatical aspect in the lower levels of proficiency, while a uniform distribution of verb morphology across all aspectual verbs independent of lexical aspect occurs in the higher levels. Therefore, we would identify innate knowledge of aspectual values as the key to explaining the obvious influence of inherent lexical aspect on the development of tense-aspect morphology in the early stages of language acquisition (see sections 6.7, 6.10, and 7.2).

What does this claim imply? The innate knowledge of universal aspectual values referred to in the last paragraph provides a basic characterization of aspectual categories. The variations that occur among the aspectual systems of languages are departures from the general characterization of a category, so that aspectual categories are not language-dependent, but are in fact rooted in human cognitive abilities (Smith, 1997). People distinguish between the basic

aspectual categories of verb (stative, activity, achievement, and accomplishment) by using their innate knowledge of universal aspectual values. There is, therefore, a high probability that in all languages, stative verbs are [-dynamic], activity verbs are [+dynamic] and [-telic], achievement verbs are [+punctual] and [+telic], and accomplishment verbs are [-punctual] and [+telic] (see Chapter 2, sections 2.4.4.1, 2.4.4.2, 2.4.4.3, and 2.4.4.4). Before presenting an overview of L1 and L2 acquisition of tense and aspect, we shall discuss three distinct temporal categories denoted by the terms 'tense', 'grammatical aspect', and 'inherent lexical aspect'.

## **1.1 Background**

### **1.1.1 Tense and Aspect**

Tense has been described in a variety of ways in the literature. Jespersen (1962:1) defines tense as "the linguistic expression of time-relations, so far as these are indicated in verb forms". Hockett (1958) claims that "tenses typically show different locations of an event in time". Lyons (1968:305) proposes a broader definition of tense, stating:

The essential characteristic of the category of tense is that it relates the time of the action, event or state of affairs referred to in the sentence to the time of utterance (the time of utterance being 'now'). Tense is therefore a deictic category, which (like all syntactic features partly or wholly depend upon deixis) is simultaneously a property of the sentence and of the utterance (Lyons, 1968: 305).

Comrie (1976:1–2) seems in agreement with Lyons' definition of tense, maintaining that "tense relates the time of the situation referred to to some other time, usually to the moment of speaking". Cook (1981:83) defines tense as "a semantic category which indicates present, past, or future time". King (1983:126)



defines tense along similar lines as the “semantic notion by which the speaker associates a reported situation with a particular temporal perspective”.

As these various views indicate, some definitions are based on morphological criteria (e.g., Jespersen’s), while others are based on semantic ones. Those linguists who, as Mohammed (1982) comments, cherish a morphological definition of tense assume that any tense not represented by morphological structure of the verb is not a tense at all. But, a morphological definition of tense is inadequate as it does not hold for every natural language. Some languages use other devices (e.g., auxiliaries, particles, temporal adverbials, etc.) besides verb inflection to represent tense (see Chapter 2, section 2.1, and Chapter 3, section 3.5).

In this study, tense refers to temporal deixis – the relation (present, past, or future) of a given situation<sup>1</sup> to a reference time, usually the time of speech (Comrie, 1976). In other words, it locates a situation in relation to some other time (such as speech time). Aspect, on the other hand, is not concerned with temporal deixis (i.e., it is nondeictic)<sup>2</sup>, but rather characterizes “different ways of viewing the internal temporal constituency of a situation” (ibid.,3). Therefore, the difference between *he is writing* and *he was writing* is that of tense, since the *is/was* contrast signifies the difference between the two in relation to speech time. However, the difference between *he wrote a letter* and *he was writing a letter* is one of aspect, since the difference stems from how the action of writing is viewed by the speaker: the former views the situation in its entirety (external view) whereas the latter views the situation as consisting of phases (internal view) (ibid., 5) (see sections 2.2, 2.4.1, and 2.4.2 for elaboration).

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<sup>1</sup> Situation is used as a cover term for states, events, and processes, following Comrie (1976).

<sup>2</sup> The term ‘deictic’ is used throughout the present work in terms of the coordinates of speech acts. For example, *I am eating* eating is associated with the present moment which is the time of uttering the sentence.

## 1.1.2 Grammatical Aspect VS Inherent Lexical Aspect

Grammatical aspect (what Smith, 1983, 1997, calls VIEWPOINT ASPECT) refers to the ways in which the temporal features of a situation are viewed independent of its relation to any reference time (Bickel, 1997, Comrie, 1976; Robison, 1995, Smith, 1983, 1997). In other words, it refers to non-tense distinction expressed by grammatical markers such as auxiliaries or inflections (Andersen, 1991:308, Bertinetto, 1994:392; Shirai and Andersen, 1995:744). This can be exemplified by considering the aspectual interpretation of the following sentences, given in Arabic along with their English equivalents:

(1)a. *mashat hindun ?ila al madrasati* (perfective)

walked-PERF-3fsg Hind-NOM to-prep. the-school-GEN

'Hind walked to school'.

b. *kaanat hindun tamshii ?ila almadrasati* (imperfective)

was-PERF-aux-fsg. Hind-NOM walk-IMP-3fsg to-prep. the-school-GEN.

'Hind was walking to school'.

c. *mashat hindun fii al muntazahi* (perfective)

walked-PERF-3fsg Hind-NOM in-prep the-park-GEN

'Hind walked in the park'.

(1a) presents a complete event that has a goal, or natural ending, and the information that the goal was reached. (1b) presents a part of the same type of event, but does not convey whether or not the goal was reached. Rather, it implies that the event was in progress without information about its beginning or end, leaving doubt regarding its completion. (1c) presents a complete event that does not involve a goal, and the information that the event was terminated. In other words, the endpoint of the event is arbitrary rather than inherent. Thus, grammatical aspect gives a full view in (1a) and (1c), but a partial view in (1b). Hence, the perfective aspect in both languages views a situation in its entirety with a beginning and an end, whereas the imperfective views only a part of a situation without an endpoint. The difference between these two categories, then,



is how much of a situation is made visible. This means that grammatical aspect concerns the way situations unfold in time, involving beginnings and endings, dynamic stages and static periods.

From the above discussion, we conclude that grammatical aspect can be divided into two types:

- (i) **perfective aspect**, which views a situation in full including initial and final points. The perfective can be represented schematically, as in (2):
- (2) General temporal schema of perfective: I .....F<sup>3</sup>  

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- (ii) **imperfective aspect**, which views a situation in part including neither initial nor final points. A schematic representation of the imperfective is given in (3):
- (3) General temporal schema of imperfective: I...////...F

(See also Smith, 1983, 1997, and sections 2.4.2.1 and 2.5.4 for elaboration on grammatical aspect in English and Arabic, respectively).

'Lexical aspect', also called 'situational aspect' (Smith, 1983, 1997) and 'semantic aspect' (Comrie, 1976), on the other hand, refers to "chronological" features inherent in the lexical items which describe a situation independent of tense or grammatical aspect. Unlike grammatical aspect, lexical aspect is a universal feature or a property of the verb or predicate (see sections 1.0, 2.1, 2.4.2.1, 2.4.2.2, and 4.0). Vendler (1967) proposes a four-way classification of the inherent semantics of verbs (i.e., inherent lexical aspect): Achievement,

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<sup>3</sup> I and F represent initial and final endpoints; the dots represent the internal stages of the event; the slashes indicate an interval consisting of internal stages of a situation (Smith, 1997). Slashes under the dots mean that the span of the perfective includes the initial and final endpoints of the situation, while those on the dots indicate that the interval of the event includes neither its initial nor final endpoint.

Accomplishment, Activity, and State. Each of these categories can be characterized in terms of three universal aspectual features:

- (i) *Telic* (denotes having an inherent endpoint, e.g., *build a house, reach*);
- (ii) *Punctual* (denotes having no duration, e.g., *notice, finish*);
- (iii) *Dynamic* (denotes activity and action (e.g., *play, write*) as opposed to static and unchanging (e.g., *love, want*)).

Therefore, whether a situation is

(4) a state: *He knows the answer.*

an activity : *He runs fast.*

an achievement: *He arrived early,*

or an accomplishment: *He wrote a letter.*

is determined by the presence or absence of the above semantic features. Therefore, statives are not dynamic, and are atelic and durative, activities are dynamic and have duration and no natural endpoint, achievements are dynamic and telic and are perceived as punctual, and finally accomplishments are dynamic and telic, but have some duration and are therefore not punctual. These features are mapped onto the above lexical aspectual categories using an adapted version of Andersen's semantic features description of lexical aspect, illustrated with our examples:

**Table 1: Semantic Features of Lexical Aspectual Categories**  
(after Andersen, 1991)

Categories of Lexical Aspect	Semantic Features		
	Dynamic	Telic	Punctual
<b>State:</b> He knows the answer.	-	-	-
<b>Activity:</b> He runs fast	X	-	-
<b>Achievement:</b> He arrived early.	X	X	X
<b>Accomplishment:</b> He wrote a letter.	X	X	-



The crucial point is that all lexical aspectual categories of verb are constrained by three universal aspectual values: [punctual], [telic], and [dynamic]. Stative verbs are [-dynamic], activity verbs are [+dynamic] and [-telic], achievement verbs are [+punctual] and [+telic], and accomplishment verbs are [-punctual] and [+telic]. These points are discussed in detail in sections 2.4.4.1, 2.4.4.2, 2.4.4.3, 2.4.4.4.

It is common to speak of stative verbs, activity verbs, and so on, but in fact, it is the full verb phrase and not the verb in isolation that determines the aspectual category. This was first shown for Dutch and English by Verkuyl (1972). Verkuyl argued that the aspectual category of a situation is determined not by the verb alone but by the verb constellation (i.e., the verb and its internal arguments) (and associated adverbials) in Smith's (1997) terms. Thus, *he walked in the park* would be an activity, an atelic event that may continue indefinitely, whereas *he walked to school* would be an accomplishment, a telic event that has a clear endpoint, when he reaches the school. Hence, the meaning of the lexical aspectual category is compositional: it is built up with the verb, internal arguments and adverbials of a sentence (see sections 2.4.2.2, 2.4.4.2, 2.4.4.4, and 2.5.4 for elaboration).

## **1.2 Overview of L1 and L2 Acquisition of Tense and Aspect**

Research on first language (L1) and second language (L2) acquisition has shown that the development of tense-aspect morphology is strongly influenced by inherent lexical aspect with tense distinction being neglected in the early stages of language acquisition in that the present tense marker '-s' is strongly associated with stative verbs, progressive marker '-ing' with activity verbs, and PAST<sup>4</sup> marking with achievement and accomplishment verbs. Thus, emerging

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<sup>4</sup> PAST refers to 'ed/irregular' forms collectively.

verb inflections function in ways distinct from the target. This tendency, which has come to be known simply as the Aspect Hypothesis (Andersen and Shirai, 1994; Bardovi-Harlig, 1994), has appeared under different names and formulations including the Defective Tense Hypothesis (Weist, Wysocka, Witowska-Standnick, Buczowska, and Konieczna, 1984), the Relative Defective Tense Hypothesis (Andersen, 1989) and the Primacy of Aspect Hypothesis (Robison, 1990) (see sections 4.0 and 4.1).

Nevertheless, no study to date has considered the acquisition of tense and aspect by Arabic-speaking learners, neither children nor adults. In this study the Arabic-speaking learners were in an instructed setting and were clearly post-puberty. Moreover, only two other studies have investigated the influence of inherent lexical aspect in wider temporal contexts, but with a relatively small corpora, namely, Jabbari (1998) and Robison (1995). The present study tested the Aspect Hypothesis involving:

- (i) a larger array of target tenses: present, present perfect, past, past perfect, future, and future perfect;
- (ii) large corpora (N = 90 adult Arabic-speaking learners of English as a second language as experimental group and 25 native speakers as the control group);
- (iii) three elicitation tasks, namely, grammaticality judgement task (GJT), gap-filling task (GFT), and story retelling task (RT), which function as mutually confirmatory tests. These tasks were adapted from Jabbari (1998) for comparability;
- (iv) sophisticated statistical tests including MANOVA, Tukey test, and chi square tests; and



- (v) a control for possible Arabic L1 transfer<sup>5</sup>.

These matters are discussed in detail in Chapter 5.

Based on the findings of the present study (see Chapter 6), which furnish strong evidence for the Aspect Hypothesis in adult L2 acquisition, we would make the claim that the early use of tense-aspect morphology is constrained by an innate knowledge of universal aspectual values (namely, punctuality, telicity, and dynamicity). The elementary- and intermediate- level learners who have a mature L1 grammar have reactivated their innate knowledge of universal aspectual values to acquire tense-aspect morphology, which they use as a starting point for the acquisition of tense distinctions in the lower advanced level, where correct target tense forms are uniformly distributed across all aspectual verbs regardless of inherent lexical aspect. The claim for the accessibility of this particular type of innate knowledge runs counter to the position that innate mechanisms used by children to acquire their L1, which include Universal Grammar (UG), are not available to adult L2 learners. These matters are discussed in detail in Chapter 7, sections 7.1 and 7.2.

### **1.3 Arabic L1 and Dialects**

As one of the variables to be considered in this research is possible Arabic L1 transfer, a basic understanding of the linguistic situation of Arabic is necessary. Ferguson (1959a, 1959b) distinguishes between the 'High' form of Arabic (the written variety) and the 'Low' form (the spoken variety) (described as diglossia). These two varieties coexist side by side in the Arab world, serving important social functions. Written Arabic or "Modern Standard Arabic" (MSA) is

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<sup>5</sup> Since a one-sided approach to transfer is inadequate, both MSA and Saudi Arabian dialects (SAD) spoken by the subjects in this study are considered in our discussion of the Arabic tense and aspect system as related to the acquisition of tense and aspect.

a contemporary form of Classical Arabic (CA), the language of pre-Islamic literature and oratory, the Quran (Holy Book) and Arabic literature subsequent to the advent of Islam, and is the official language of Arab nations and the vehicle of literary as well as scholarly work. It is used for formal purposes: political, religious, and educational. It is not used, however, for informal conversations or daily interaction. Spoken Arabic or “Colloquial Arabic” refers to the native dialects spoken by people in informal situations and for communication purposes.

It is worth noting that MSA is not acquired by children at home but is learned at school during the early years of education. The child first acquires a regional variety of Arabic that is frequently used at home by his parents and other members of his family. The acquisition of MSA in school is compulsory and the child’s educational progress depends on his mastery of MSA (Mohammed, 1982:28).

## **1.4 The Outline of the Thesis**

The thesis consists of 7 chapters. Chapter 2 covers a comparative discussion of the theoretical underpinnings relating to aspect in English and in Arabic and also considers tense in English in terms of Reichenbach’s (1947) and Comrie’s (1985) theories of tense. Tense and aspect in English are examined from a functional point of view on the assumption that in acquiring language, learners associate forms with meaning and use and that they need to distinguish between different semantically-related forms (Bardovi-Harlig, 1997:376). Aspect is explored in depth from two perspectives: (1) grammatical aspect and its interaction with inherent lexical aspect, and (2) inherent lexical aspect, which is primarily focused on throughout the thesis. Inherent lexical aspect is examined within Vendler’s (1967) four-way classification of aspectual categories of verb in English, and McCarus’s (1976) aspectual classification of verbs in Modern Standard Arabic (MSA).



Chapter 3 examines the Arabic tense and aspect system in terms of verb types and inflection, the perfect and imperfect forms, the active participle, tense in MSA and a functional view of the perfect and imperfect. The chapter concludes with a contrastive analysis of tense and aspect in Arabic and English.

Chapter 4 reviews research literature on the L1 and L2 acquisition of tense and aspect as it relates to the Aspect Hypothesis. Such a discussion encompasses important early and recent studies that support or dispute the Aspect Hypothesis, and shows that the development of tense-aspect morphology is strongly influenced by inherent lexical aspect in the early stages of language acquisition.

Chapter 5 describes the methodology and materials used in the study, the subjects, and the following tasks: grammaticality judgement (GJT), gap-filling (GFT), and story retelling (RT), coding for inherent lexical aspect, coding tasks for data analysis, and finally analysis techniques employed to test the research hypotheses of the study, which are stated in terms of Vendler's (1967) four categories of inherent lexical aspect. They are formulated to confirm the descriptive results of earlier research reviewed in Chapter 4. They also address the role of Arabic L1 transfer in the process of the acquisition of tense and aspect in English. The hypotheses are as follows:

### **Research Hypothesis 1**

- i. **Statives with –s:** Elementary- and intermediate-level learners will use the present tense form -s' to mark [-dynamic] stative verbs with tense distinction being neglected, while lower advanced-level learners will mark stative verbs with the correct target tense form independently of lexical aspect.
- ii. **Activities with –ing:** Elementary- and intermediate-level learners will mark [+dynamic] and [-telic] activity verbs with the progressive form '-ing' with

tense distinction being neglected, while lower advanced-level learners will use the correct target tense form regardless of lexical aspect.

**iii. Achievements with PAST:** Elementary- and intermediate-level learners will mark [+punctual] and [+telic] achievement verbs with PAST form regardless of the target tense, while lower advanced-level learners will apply the correct target tense form regardless of lexical aspect.

**iv. Accomplishments with PAST:** Elementary- and intermediate-level learners will mark [-punctual] and [+telic] accomplishment verbs with PAST form regardless of the target tense form, while lower advanced-level learners will use the correct target tense form regardless of lexical aspect.

### **Research Hypothesis 2/Continuity of Lexical Aspect**

Elementary- and intermediate-level learners will show the narrowest and most significant association of '-s' with stative verbs, '-ing' with activity predicates and PAST with achievement and accomplishment predicates, while lower advanced level learners will extend the domains to include all categories of aspectual verbs. Lower advanced-level learners will show the weakest dependence, if any, of verb morphology upon Lexical Aspect.

### **Research Hypothesis 3/Influence of Tense**

The dependence between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced level learners.

### **Research Hypothesis 4/Transfer**

The tendency

- a. to use past simple instead of present perfect, and
- b. to mark achievement and accomplishment verbs with '-ing' (and PAST)



will be prominent among elementary- and intermediate-level learners but will diminish with increasing level of proficiency.

It is expected that native speakers (NS) will treat tense and grammatical aspect independently of inherent lexical aspect, as in the TL.

Chapter 6 presents and discusses the results of the study. The results indicate that when L2 verb morphology appears in the interlanguage of an adult learner, it is not uniformly distributed across all aspectual categories of verb but rather, as in L1 acquisition, is distributed according to lexical aspect. For the elementary- and intermediate-level learners, the present marking morpheme '-s' was strongly associated with stative verbs. These verbs exhibited also a significant occurrence of uninflected forms. Progressive marking with and/or without auxiliary 'be' was strongly affiliated with activity verbs but overextended to achievement and accomplishment verbs - evidence of an Arabic L1 influence. There were also instances of progressive overextension to stative verbs, which is typical of L2 acquisition. PAST marking was strongly associated with achievement and accomplishment verbs.

In addition to reinforcing the findings of previous cross-sectional studies, the study demonstrates that for the elementary- and intermediate-level learners, lexical aspect exerts more control over inflection than tense does. Regarding variation across proficiency levels, at least three trends emerged. In connection with tense, Research Hypothesis 2 was confirmed: the correlation of inflection with tense ('-s' with present reference and PAST with anterior reference) increases with proficiency level. Correct target tense forms for all target tenses were uniformly distributed across all aspectual verbs regardless of lexical aspect. The influence of tense at the lower advanced level and NS groups is comparable to that of lexical aspect in the elementary- and intermediate-level groups for whom lexical aspect dominates the distribution of verb inflections. In other words,

**tense** controls the use of verb inflection at the lower advanced level, whereas **lexical aspect** constrains the attachment of aspect markings to a particular class of verb types at the elementary and intermediate levels. Thus, the lower advanced level group showed the weakest dependence of verb morphology upon lexical aspect.

The use of the past simple tense to express the present perfect tense in English was high in the elementary- and intermediate-level groups, but diminished significantly in the lower advanced-level group.

The results are explored in terms of the cognitive principles: Relevance Principle (Bybee, 1985; Slobin, 1985) and the One-to-One Principle (Andersen, 1984), the prototype model of language acquisition (Andersen and Shirai, 1994), and finally in terms of Bickerton's (1981) Language Biogram Hypothesis (LBH) as a complementary explanation.

Chapter 7 consists of two main sections. In the first section, the implications of the study for L2 acquisition are discussed in terms of the accessibility of the innate knowledge of universal aspectual values to L2 adult classroom learners, the Distributional Bias Hypothesis (DBH) and L2 distributional patterns, overuse of progressive on stative verbs, conceptual-development, and learning strategies. The second section summarizes the results of the study, discusses some methodological considerations and concludes with suggestions for future research.



# **CHAPTER 2**

## **THE THEORETICAL FRAMEWORK OF ASPECT**

### **2.0 Introduction**

This chapter is divided into three main parts. The first part examines the concept of time in order to provide a context for the discussion of tense and aspect. The second part is divided into two main sections. The first presents a detailed analysis of the treatment of tense in English in terms of the frameworks of Reichenbach (1947) and Comrie (1985). In the second section, tense and aspect are examined functionally on the assumption that in acquiring language, learners associate forms with meaning and use and that they need to distinguish between semantically closely-related forms (see Bardovi-Harlig, 1997:376). The third part extensively examines grammatical aspect, inherent lexical aspect, and aspectual classes (English and Arabic), and their relevant diagnostic tests.

### **2.1 Concept of Time**

In order to provide a context within which the discussion of tense and aspect can take place, we shall start with a brief review of how philosophers and linguists have treated the concept of time.



For Aristotle, cited in Whitrow (1980), time is intrinsic and fundamental to the universe and to the human mind, and therefore independent of the motion of heavenly bodies. Kant takes this view further, seeing time as a necessary condition for our existence in the physical world.

In the late nineteenth century, Guyau, (1890) cited in Whitrow (1980), sees time as a consequence of rather than a pre-condition for our experience of the world, arguing that time has essentially always been a product of the human mind: imagination, will and memory. The future represents what lies ahead and is to be sought, whereas the past is behind and no longer in view, e.g., the cessation of pain and the coming of pleasure. By contrast, Bergson disregards any physical concept of time, seeing it in psychological terms. For Bergson, psychological time or duration is continuous rather than broken up into discrete units, so that the future co-exists with present. Genuine “novelty” is therefore an illusion. Yet duration contains sub-intervals, a “before” and an “after”. In other words, succession and change must be present even within the smallest interval of time. Kant subscribes to this view, maintaining that time can consist of “times” only and that, consequently, there are no parts of time which are not themselves temporal (Cohen and Wartofsky, 1971).

Along similar lines, linguists perceive time as a universal concept (Fillmore, 1975; Jespersen, 1962:230; Levinson, 1983:73). In all languages, time is referred to in some fashion (Hinkel, 1992:557). It is reckoned and measured in most languages on the basis of the natural and prominent cycles of day and night, lunar months, seasons and years. Such units can either be used as measures relative to some fixed point of interest, or they can be used calendrically to locate events in ‘absolute’ time, or at least to some part of each natural cycle designated as the beginning of that cycle (Fillmore, 1975).

With these calendrical and non-calendrical units, as Levinson (1983:73) suggests, time deixis interacts. However, as Hinkel (1992:557) notes, time attributes (i.e., perceptual, conceptual and cultural divisions of

time), differ among cultures. Comrie (1985:3) seems to be in agreement with this view. He argues that various cultural groups "have radically different conceptualisations of time", and only a few measure time and occurring events with exactitude. The boundary of a day is a case in point. In non-secular Muslim and Jewish cultures, as Hinkel (1992:557) points out, "days begin at sunset and not at midnight as in Western civil convention. On the other hand, the Japanese [traditionally] consider sunrise as the beginning of a new day".

Levinson (1983:75) notes that "time attributes are bound to reflect on the systems through which languages represent these divisions". Linguistic references to time attributes can take many forms. Some languages such as Chinese refer to time lexically by use of adverbs comparable with the English words *now*, *then*, *recently*, *soon*, *today*, *yesterday*, etc., which provide the means for drawing deictic temporal distinctions when needed or desired; others, like English, use these and also grammatical references (i.e., tense marked on the verb) (Hinkel, 1992:557). Furthermore, in most languages, Fillmore (1975) maintains, lexical markers (e.g., *today*, *tomorrow*, *yesterday*) can indicate a variety of time lengths within a relevant span, but these relevant spans vary from one language to another. Levinson (1983:78) claims that in "languages without true tenses, for example, Chinese or Yoruba, the concept of time is realised through adverbs and implicit and contextual assumptions. Southeast Asian languages require a strict discourse frame which delineates time and, therefore, the time reference". We may conclude that tense is not a universal feature of language.

In contrast, in languages with tense (e.g., English) sentences are anchored to a context by morphological tense. English time reference is calendrical reckoning (Levinson, 1983:75). Thus, if mutual contextual beliefs (Bach, 1981) and calendrical time deixis (Levinson, 1983:75) are necessary for picking out a time attribute and its morphological reference in English, non-native speakers lacking intuitions and access to knowledge associated with



English time deixis and linguistic tense may face problems in using and interpreting English time references (Hinkel, 1992:560). In other words, if "both L1 time attributes and their linguistic references differ from those in L2, learners may find themselves in an environment where they cannot pick out the temporal attribute to which tense is a grammatical reference" (Donnellan, 1991, cited in Hinkel, 1992:557).

As already indicated, there are two kinds of time, notional and grammatical. Notional time refers to time as one normally thinks of it (Roberts, 1954:132), or to "clock time in our physical world" (Bull, 1960:68). Grammatical time is the expression of time by the use of verb forms (Roberts, 1954:132) (see section 3.2 for the concept of time in Arabic). The English verb system is conceived as "comprising two sub-systems, one for reference to three different kinds of time: the past, the present and the future, and the other for reference to three time relationships, earlier time, same time and later time" (Allen, 1966:149). In this sense, time, as Quirk, Greenbaum, Leech, and Svartvik (1985:195) hold, is described as follows:

... in abstraction from any given language, time can be thought of as a line (theoretically of infinite length) on which is located, as a continuously moving point, the present moment. Anything ahead of the present moment is in the future and anything behind it is in the past (Quirk et al, 1985:195) .

## **2.2 Treatments of Tense**

Tense, as indicated earlier (see section 1.1.1) refers to the relating of the time of the referent situation to either the time of the utterance or to the time of some other situation. It is the grammatical expression of a particular temporal meaning. The primary characteristic of tense is that it is a deictic category (Comrie, 1976; Levinson, 1983:77; Lyons, 1977:677). Temporal



reference requires that interlocutors be able to control and interrelate at least two different frames of reference: the deictic and the non-deictic (Lyons, 1977:678).

### 2.2.1 Reichenbach's (1947) Framework

Reichenbach's (1947:288-298) framework seems to be widely accepted for the analysis of tense. He analyses tense in terms of three temporal points: the **speech point (S)** (or the time at which the sentence is uttered, which is always the deictic 'now'), the **event point (E)** (or the time the event actually occurs), and the **reference point (R)** (or an interval time relating speech time and event time in some tenses which establishes a point of orientation with respect to which the event point is fixed). We can illustrate the three meanings by the way they are used in the following sentence:

(1) Ali went (from Riyadh) to Dammam yesterday.

The S-time is the time of uttering the sentence, the E-time is the 4 hours of actual drive from Riyadh to Dammam and the R-time is *yesterday*. The R-time is always specified if it is not the present, either by an explicit frame adverb such as *yesterday*, *today*, *tomorrow* (Comrie, 1985:56; Partee, 1973) or by the context (cf. Partee, 1973).

Reichenbach illustrates the way in which these three elements are interrelated with the help of the past perfect:

Let us call the time point of the token the point of speech (...) From a sentence like 'Peter had gone' we see that the time order expressed in the tense does not concern one event, but two events, whose positions are determined with respect to the points of speech. In the examples the point of the event is the time when Peter went; the point of reference is a time between this point and the point of speech. In an individual sentence like the one given it is not clear which time point is used as the point of reference.

This determination is rather given by the context of speech (Reichenbach, 1947: 288).

Reichenbach (1947:289-290) claims that these three points are relevant to every one of the tenses, not just to tenses such as the past perfect or the future perfect. He points out that in some tenses two of the three points are simultaneous. In the past simple, for example, the point of event and the point of reference are simultaneous, and both occur before the point of speech. This distinguishes the past simple from the present perfect as in *I have seen Charles*, the event is also before the point of speech, but is referred to a point simultaneous with the point of speech (i.e., the point of speech and reference coincide).

The distinctions of **past**, **present** and **future** result from the different ordering relations that hold between S and R. Distinctions such as **anterior**, **simultaneous** or **posterior**, on the other hand, derive from the ordering relation that holds between E and R. Thus, Reichenbach (1947) analyses nondeictic temporal reference, or what has been commonly called "secondary" or "relative" tenses involving notions like anteriority, posteriority and simultaneity, under the category tense.

According to Reichenbach (1947:290), tenses are represented in this way (with dashes representing an interval of time and commas representing simultaneity):

**Table 1:Tense Representation**

(R = reference point, E = event point, and S = speech point)

Tense	Representation	Example
1. Past simple:	R, E—S	I saw John.
2. Past progressive:	R, E—S	I was seeing John.
3. Past perfect:	E__R__S	I had seen John.
4. Present simple:	S, R, E	I see John.

5. Present progressive:	S, R, E	I am seeing John.
6. Present perfect:	E__S, R	I have seen John.
7. Future simple:	S, R__E	I shall see John.
8. Future progressive:	S, R__E	I shall be seeing John
9. Future perfect:	S__E__R	I shall have seen John.
10. Past perfect progressive:	E__R__S	I had been seeing John.
11. Future perfect progressive:	S__E__R	I shall have been seeing John.
12. Present perfect progressive:	E__S, R	I have been seeing John.

Lyons (1977:687), on the other hand, distinguishes between the deictic and non-deictic frames of reference and defines tense as:

part of the deictic frame of reference: it grammaticalises the relationship which holds between the time of the situation being described and the temporal zero point or the deictic context (Lyons, 1977:687).

Thus, by limiting the domain of reference of tense, Anderson (1973) and Lyons (1977) treat other time-related distinctions subsumed under relative tenses in the domain of aspect. Comrie (1985), however, treats relative tense constructions under tense rather than aspect, as we shall see in the following section.

### 2.2.2 Comrie's (1985) Framework

Comrie (1985) presents a framework different from Reichenbach's (1947). In this framework, all that is needed for representing the three absolute tenses<sup>1</sup> is two time points (the time of speech (S) and the time of the event (E) and three relations (simultaneity, anteriority and posteriority (p. 122). Situations described by one of the tenses (i.e., the past, present, or future) are

<sup>1</sup> The term **absolute tense** is "misleading because, strictly speaking, absolute time reference is impossible, since the only way of locating a situation in time is relative to some other already established time point" (Comrie, 1985:36).



located prior to, simultaneous with, or posterior to the moment of speech, as Table 2 illustrates:

**Table 2: Representation of Absolute Tenses**

Tense	Representation
1. Present	E simultaneous S
2. Past	E before S
3. Future	E after S

These representations capture absolute tense distinctions by relating the situation (E) to the present moment (S), which is the reference point for the location of a situation in time. Put another way, absolute tenses take the present moment as their deictic centre (p. 36). To illustrate these tenses, Comrie (1985) uses the following examples:

- (2) a. Red Rover crosses the finishing line. (present tense)  
 b. The author is working on chapter two (p.37). (present tense)  
 c. John lived in Manchester from 1962 to 1982. (past tense)  
 d. Up to this moment the disease was incurable (p.41). (past tense)  
 e. John will be eating his lunch when you call on him in five minutes (p.43). (future tense)

For the representation of other tenses, one more time point is necessary, viz. the reference point (R), as in Table 3 below:

**Table 3: Representation of Relative<sup>2</sup> Tenses**

Tense	Representation
1. Pluperfect	E before R before S
2. Future perfect	E before R after S
3. Future in the future	E after R after S
4. Conditional	E after R before S

<sup>2</sup> Comrie (1985) refers to relative tenses as absolute-relative tenses since their meaning combines absolute time location of a reference point with relative time location of a situation.

As Table 3 above shows, the possible relative tenses are determined by a reference point being before or after the present moment, and by the situation being located before or after that reference point.

Comrie (1985:65-66) illustrates the notion of relative tense by examining the pluperfect (past perfect). In this tense, the reference point is located in the past, and the situation occurs before the reference point. The latter is often given by a time adverbial, as in *John had arrived by six o'clock yesterday evening*. The time adverbial *by six o'clock yesterday evening* establishes a reference point in the past (6.00 p.m. yesterday), and John's arrival is located before that time point.

Moreover, several reference points can also be provided for more complicated instances of location in time, where two reference points R1 and R2 can appear, as in (3):

(3) If he had had enough money, he would have bought the car .

Thus, compared with Reichenbach's (1947) framework, Comrie's (1985) system allows of the possibility that more than one reference point is necessary. It also obviates the problem of overcapacity of the system: whereas Reichenbach's system generates three future perfect tenses (because the point of the event can be posterior to, simultaneous with, or anterior to the point of speech), Comrie's system needs to generate only one future perfect tense: the future perfect implies no more than that E precedes R and that R follows S. Whether the situation (E) referred to actually follows, or coincides with the point of speech, is immaterial to the meaning of the future perfect tense. The same point can be made in connection with the future tense and the conditional tense (see Declerck, 1986:309).

### 2.2.3 Tense Distinction

In light of the above discussion, English has two tense forms: **past** and **present** (see also Lyons, 1977:678; Nasr, 1963:54; Quirk et al, 1972:84; Smith, 1978). Lyons (1968:306) argues that this tense distinction is best regarded as a contrast of 'past' versus 'non-past'. The reason is that whereas

the past tense does not typically refer to 'before-now', the non-past is not restricted to what is contemporaneous with the time of utterance: it is used also for 'timeless' or 'eternal' statements... and in many statements that refer to the future ('after-now') .... the opposition of past and non-past is realised systematically by suffixation of the first element of the verbal-phrase (Lyons, 1968:306).

The **future form** has often been shunned from admittance to the rank of tense. Leech (1971:52) states:

..although the will/shall construction provides English with its nearest approximation to a 'neutral' or 'colourless' future, one ought not to describe it as a "future tense" on a par with the past and present tenses (Leech, 1971:52).

Furthermore, Quirk et al (1972:87) state that "there is no obvious future tense in English corresponding to the time/tense parallel for present and past". This view is shared by Lyons (1968, 1977) who argues that futurity is never a purely temporal concept. It necessarily includes an element of prediction or some related modal notion. In other words, there is no form which in itself indicates futurity. These linguists (cf. Hockett, 1958; Lyons, 1968; Palmer, 1968) observe that the inflectional morphology of the English verb does not include any affix that could be regarded as an explicit marker of future tense. Futurity can be expressed in several ways such as with the auxiliary verbs *shall/will* which, they argue, should be treated as modals (e.g., *can, may, must*, etc.) because of the modal connotation they express in certain contexts,



and with other semantic forms (e.g., the present form of the English verb plus an obligatory temporal adverb). What has been treated in most languages as the future tense is, Lyons (1977:677-678) argues, rather a modal category, and so-called present tense markers have primarily aspectual functions. Thus, the opposition is reduced to the binary one of past-nonpast. However, other linguists (cf. Comrie, 1985; Reichenbach, 1947) (see sections 2.2.1 and 2.2.2 above) distinguish a wider range of tenses, maximally including the present tense, the past tense, the future tense, the present perfect, the past perfect, the future perfect, the conditional and the conditional perfect. This distinction is deemed necessary for labelling different kinds of verb forms and is warranted from a theoretical view-point since each of these tenses corresponds to a different temporal scheme (Declerck, 1986:317). In what follows, we shall look at tense and aspect in English from the perspective of function.

## **2.3 Functional View of Tense and Aspect**

At this point, it would be useful to examine tense and aspect from the functional point of view. The justification is that in acquiring language, learners associate forms with meaning and use. Not only must they develop primary associations of meaning and use for each form they acquire, but they must also distinguish between semantically closely-related forms, as the child first-language (L1) learner does (cf. Bardovi-Harlig, 1997:376). The examination involves six target tenses (i.e., present, present perfect, past, past perfect, future, future perfect) used in the present study to investigate the acquisition of tense and aspect by Arabic-speaking learners of English as a second language.

### 2.3.1 Present Simple

The present simple<sup>3</sup> has various uses:

i. It can describe a state of indefinite duration where there are no limitations on the extension of the state through the present into past and future time (King, 1983:102; Leech, 1971:1; Quirk et al, 1972:58). This holds true for general statements of fact and truth (Azar, 1985:2; Quirk et al, 1972:85) which are generally timeless statements, i.e., generic aspect. Quirk et al (1972:85) distinguish two related types:

(a) Universal time statements, particularly associated with stative verbs (see section 2.4.4.1):

- (4) a. The camel is a big animal. (stative)
- b. The earth revolves on its axis. (dynamic)

(b) Habitual statements, particularly associated with dynamic verbs:

(5) Dr. Abdullah operates on Sundays.

(see also section 2.4.4.2)

ii. It can refer to events occurring at the present moment, using only dynamic verbs as in commentaries, demonstrations, exclamations and performatives (Comrie, 1985:37-38; King, 1983:102; Quirk et al, 1972:85) and step by step explanations etc.:

(6) Zayd passes the ball to Majid.

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<sup>3</sup> Present simple denotes an event or a state in present time in relation to the time of speaking.

iii. It can refer to future time (King, 1983:102; Quirk et al, 1972) in two cases (see sections 3.5.1 and 3.6.2 for similar treatment in Arabic):

(a) when it is accompanied by a temporal adverbial:

(7) The programme starts tomorrow.

(b) in conditional and temporal clauses introduced by *if*, *unless*, *after*, *as soon as*, *when*.. etc.:

(8) a. He will do it for you if you pay him. (conditional)

b. I will let you know as soon as I hear from him. (time clause)

iv. It can refer to a past event:

(9) The other day I was reading. Suddenly the door opens, in rushes Abdullah and exclaims...

### 2.3.2 Present Perfect

The present perfect is characterized by expressing “current relevance” (Bardovi-Harlig, 1997:376; Inoue, 1979; McCoard, 1978; Quirk et al, 1972:91; Vlach, 1993:269), which is seen as “the continuing relevance of a past situation” (Comrie, 1976:25). The present perfect serves to locate an event within a period of time that began in the past and is continuing to the present moment (Dowty, 1979:341). The meaning of the present perfect (and current relevance) is composed of its past and present components. Leech (1971:30) glosses the present perfect as “past-time-related-to-present-time”. Suh (1992:82) states that by using the present perfect the “speaker brings what happened in the past to the realm of the present”. Suh further suggests that the present perfect and the past simple share the feature [+anterior] and differ



on the feature [current relevance] with the present perfect carrying [+current relevance] and the past simple [-current relevance]. The main uses of the present perfect are:

i. It expresses a situation that began in the past and continues to the present:

(10) a. He has lived in Riyadh for thirty years.

b. He has not eaten lunch yet.

ii. It expresses situations/activities that were repeated several or many times in the past:

(11) He has eaten at that restaurant many times.

iii. It expresses activities or situations that occurred (or did not occur) “before now”:

(12) He has already eaten lunch.

### 2.3.3 Past Simple

The past simple describes an event or state that began and ended in the past. However, Riddle (1986:267) argues that “the past tense simply means before speech time” and that completion is not part of its denotative meaning, although it is an implication often associated with the past in many contexts”. Thus, the past tense can be used to describe situations which may still exist, objectively speaking, or the time of speech at which the speaker wants to present the information in terms of its psychological relevance. Hence, activity verbs (e.g., *swim*, *read*) normally carry a completive sense because of the nature of the activity, but stative verbs (e.g., *be*, *have*) will quite often be associated with a non-completive sense. The final arbiter, however, is the context. Put another way, although the completive sense is

prototypical of the past tense and commonly occurs with many verbs, it does not occur in all contexts and the sense may be cancelled. When describing a situation that could exist at speech time, the speaker may use the past tense to focus on his or her experience or perception of that situation in the past, and there is no completive denotation. Conversely, one may choose to describe past acts or opinions in the present tense if they constitute information to be foregrounded as currently relevant (ibid., 278). The past simple has various uses:

i. It denotes a definite time, i.e., what happened at a given time or in a given period before the present moment, with the help of a temporal adverbial:

(13) I saw him last week.

ii. It can, as Leech (1971:10-11) notes:

a. express a hypothetical meaning (see also King, 1983:102):

(14) It is time we visited Zayd.

b. narrate future events as if they had already happened:

(15) By the year 2000 malaria would be eradicated.

c. express the present thoughts and feelings of the speaker, as in conversational situations or discourse of informal tone:

(16) A: Did you want me?

B: Yes, I hope you would give me a hand with the painting (Leech, 1971:11).

iii. It denotes indefinite time:

(17) Saud lived here.

iv. It is used in indirect speech:

(18) I told him that he looked fine.

v. It is used to indicate present occurrence:

(19) Did you want to tell me about it now?

### **2.3.4 Past Perfect**

The past perfect (or pluperfect) is formed with *had* and the past participle. It has various uses:

i. The past perfect is used to refer to a situation that came before another situation in the past. The past perfect represents either the past of the simple past or the past of the present perfect:

(20) He had lived in Riyadh for five years when I met him.

ii. The hypothetical past perfect is used in hypothetical conditions that relate to past time, indicating the knowledge or belief that the condition was not fulfilled:

(21) If I had had enough money, I would have bought a car.



### 2.3.5 Future Simple

As already noted (section 2.2.3), there is no future tense in English, but for convenience we use the term 'future simple' to describe the form *will/shall* + bare infinitive. The future simple has various uses:

- i. To express the speaker's opinions, assumptions, and speculations about the future. These may be introduced by verbs such as *assume, hope, expect, suppose ...etc*, but can be used without them:

(22) (I suppose) they'll sell the house.

The future simple can be used with or without a time expression. *Be going to* is sometimes possible here also, but it makes the action appear more probable and more immediate. *He'll build a house* merely means 'this is my opinion', and gives no idea when the building will start. But *He's going to build a house* implies that he has already made this decision and that he will probably start quite soon.

- ii. The future simple is used similarly for habitual actions which we assume will take place:

(23) Winter will come soon.

- iii. The future simple is used in sentences containing clauses of condition, time, and sometimes purpose:

(24) a. If you drop the cup it will break.

b. When it gets warmer the snow will start to melt.

c. I'm putting this letter on top of the pile so that he'll read it first.

iv. The future simple is used for prediction of occurrence at the moment of speaking:

(25) When are you going to get married?

### 2.3.6 Future Perfect

The future perfect consists of *will/shall* + perfect in infinitive for first persons, and *will* + perfect in infinitive for the other persons.

It is normally used with a time expression beginning with **by**: *by then*, *by that time*, *by the 2<sup>nd</sup>*.

(26) By the end of the next month he will have been here for ten years.

It is used for an action which at a given future time will be in the past, or will just have finished as in *We'd better wait till 14 December. Zayd will have had his exam by then, so he'll be able to enjoy himself.*

## 2.4 Treatment of Aspect

### 2.4.1 Overview

The discussion presented here assumes three temporal categories: tense, grammatical aspect and inherent lexical aspect. **Tense**, as we have seen (sections 1.1.1 and 2.2), is a deictic category that locates a situation in relation to some other time (usually the time of speech). **Aspect**, on the other hand, is nondeictic and covers a wide range of phenomena having to do with the internal temporal structure of the situation described by a verb (see Chung and Timberlake, 1985; Comrie, 1976; Smith, 1997; among others). It refers to

the internal temporal properties of the situation such as duration, iterativity, etc.

**Inherent lexical aspect**, however, deals with the chronological features inherent in the situation described by the verb, independent of any time frame. For example, a predicate like *reach* is characterized by a change, whereas a predicate like *swim* is a process composed of discrete steps which are different from each other. Both change and process then contrast with state. During a state nothing happens and every point of a state is exactly like every other point. For *love* or *hate*, neither the configuration of the individual nor his location ever needs to change. It has also been observed that some predicate types combine the features of a process and a change. The predicate *write a letter* has both discrete steps (writing each word) and a built-in final point (the last sentence of the letter). The kinds of temporal structure reflected in these predicate types constitute inherent lexical aspect.

What exactly is meant by the phrase **inherent lexical aspect**? A brief explanation of each part is pertinent. “**Aspect**”, as with grammatical aspect, is concerned with the internal nature of the situation (as opposed to the time takes place, as in tense). “**Lexical**” means each verb has associated with it some type of aspect (denoting a state or an action; and if an action, whether it is durative or momentary, or possibly a combination of both). “**Inherent**” means the aspect belongs to the concept whatever the situation. Thus, *play* is inherently durative in aspect and *break* is inherently nondurative (more specifically punctual or momentary) (see Andersen, 1991:310).

To shed more light on tense, grammatical aspect, and inherent lexical aspect, consider Table 4.



**Table 4: Tense, Grammatical Aspect and Inherent Lexical Aspect**

Example	Tense	Grammatical Aspect	Lexical Aspect
27) a. Zayd draws. b. Zayd will draw. c. Zayd drew. d. Zayd was drawing. e. Zayd has drawn. f. Zayd had drawn. g. Zayd will have drawn.	a. present b. future c. past d. past e. present f. past g. future	a. simple. b. simple. c. simple. d. progressive. e. perfect. f. perfect. g. perfect.	a. atelic-activity. b. atelic-activity. c. atelic-activity. d. atelic-activity. e. atelic-activity. f. atelic-activity. g. atelic-activity.
(28) a. Zayd draws a circle. b. Zayd will draw a circle. c. Zayd drew a circle. d. Zayd was drawing a circle. e. Zayd has drawn a circle. f. Zayd had drawn a circle. g. Zayd will have drawn a circle.	a. present b. future c. past d. past e. present f. past g. future	a. simple. b. simple. c. simple. d. progressive. e. perfect. f. perfect. g. perfect.	a. telic-accomplishment. b. telic-accomplishment. c. telic accomplishment. d. telic-accomplishment. e. telic-accomplishment. f. telic-accomplishment. g. telic-accomplishment.

In examples (27) and (28), we have three tenses and three grammatical aspects: (27a-27c) and (28a-28c) refer to simple aspect, (27d) and (28d) to progressive aspect, and (27e-27g) and (28e-28g) to perfect aspect. Note that the difference, for example, between (27c) and (28c) (past simple tense) on the one hand, and (27d) and (28d) (past progressive tense) on the other, shows a contrast in grammatical aspect since the difference is about how the action of drawing is viewed by the speaker: the former views the situation in its entirety (external view), while the latter sees it as consisting of phases (internal view) (Comrie, 1976:5) – yet all the examples are in the past tense. Put another way, the difference is not tense. It is in this sense that we speak of aspect as being distinct from tense. Furthermore, (27a–27g) and (28a–28g) show a contrast in inherent lexical aspect: the former involves atelic (activity) predicates, but the latter telic (accomplishment) predicates.

The lexical aspectual interpretation is determined in these instances by the presence or absence of an object NP (Binnick, 1991:19; Brinton, 1988:26; Dowty, 1986:39) (see sections 2.4.2.1, 2.4.4.2 and 2.4.4.4). Note, however, that (28d) presents what Dowty (1979) calls an “imperfective paradox” in that the subject has not accomplished yet what it had to accomplish, namely, the situation has not reached its temporal boundary (see section 2.4.2.1 for elaboration).

## 2.4.2 Grammatical Aspect VS Inherent Lexical Aspect (English)

### 2.4.2.1 Grammatical Aspect

As already noted (see section 1.1.2), the aspectual meaning of a sentence is composed of two types of aspect: grammatical and lexical. Grammatical aspect (what Smith, 1983, 1997, calls VIEWPOINT ASPECT) encompasses the ways in which the temporal features of a situation are viewed independent of its relation to any reference time (Bertinetto, 1994:392; Comrie, 1976; Robison, 1995:345-6; von Steutterheim, 1991). The aspectual distinctions involved in the situation are encoded explicitly by linguistic devices or grammatical markers such as verb inflections or auxiliaries (Andersen, 1991:308; Bertinetto, 1994:392; Robison, 1995:346; Shirai and Andersen, 1995:744). Some additional examples are provided to facilitate discussion. The sentences in (29) present the same event. They have different grammatical aspects or viewpoints, traditionally known as **perfective** and **imperfective**. The two types of aspect are conveyed by the form of the verb, (29a) having a perfective and (29b) an imperfective aspect. These two types of aspect differ in meaning: they present all or part of the event. To see this, consider the aspectual information conveyed by the two sentences:

(29) a. He painted a picture.



b. He was painting a picture.

From (29a) we know that a painting event occurred in its entirety. By contrast, (29b) conveys only that a painting event was in progress, but does not convey information about the beginning or end. So we do not know whether the painting event was completed. These examples suggest that perfective aspect spans an entire event, while the imperfective spans only a part of it without regard to the terminus point (see also Bertinetto, 1994:392; Comrie, 1976; Klein, 1986 cited in Robison, 1990:319; Smith, 1983, 1997). To the first belong, in particular, the aoristic (cf. the past simple in English) and the perfect aspect; to the latter, the progressive and the habitual (Bertinetto, 1994:392). Hence, the speaker can choose between perfective or imperfective forms which correspond to different viewpoints, and each choice contributes to the aspectual interpretation of a sentence in a different way.

The question that arises now is: **how do the four aspectual categories of verb interact with the two types of grammatical aspect?** The perfective aspect presents a situation as a whole, including initial and final points. This means that nonstative verbs are closed in the perfective according to the general perfective temporal schema given in (30), while stative verbs are open and therefore no endpoints appear in the temporal schema of a state.

(30) General temporal schema for the perfective: I.....F

//////////

To see this, consider the interpretation of the following sentences ((31a–31c) are nonstatives and (31d–31e) statives):

- |                                   |                  |
|-----------------------------------|------------------|
| (31) a. He played tennis.         | (Activity)       |
| b. He painted a picture           | (Accomplishment) |
| c. He reached the top.            | (Achievement)    |
| d. He owned three peach orchards. | (Stative)        |



e. He lived in Jeddah. (Stative)

Sentences (31a–31c) present the events as closed, with initial and final endpoints (for durative events); and the events are taken as terminated or completed depending on the type of the aspectual category of verb. (31a) presents a terminated event, since activity verbs do not have inherent endpoints but, rather, an arbitrary one (see section 2.4.4.2), while (31b–31c) present completed events because of their inherent endpoints (see sections 2.4.4.3 and 2.4.4.4). (31d–31e) present open states that have not ended, but continue into the present (see section 2.4.4.1). There is also the possibility that a state has ended – a closed interpretation. Both readings are available for stative sentences. (31d–31e), for example, can be felicitously conjoined with an assertion that the state continues and that it no longer obtains, as (32) illustrates:

- (32) a. He owned a house last year, and he still owns it.  
b. He owned a house last year, but he no longer owns it.

The conjunctions show that the perfect aspect of a state does not include its final point. If it did, the continuing interpretation would be impossible. So the closed interpretation is not semantically required by the perfective aspect, and must be due to pragmatic inference (cf. Smith, 1997). As such, the interpretation conveyed by a stative perfective is precisely that of the temporal schema of a state. This temporal schema does not include its endpoints. Endpoints involve a change of state which does not apply to states since they have neither an internal structure that differentiates any part of them from any other part nor a well-defined endpoint or a final conclusion (see section 2.4.4.1).

Smith (1997:67) suggests a verbal statement to account for the interpretation of perfective sentences:

(33) A sentence with the perfective viewpoint presents a sentence with the endpoint properties of its situation type schema.

This statement provides for the different interpretations presented above. The perfective aspect for activities includes an arbitrary final endpoint. The perfective for accomplishments includes a natural endpoint; for achievements it focuses on the single-stage event; for statives no endpoints are included (see sections 2.4.4.1, 2.4.4.2, 2.4.4.3, and 2.4.4.4 for elaboration).

So far we have seen how the perfective interacts with Vendler's (1967) four aspectual categories of verb. We shall now consider the behaviour of these categories with the imperfective (which is mainly progressive in English), starting with the interaction of the progressive with durative events (i.e., activities and accomplishments), and followed by achievements and statives.

The imperfective views a part of the situation without information about endpoints. Therefore, the temporal schema of the imperfective can be schematically represented, as in (34):

(34) Imperfective temporal schema: I .... //// ....F

This schema, then, spans the internal interval of durative events as in activities and accomplishments that have an internal structure of successive stages (a characteristic compatible with that of the progressive). This is illustrated in (35) below:

- (35) a. He was writing.  
b. He was writing a letter.

Sentences (35a) and (35b) conform to the imperfective in that they span an internal interval. The activity and accomplishment aspects are

perfectly natural in the progressive. However, sentence (35b) raises the question of whether there is still a reference to accomplishment. This sentence requires two different types of distinction, classifying one based on potential endpoints labelled (a)telicity, and the other on actual temporal boundaries, captured by the label (un)boundedness (see Declerck, 1989: 277–278; 1991:121; Depraetere, 1995:1). (A)telicity relates to whether or not a situation is described as having an inherent or intended endpoint; (un)boundedness has to do with whether or not a situation is described as having reached a temporal boundary (see Declerck, 1989:277; 1991:121). To see how Declerck’s (1989:277; 1991:121) definition works, consider the following examples:

- (36) a. He wrote a letter.
- b. He swam for an hour.

The examples in (36a) to (36b) are telic situations, the former with an inherent endpoint and the latter an intended endpoint. Thus, the focus is on endpoints.

Regarding (un)boundedness, a sentence is bounded if it represents a situation as having reached a temporal boundary, irrespective of whether or not the situation has an intended or inherent endpoint. It is unbounded if it does not represent a situation as having reached a temporal boundary. The examples in (37a) to (37c) are bounded sentences, those in (37d) and (37e) are unbounded:

- (37) a. He met Ali at 5 o’clock.
- b. He played football for an hour.
- c. He has lived in Jeddah.
- d. He works in a hospital.
- e. He is painting a picture.



In (37a), the punctual character of the clause and the use of the non-progressive form impose a temporal boundary on the situation. In (37b), it is the past tense and the adverbial that indicate temporal boundaries to the situation. In (37c), boundedness is indicated by the present perfect tense. Sentences (37d) and (37e) are unbounded due to the use of the present tense in the former and the progressive form in the latter (see also Depraetere, 1995:4).

We disagree with Declerck's (1989; 1991) definition of telicity, which considers an activity aspect as telic (see example 37b above). In the present work, telicity is defined as denoting situations with inherent endpoints or natural final conclusions (e.g., achievements and accomplishments) and atelicity as situations with arbitrary endpoints (e.g., activity) or open-ended (i.e., state) in accordance with Vendler's (1967) definition of (a)telicity (see sections 1.1.1, 2.4.4.2, 2.4.4.3, and 2.4.4.4). However, we have adopted Declerck's (1989:277; 1991:121) definition of (un)boundedness. Thus, the (a)telic character of a sentence, unlike (un)boundedness, is not affected by the progressive (see Depraetere, 1995:5). Accordingly, sentence (35b) is a telic unbounded sentence, since the situation described in this sentence has not reached the temporal boundary of the situation, as this is undermined by the use of the progressive form (see section 2.4.4.4).

Achievements do not allow the progressive. They are punctual in that their temporal schema has no interval, and consequently, they have no structure of successive stages. Thus, they are incompatible with the progressive form – a claim consistent with Smith's (1997) and Vendler's (1967) (see section 2.4.4.3 for elaboration). However, the progressive can be used with achievements when the focus is on the preliminary stages of the event with no information as to its outcome (Smith, 1997):

- (38) a. He was winning the race.  
b. He was reaching the top.

c. ? He was finding his watch.

The preliminary focus of the progressive is, however, required in the futurate.

Statives do not generally occur in the progressive. They have neither an internal structure nor a well-defined endpoint. Moreover, states are completely homogeneous in that every point of a state is identical to every other point. This means that every part of the stative is identical to every other part, including the entire state. However, the progressive has an internal structure of successive stages, and the interval focused by the progressive is a process. A process is [+dynamic], whereas a state is [-dynamic] (see section 2.4.4.1 for elaboration). Therefore, the progressive is incompatible with statives, as (39) illustrates:

(39) a. \* He is knowing the answer.

b. \* He is loving his wife.

However, many statives seem to be acceptable in the progressive:

(40) a. He is living in Riyadh.

b. He is looking well.

As a result, many authors have not accepted the progressive as a solid criterion (e.g., Bertinetto, 1994:405; Dowty, 1979,1986,1991; McClure, 1995:35-36; Mittwoch, 1988; Parsons, 1989; Verkuyl, 1993:39; Vlach, 1981; van Voorst, 1992; among others) (see section 2.4.4.1).

To sum up, activities and accomplishments are quite natural and consistent with the inherent features of the progressive, whereas achievements and statives are to a large extent incompatible with the progressive. This conclusion accords with the universal aspectual values (i.e., punctuality, telicity, and dynamicity) underlying Vendler's four-way



classification of aspectual classes of verb, which provides the theoretical framework for the Aspect Hypothesis investigated in the present work. Inherent lexical aspect will be discussed in depth in the following sections and will be primarily focused on throughout this thesis.

### 2.4.2.2 Inherent Lexical Aspect

As already noted (sections 1.1.2 and 2.4.1), inherent lexical aspect refers to the chronological characteristics inherent in the situation itself as expressed by an unmarked predicate independent of any time frame or grammatical marking (Collins, 1998:2; Robison, 1990:317, 1995:340; Shirai and Andersen, 1995:744). It is, therefore, the full verb phrase and not the verb in isolation that determines the aspectual category. Thus, *write* and *write a letter* may both refer to the same situation. The former, however, has an atelic sense (activity) and conceives of the writing to have an indefinite duration, whereas the latter has a telic sense (accomplishment), and implies a definite duration determined by the length of the letter. We can thus, refer to the inherent lexical aspect of the predicate sense as a telic predicate, i.e., a predicate with a telic sense.

Andersen (1991:310-311) rightly points out that “to speak of inherent lexical aspect gives one the impression that the aspect is inherent in a single lexical item. This is true of most states (e.g., *want*) and activities (e.g., *run*), but in many cases the aspect is associated not with a single verb, but with the entire predicate or even the entire proposition”. Thus, verb classification “cannot be done just by focusing on the verb alone; its arguments and/or adjuncts also are an important part of the classification (e.g., the contrast between *run* vs. *run a mile*, *walk* vs. *walk to the store*)” (Andersen and Shirai, 1995:751) (see also Dowty, 1979, 1986, 1991; Hoekstra, 1992; Mitchell, 1978:296; Mittwoch, 1980:206; Mommer, 1986:62; Shi, 1990:48; van Valin, 1990; Vlach, 1993:236; von Steutterheim, 1991:388; among others).



Consequently, the aspectual interpretation of a sentence is, as Ghomeshi and Massam (1994:181) suggest, the result of a combination of factors, such as tense/aspect morphology and the nature of the direct object (see sections 2.4.4.2, and 2.4.4.4 below for elaboration).

To sum up, grammatical aspect and inherent lexical aspect are linguistic properties, and as Smith (1983:480) points out, should not be confused with “the properties of an actual situation”. Real situations are the basis for the linguistic choices made by the speaker, but in referring to these, as Andersen and Shirai (1995:744) say, the speaker makes linguistic choices (i.e., inherent lexical aspect or grammatical aspect) even though the range of such choices is limited by the real world situation (see section 5.3.3.2).

### 2.4.3 Semantic View of Inherent Lexical Aspect

Let us now look more closely at inherent lexical aspect. In linguistic theory, the elements of the category verb are classified as belonging to two general types, based on their semantic nature (Comrie, 1976; Lyons, 1977; Vendler, 1967). These analyses are pertinent to our discussion of aspect because a given verb “normally denotes one kind of a situation rather than another” (e.g., a state vs. an event) or has an “aspectual character” which interacts highly with grammatical aspect as “they both rest ultimately upon the same ontological distinctions” (Lyons, 1977:706). This semantic classification of verbs posits two primary types of situation, indicated by the two major verb types: (1) **states** – properties or states of affairs that do not undergo a change over time, have duration, and continue unless something happens to change them such as inception or termination (e.g., *love, hate, know, want*) - and (2) **nonstative** situations. These necessarily involve change and are further subcategorized into events and processes. Events are non-extended, dynamic situations that happen momentarily in time where a punctual transformation or change in state is involved. A subclass of this category is

ACTS which refer to agent-controlled events. **Processes** are extended, dynamic situations that endure through time, where different phases of the situation may differ from one another. Processes or activities can go on indefinitely or be broken off at any point (e.g., *swim, eat, play, write*).

A further distinction within these categories is proposed by Vendler (1967). He specifies ACCOMPLISHMENTS as processes which take time and which take, as their natural end point, an event (e.g., *build a house, write a letter*). Hence, the notion of completion applies to these situations. ACHIEVEMENTS, however, are punctual events, where the process and end point are intimately bound up. Once the event is under way, it normally cannot be prevented from happening and results in a terminal point or event (e.g., *die, reach, break*). The difference between accomplishments and achievements lies in how closely the process and the terminal point are related. In what follows, we shall examine in depth Vendler's (1967) four-way classification of aspectual categories of verb.

#### 2.4.4 Aspectual Classes (English)

Vendler (1967) distinguishes four aspectual categories: states, activities, achievements, and accomplishments<sup>4</sup> (see Table 6 below).

**Table (6): Vendler's (1967) Aspectual Classes**

State	Activity	Achievement	Accomplishment
want	paint	recognise someone	paint a picture
like	walk	realize something	walk a mile

<sup>4</sup> McClure (1995:32) and Verkuyl (1993) argue that there are three abstract aspectual types (i.e., states, changes, and processes). McClure, for instance, claims that accomplishments do not define a unique aspectual category, but are best treated as one kind of aspectual ambiguity. First, all accomplishment predicates are syntactically complex and no simple verb is actually characterized by an achievement/activity ambiguity. Second, when the tests *for an hour* and *take an hour* are applied to accomplishments, they do not give uniform results (pp. 44-46). Kenny (1963) also identifies only three classes: states, achievements and accomplishments.

desire  
know

push  
write

lose something  
win a race

build a house  
write a book

These categories can be distinguished by three universal aspectual values:

- (i) punctual, which distinguishes predicates that can be thought of as instantaneous or as a single point (*begin to write*) from those with duration (*write a letter*);
- (ii) telic, which distinguishes predicates with inherent natural endpoints (*sing a song*) from those without (*sing*); and
- (iii) dynamic, which distinguishes dynamic verbs (*play, run, read*) from stative verbs (*know, want, seem*).

The three characteristics are mapped onto these aspectual classes using an adapted version of Andersen's (1991) semantic feature description of lexical aspect presented in Chapter 1, which we repeat here as Table 7 to facilitate discussion.

**Table 7: Semantic Features of Lexical Aspectual Categories**

(after Andersen, 1991)

Categories of Lexical Aspect	<u>Semantic Features</u>		
	Dynamic	Telic	Punctual
<b>State:</b>			
He knows the answer.	-	-	-
<b>Activity:</b>			
He runs fast.	X	-	-
<b>Achievement:</b>			
He arrived early.	X	X	X
<b>Accomplishment:</b>			
He wrote a letter.	X	X	-



We shall now consider the behaviour of these aspectual classes.

### 2.4.4.1. States

A state by its very nature occupies a span of time. It is completely homogeneous (Declerck, 1979; McClure, 1995; Vendler, 1967) in that a state would be true at “any instant between t1 (time 1 as onset of state) and t2 (time 2 as a new state)” (Vendler, 1967:106). According to this definition, every point within a state is identical to every other point, and any part of a state is identical to the entire state. Therefore, a state has neither an internal structure that differentiates any part of it from any other part nor a well-defined endpoint or final conclusion (i.e., time 2). It persists over time without change; it is [-dynamic]. Thus, states are incompatible with temporal adverbials and verbs such as *in X minutes*, *for X years*, and *take an hour*, as in:

- (41) a. \* He loved her in ten minutes.  
b. \* He loved his son for three years.  
c. \* It took him ten minutes to love her.

Regarding the progressive, states do not generally occur in the progressive. We have argued (section 2.4.2.2 above), that a state has neither an internal structure that differentiates any part of it from any other part, nor a well-defined endpoint; a state is completely homogeneous and therefore has no internal structure of successive stages. In a successive-stage structure, each stage is followed by another, and each stage brings the next stage closer to the endpoint, implying a dynamic process. This characterization accords with that of the progressive which, as Verkuyl (1993) suggests, appears to be based on the parameter of [ $\alpha$  Process] which in its plus-value [+ process] relates to processes going on in time. As Vendler (1967:99) puts it, “running, writing and the like are processes going on in time, that is, roughly, they consist of successive phases following one another in time”. Therefore, we reject the claims made by Galton

(1984:71), Lyons (1968:315–316), and Vlach (1981, 1993) to explain the incompatibility of statives with the progressive. These authors claim that since the meaning of stative verbs is already continuous and since the function of progressive morphology is to stativize the predicates, there is no need to stativize an already stative predicate. In other words, these authors analyze the progressive as a stative operator. Smith (1997) rejects also the analysis of the progressive as a stative operator on both conceptual and empirical grounds. She argues that statives are more flexible than progressives: they must be taken as open or closed informationally, whereas progressives are never closed. Sentences with *when*-clauses show this difference:

- (42) a. Mary was angry when John broke the glass.  
b. Mary was singing when John broke the glass (Smith, 1997: 48).

(42a), a stative, is ambiguous: either Mary was already angry before the event of the main clause, or she became angry at the time of the event. (42b), a progressive, has only the ongoing interpretation. Empirically, then, there is strong evidence against identifying progressives with statives. Sentences with the progressive are open informationally because the progressive does not include the endpoints of an event. Stative sentences present situations which do not have endpoints in their temporal schema.

Conceptually the two are of different types. Progressives are a type of imperfective aspect; they are very like statives in that both present open situations, without endpoints. Intuitively, both present stable situations, though progressives have successive stages and statives do not. The only difference between them seems to be the factor of dynamism since progressives are [dynamic] and statives [static].

Thus, the progressive is typical of activities and accomplishments since they have an internal structure of successive stages compatible with that of the progressive (see sections 2.4.4.2 and 2.4.4.4 below). As such, states are

quite natural in the present simple and, unlike nonstatives, do not have a frequentative or habitual meaning, and are strange with the progressive:

- (43) a. \* He is knowing the answer. (stative – ungrammatical)  
b. He knows the answer. (stative – non-habitual)  
c. He goes to school. (nonstative – habitual)

However, some stative predicates, as already noted (section 2.4.2.2) occur in the progressive; for example:

- (44) a. He is being polite.  
b. He is standing by the Nile.

In addition, statives are also characterized by not occurring in imperatives, or in pseudo-cleft *do*, as (45) illustrates:

- (45) a. \* Know the answer. (imperative)  
b. \*What John did was know the answer. (pseudo-cleft *do*)

The above characterization brings to mind Research Hypothesis 1a.

### **Research Hypothesis 1a:**

**Statives with –s:** Elementary- and intermediate-level learners will use the present tense form ‘-s’ to mark [-dynamic] stative verbs with tense distinction being neglected, while lower advanced-level learners will mark stative verbs with the correct target tense form independently of lexical aspect.

It is thus predicted that Arabic-speaking learners of the elementary and intermediate level will attach the present marking morpheme ‘-s’ significantly to stative verbs.



## 2.4.4.2 Activities

Unlike states, activities are processes that have an internal structure composed of successive stages with no outcome. They have inherent duration in that they involve a span of time, like *play*, *write*; they are [-punctual]. Activities have no natural endpoint consisting of a goal or an outcome (*I studied all week*) and, thus, they are atelic [-telic] (Smith, 1997; Vendler, 1967). Therefore, the termination of an activity event does not *follow from* the structure of the event. That is to say, activities have arbitrary final points (see also Dahl, 1981, McClure, 1995; Smith, 1983, 1997; Vendler, 1967; among others). Activities *terminate* or *stop*, but they do not *finish*: the notion of completion is relevant in the case of achievements and accomplishments but not activities (see sections 2.4.4.3 and 2.4.4.4, respectively).

Activities have the part-whole relation of cumulative events. “Activities go on in time in a homogeneous way; any part of the process is of the same nature as the whole” (Vendler, 1967:133). If John walked in the park for some interval, the subevent of his walking for a few minutes of the interval is also an instance of walking. Smith (1997:23) proposes a part-whole entailment for activities, as in (46):

(46) Entailment pattern for activities:

If an Activity event holds at interval I, then the process associated with that event holds at all intervals of I, down to intervals too small to count as A.

The qualification of interval size is, as Taylor (1977:212) cited in Smith (1997) points out, important because activities cannot be said to take place at vanishingly small intervals. Running, for example, requires a certain motion, at

a small enough interval; a person may be lifting a foot but not running. But activities are not completely homogeneous. The endpoints involve change to and from a state of rest.

Consistent with an ongoing state of affairs, activities occur in the progressive (see also Dowty, 1979; Kenny, 1963; McClure, 1995; Vendler, 1967; among others), as (47) illustrates:

- (47) a. He is playing in the park.  
b. They are swimming.

The progressive form, as Verkuyl (1993) suggests, appears to be based on the parameter of [ $\alpha$  Process] which in its plus-value [+Process] relates to processes going on in time. As Vendler (1967:99) puts it: “running, writing and the like are processes going on in time, that is, roughly, they consist of successive phases following one another in time”. Hence, when we speak of an ongoing state of affairs, all the activity verbs in Table 6 clearly have the progressive entailments (48a) and not (48b). The progressive entailments (48a) indicate that if a progressive activity sentence is true for a given interval, the corresponding perfective sentence is also true; and vice versa:

- (48) a. He is playing  $\rightarrow$  He has already played.  
He is running  $\rightarrow$  He has already run.  
He is pushing  $\rightarrow$  He has already pushed.
- b. He is playing  $\nrightarrow$  He has not yet played.  
He is running  $\nrightarrow$  He has not yet run.  
He is pushing  $\nrightarrow$  He has not yet pushed.

The entailments (48b) are valid under a futurate progressive interpretation, as in the proposition *Al Helal is playing against Al Nassir*

*tomorrow*. In addition, activities are characterized by being compatible with adverbials and verbs of simple duration: *for* an hour, *stop*, and *spend* since they have time 1 (onset time) without time 2 (endpoint), as in (49):

- (49) a. He ran for an hour.  
b. He stopped running.  
c. He spent an hour running.

but, like statives, strange with *take* an hour, *in* an hour or *finish* because they are compatible with endpoint interpretation (see sections 2.4.4.3 and 2.4.4.4), as in (50):

- (50) a. \* It took him an hour to run.  
b. \* He was running in an hour.  
c. \* He finished running.

The relevant interpretation involving *for* an hour in (49a) is that in which the event continues over an hour's duration but of necessity does not stop after one hour. The running event might have continued, or it might have stopped, but if the event came to an end after an hour it was because it had a built-in terminus that had to be reached. Conversely, the relevant interpretation of *in* an hour is that in which the event is understood to continue for an hour and then stop, so that an hour is consumed by the event's transpiring. The use of *in* an hour to indicate that the event will begin in an hour from now does not indicate delimitedness<sup>5</sup>, as in:

- (51) He will sleep in an hour.

The last point we shall look at before concluding this section is the distinction between activities and accomplishments. The patterns of verb

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<sup>5</sup> Delimitedness means that the event has a natural endpoint or a final conclusion.



complements seem to change the interpretation of a sentence from an atelic to a telic one and vice versa. We have seen (sections 1.1.2, 2.4.1, and 2.4.2.2, and Table 6), that the domain of lexical aspect is the full verb phrase rather than the verb alone. To examine this in greater depth, consider the aspectual interpretation of the following sentences:

- (52) a. He writes. (Activity verb without NP)  
b. He writes books. (Activity verb with a plural NP)  
c. He read in the book. (Activity verb without a goal adverbial)  
d. He wrote on the report. (Activity verb without a goal adverbial)  
e. He wrote a book. (Activity verb with quantified NP)  
f. He read the report. (Activity verb with quantified NP)  
g. He walked to school. (Activity verb with a goal adverbial)

Sentence (52a) involves a process verb without an object NP. (52b) involves a plural object noun. The event is indefinite in extent and has an arbitrary final endpoint. (52c–52d) involve activity verbs without a goal adverbial, but with the particles *in* and *on* that give an atelic interpretation. All these events have no natural endpoints, nor are they expected to attain such endpoints. Therefore, they are activity predicates. In contrast, (52e–52f) involve NPs that refer to countable objects and are definite in extent. (52g) involves a directional phrase or a goal adverbial. These events (52e–52g) have natural endpoints which are the completion of writing the book in (52e), reading the report in (52f), and reaching the school in (52g). Therefore, they are accomplishment predicates. Thus, the distinction between activities and accomplishments can depend on the presence or absence of an NP. An activity verb without an object NP that lacks a quantifier, or with a mass noun or ‘bare’ plural, is an activity, while an activity verb with quantified object NP or with a goal adverbial is an accomplishment (see also Binnick, 1991:191; Brinton, 1988:26; Dowty, 1986: 39; Mittwoch, 1980, 1988; Shi, 1990: 48–50, and section 2.4.4.4).

### 2.4.4.3 Achievements

Achievements are instantaneous events that result in a change of state. They can be thought of as reduced to a point (Andersen, 1991) and are thus distinguished from the other dynamic predicates by the feature [+punctual]. They capture the beginning or the end of an action (Mourelatos, 1981), as shown in (53):

- (53) a. The race began.  
b. The game ended.

Typical examples of achievements include *arrive*, *reach*, *notice* (see Table 6).

In punctual events, the process and endpoint are intimately bound up. Once the event is under way, it cannot be prevented from happening and results in a terminal point or event (e.g., *die*, *break*). Endpoints are inherent properties of achievements (and accomplishments) (Dahl, 1981:83; Declerck, 1979:764; Hatav, 1989:511; Moens, 1987:59; Smith, 1983, 1997), and therefore characterized as having a “natural endpoint” (Smith, 1983) or a “terminal point” (Dahl, 1981). Hence, they “have a definite terminus, but happen instantaneously, having little or no duration” (Tenny, 1994:5).

Achievements are therefore momentary (Vendler, 1967:102; Vlach, 1993:235). In fact, Vendler (1967:102) uses a momentary [ $\pm$  Momentary] parameter to distinguish achievements from states. He says:

Verbs like *knowing* and *recognizing* do not indicate processes going on in time, yet they may be predicated of a subject for a given time with truth or falsity. Now some of these verbs can be predicated only for single moments of time (strictly speaking), while others can be predicated for shorter or longer periods of time. One reaches the hilltop, wins the race, spots or recognizes something, and so

on at a definite moment. On the other hand, one can know or believe something, love or dominate somebody, for a short or long period (Vendler, 1967:102).

Achievements generally exhibit the entailment given in (54):

(54)a. W is dying → W has not yet died.

W is recognizing his mother → W has not yet recognized her.

W is sneezing → W has not yet sneezed.

b. W is dying → \*W has already died.

W is recognizing his mother → \*W has already recognized her.

W is sneezing → \*W has already sneezed (McClure, 1995:39-40).

The concept of an achievement is a single-state event, a change of state, detached from any associated process. The lexical span may focus on the outcome of a chain of events, as *reach the top*, *arrive*; or the event may be instantaneous, as in *find*, *lose*. However, many achievements, as Smith (1997:31) suggests, have preliminary processes associated with them. In such cases, there is no part-whole entailment as is the case with activities (see section 2.4.4.2). An achievement sentence is true only for the moment of the event. "If *John won the race* is true for time T, it does not follow that *John was winning the race* is true at that moment. Indeed if *John was winning the race* is true at some moment, it would be a moment earlier than T" (ibid.,30).

Achievements can be characterized by the following syntactic tests:

(i) Achievements are quite strange with a *for*-phrase because the duration it expresses appears incompatible with the concept of a definite or endpoint of an event that is realized by its own bound (Dowty, 1979; Verkuyl, 1993), but they are compatible with an *in*-phrase, as (55) illustrates:

(55) a. ?? John noticed the painting for a few minutes.



b. John noticed the painting in a few minutes.

(ii) Achievements are compatible with the phrase *take an hour* but strange with *spend an hour*, as in:

(56) a. It took John a few minutes to notice the painting.

b. ?? John spent a few minutes to notice the painting.

From the truth of (56a), it does not follow that John was *noticing* the painting throughout the period of *a few minutes*. Thus, the entailment of achievement can be represented schematically:

(57) If  $\emptyset$  is an achievement verb, then  $X \emptyset$ ed in  $Y$  time does not entail  $X$  was  $\emptyset$ ing during  $Y$  time (Dowty, 1979:59).

Achievements are generally unacceptable as complements of *finish*:

(58) \*John finished noticing the painting.

However, the distinction of achievements from other predicates, particularly accomplishments, is sometimes blurred. Achievements and accomplishments share certain syntactic properties that make the split between them difficult to maintain, as we shall see in the following section.

#### 2.4.4.4. Accomplishments

Accomplishments are processes that have an outcome or a change of state. The change is the completion of the process. They share features with activities and achievements. Like activities, accomplishments are processes that have inherent duration, as in *build a house* or *write a letter*, and they are [-punctual]. But similar to achievements, they have a goal or an endpoint. In

*build a house*, for example, the endpoint is the completion of the house, and in *write a letter*, the completion of the letter, and, thus, they are [+telic].

Accomplishments have successive stages by which the process advances to its natural endpoint, resulting in a new state. When a process with a natural endpoint reaches its outcome, the event is completed and cannot continue. If you go to school and arrive there, the event is complete: you cannot go on with it, although you may retrace your steps. What does this mean? The notion of completion, which we have seen (see section 2.4.4.2 above), is essential: accomplishments *finish* or *are completed*, whereas activities *stop* or *terminate* (see Hatav, 1989; Smith, 1983; Vendler, 1967).

The process component of an accomplishment, as Smith (1997) suggests, is essential for the very notion of the event. For example, in *write a letter*, the actual writing cannot be omitted. The relation between the process and the outcome is known as non-detachability (Dowty, 1977; Vlach, 1981). Smith (1997:26) proposes a non-detachability entailment, as in:

(59) Entailment pattern for accomplishments:

If event *A* occurs at interval *I*, then the process associated with *A* occurs during the interval stages of that interval.

Accomplishments can have the progressive form:

- (60) a. He is drawing a circle.  
b. He is running a mile.  
c. He is eating a sandwich.

In (60), accomplishment verbs co-occur with the progressive because they have a structure composed of successive stages compatible with those of the progressive. The progressive form is, as Verkuyl (1993:35) suggests, based

on the parameter of [ $\alpha$  Process] which in its plus-value [+Process] relates to processes going on in time (see section 2.4.4.2 above).

Vendler (1967:102) introduces the accomplishment category to the other aspectual classes in order to distinguish (1) achievements from accomplishments, and (2) activities which are unbounded from those which are brought to a conclusion. Regarding (1), Vendler (1967:104) says:

When I say it took me an hour to write a letter (which is an accomplishment), I imply that the writing of that letter went on during that hour. This is not the case with achievements (such as reach the summit) (Vendler, 1967:104).

Vendler's characterization seems to be consistent with entailments of achievement and accomplishment proposed by Dowty (1979:59), as in (61):

- (61) a. If  $\emptyset$  is an accomplishment verb, then X  $\emptyset$ ed in Y time entails X was  $\emptyset$ ing during Y time.  
b. If  $\emptyset$  is an achievement verb, then X  $\emptyset$ ed in Y time does not entail X was  $\emptyset$ ing during Y time.

To see this, consider the interpretation of (62):

- (62) a. He wrote a letter in two minutes.  
b. He noticed the painting in two minutes.

In (62a) the writing of the letter went on during those minutes. It started at **t1** (point 1, the onset of the activity) and concluded at **t2** (point 2, the end point of the activity). But in (62b) **t1** is not part of the process that ends with **t2** as a new state. In other words, the two-minute duration is intrinsic in writing the letter and the reference is made to the whole of that time segment, not just to a single moment. Moreover, accomplishments are not homogenous. To quote



Vendler (1967:104): “in case I wrote a letter in an hour, I did not write it, say, in the first quarter of that hour”.

Regarding the distinction between activities and accomplishments, there are a number of diagnostic tests to distinguish between them. A well-known test to distinguish accomplishments from activities can be found in the so-called imperfective paradox (Dowty, 1979). An imperfective activity implies that the entity given by the subject has been performing the activity. An imperfective accomplishment does not indicate that the subject has accomplished yet what it had to accomplish. To see this, consider the following examples:

- (63) a. Ali is building a house – does not imply “he built a house”.  
b. Ali is working – implies “he worked”.

Another test uncovering the same feature is the use of the adverb *almost*. With accomplishments, the adverb creates an ambiguity that does not occur with activities, achievements or states. (64a) can mean either that the event almost started or that the accomplishment (i.e., the change of state) was almost realized. (64b) and (64c) can only have the former interpretation. The stative sentence in (64d) only implies that the state has failed to start occurring (see section 5.3.3.2).

- (64) a. He almost built a house. (accomplishment)  
b. He almost walked. (activity)  
c. He almost noticed me in the corridor. (achievement)  
d. These reports almost mattered. (state)

Another well-known feature is the behaviour of the verb classes with respect to the presence or absence of an NP (or a directional phrase in the case of verbs of motion) (Declerck, 1995; Dowty, 1979; Mittwoch, 1982:114; van Voorst, 1992:68). A process verb without an object (e.g., *He sings*), or

with an object NP that lacks a quantifier (e.g., *He sings songs*), consists of a 'bare' plural or mass noun and is an activity; an inherent aspect with quantified object NP (e.g., *He sings a song*) is an accomplishment. Moreover, van Valin (1990:236) points out that an activity verb without a goal adverbial is an activity verb, and with a goal adverbial is an accomplishment verb (e.g., *John walked in the park*, activity; *John walked to the park*, accomplishment) (see sections 2.4.2.2 and 2.4.4.2 above).

In addition, accomplishments are characterized by the following syntactic properties:

(i) Accomplishments, like achievements, are compatible with an *in*-phrase but activities are not:

- (65) a. He painted a picture in ten minutes. (accomplishment)  
b. He noticed the painting in two minutes. (achievement)  
c. \* He walked in an hour. (activity)

In (65a) the implication can be that the event is going on during the time period indicated by the adverb *in ten minutes* and leads up to the culmination point, the change of state in the entity being given by the direct object, a *picture*. By contrast, in (65b), the adverb *in two minutes* does not imply that the person was engaged in an event of noticing for the whole two minutes.

The *in*-phrase compatibility with accomplishment and achievement raises the question of how to distinguish between these telic verbs. As stated earlier, accomplishments require two points (i.e., **t1** and **t2**). That is, the beginning- and end-points are crucial for the realization of an accomplishment, whereas achievements require **t2** or the endpoint for their realization. They cannot in themselves occur over or throughout a temporal stretch; thus:

(66) a. X will achievement in Y time entails → X will achievement after Y time

b. X will accomplishment in Y time does not entail → X will accomplishment after Y time.

To distinguish between (65a) and (65b), let us change them into the future tense to see whether they accept the entailments (66a) and (66b):

(67) a. John will paint a picture in two minutes.

b. Mary will notice the painting in two minutes.

Sentence (67a) does not entail that *John will paint a picture after two minutes*, while sentence (67b) entails that *Mary will notice the painting after two minutes*. The achievement predicate *notice the painting* entails that noticing will happen after two minutes, requiring **t2** only (see section 2.4.4.3 above).

(ii) Accomplishments are incompatible with atelic durational phrases such as *for* phrases:

(68) \* He wrote a letter for an hour.

(iii) Accomplishments are compatible with the temporal verbs *take* and *spend*:

(69) a. He spent an hour painting a picture.

b. He took an hour to paint a picture.

(iv) Accomplishments, like activities, appear as complements of *stop*, as (70) illustrates:

(70) a. Ali stopped painting the picture.

b. Ali stopped walking.



From (70b) we conclude that Ali did not walk, whereas from (70a) we are not entitled to conclude that he did not paint a picture, but only that he was painting a picture (which Ali may or may not have finished painting).

(v) Accomplishment verbs can normally occur as complement of *finish*, as in (71):

(71) He finished painting a picture.

The above features are mentioned in (Depraetere, 1995; Dowty, 1979, 1986; Vendler, 1967; Mittwoch, 1988; McClure, 1995; Parson, 1989; Verkuyl, 1986, 1993; among others).

To conclude, each of Vendler's (1967) four categories of inherent lexical aspect can be characterized in terms of three universal aspectual values: [punctual], [telic], and [dynamic]. These features result in three basic semantic oppositions: (i) stative vs dynamic, (ii) telic vs atelic, and (iii) punctual vs durative events. These semantic distinctions allow us to distinguish between the above aspectual classes. Stative predicates describe situations that persist over time without change; activity predicates are dynamic and durative, but without a necessary endpoint (atelic). Stative predicates describe conditions, properties or relations that exist; dynamic predicates relate to events or actions that occur. A telic predicate indicates a clear inherent endpoint; an atelic predicate denotes only an arbitrary terminus. Durative predicates refer to situations lasting for some time; punctual predicates denote having no duration, referring to instantaneous, momentary situations that transpire in an instant, at the exact juncture between two situations. Therefore, accomplishment and achievement are both telic, but only achievement is punctual. Activities are dynamic, as are accomplishments and achievements, but are atelic and nonpunctual. States, on the other hand, have none of the three features.

In rest of the chapter, we shall discuss aspectual classes in Arabic.

## 2.5 Aspectual Classes (Arabic)

This section examines the aspectual behaviour of Arabic predicates. In McCarus's (1976) discussion of verbs in Modern Standard Arabic (MSA), Arabic verbs are said to behave in much the same way as their English counterparts. The aspectual classes of Vendler (1967) and Dowty (1972) are found in MSA with similar sets of verbs falling into each class (see Table 8). McCarus's (1976) classification is based on potential progressive meaning in the Imperfect and the range of possible meanings of the active participle. Subclasses are set up on the basis of morphological or syntactic restrictions. He proposes a quadripartite classification of states, activities, acts and inchoatives, as summarized in Table 8 below.

**Table 8: Concordance of MSA and English Verb Classes.**

(adapted from McCarus, 1976: 24)

	<b>MSA</b>	<b>English</b>
1	STATES a. Statives b. Impersonal	STATIVES
2	ACTIVITIES	ACTIVITIES
3	ACTS a. Accomplishments	ACCOMPLISHMENTS
	b. Achievements	ACHIEVEMENTS
4	INCHOATIVES a. Developmental	ACCOMPLISHMENTS
	b. Inceptive	
	c. Movement	

## 2.5.1 States

Like their English counterparts, MSA verbs are divided into **states** and **nonstates**. **States** denote states, conditions or qualities (the absence of any activity) whilst **non-state** verbs denote activities, acts, or change of state. The Imperfect form of state verbs corresponds to a state verb in English, as in (72) below:

- (72) a. *tahebu*            *zaydan*  
          love-IMP-3fsg    Zayd-ACC  
          'She loves Zayd'.  
      b. *taʔrifaa*            *zaydan*  
          know-IMP-dual-fem.    Zayd-ACC  
          'They know Zayd'.

The Perfect form of a stative verb, however, since it indicates a completed event denotes an entering upon a state or condition<sup>6</sup>, as in (73):

- (73) *ʔarifataa*                    *dhaalika*  
          found out-PERF-dual-fem.    that-ACC.  
          'They found that out'.

The active participle of state verbs is perfective in aspect. In Cowell's (1964) terms, it depicts a subsequent state, as in (74):

- (74) *ʔana ʔaarifun*                    *ismaka*  
          1sg-I    know -A.PART-1sg    name-your-ACC  
          'I know your name (now)' = 'I am in the state of having learned your name'<sup>7</sup>.

---

<sup>6</sup> English uses different expressions for the entering upon of such a state. For *came to know* we say *learned* or *found out about*, the past of *is good at* is *became good at* or *mastered*. If no good counterpart exists, then *came to* can always be used as in *came to include*; or *ended up including* will show an entering upon a state. English past states, such as *I knew*, *I was good at* are expressed in Arabic by *kaana* + the Imperfect form: *kuntu ʔarifu*, *kuntu ʔujidu*, etc. (McCarus, 1976:15).

<sup>7</sup> The English grammatical system does not express this except by a long paraphrase.



Cowell (1964:262) points out that the active participle in Syrian Colloquial Arabic depicts a resultant or consequent state which is “a certain state of affairs as a necessary consequence of the kind of event, process or activity designated by the underlying verb”. There are three kinds of consequent state: subsequent, concurrent and antecedent. A subsequent state, as in (74), is one which obtains after the completion of the event denoted by the underlying verb. Another example is that from *faa* ‘to wake up’ comes the active participle *faaye* ‘having waked up, awake’. The active participle in its subsequent state differs from the Perfect tense form in that its effects are still apparent, while this is not necessarily so for the Perfect. To see this, consider (75):

(75) a. *miin faateh ?l-baab* (Active participle)  
 who open-A.PART-3msg the door-ACC  
 ‘who opening the door?’; i.e.,  
 ‘Who has opened the door’. (it is still open)

b. *miin fatah ?l-baab* (Perfect)  
 who opened-PERF-3msg the door-ACC  
 ‘Who opened the door?’ (it may or may not be open now)

The concurrent state is one that is concurrent with (or identical with) the activity or situation of the underlying verb, e.g., the verb *?ntazar* ‘to expect, await’; the active participle is *mentazer* ‘expecting, awaiting’. The antecedent state is one which anticipates the realization of the underlying notion of the verb, as in *saafar* to ‘set out on a trip’; the active participle is *msaafer* ‘going to set out’.

It is worth noting that the Imperfect and the active participle of state verbs are largely equivalent in meaning. The Imperfect verb shows a more or less constant state, whereas the participle denotes a present condition resulting from the completion of an event (McCarus, 1976:16) or in E-S,R in Reichenbach’s (1947) terms.



By the same token, statives do not occur as the complement of *bada?a* 'to begin to...':

(77) a. *bada?at tafhamu*  
began-PERF-3fsg understand-IMP-3fsg  
'She began to understand'.

b. \* *bada?at tas?ubu*  
began-PERF-3fsg is-difficult-IMP-3fsg

The above characterization helps to test Research Hypothesis 1a.

### Research Hypothesis 1a:

**Statives with –s:** Elementary- and intermediate-level learners will use the present tense form '-s' to mark [-dynamic] stative verbs with tense distinction being neglected, while lower advanced-level learners will mark stative verbs with the correct target tense form independently of lexical aspect.

It is thus predicted that Arabic-speaking learners of the elementary and intermediate level will attach the present marking morpheme '-s' to stative verbs.

## 2.5.2 Activities

Like their English counterparts, activity verbs in Arabic are processes, actions or activities that extend over a period of time (*yalabu* 'play', *yasbahu* 'swim'). Thus, the Imperfect and the active participle both have progressive meaning and can occur with a *for*-adverbial, a characteristic of English activity verbs (see section 2.4.4.2), as in (78) below:



(78) a. *tantadiraa mudata saa?atin*  
 wait-IMP-dual-fem. for hour  
 'They are waiting for an hour'.

b. *al-bintaani muntadirataani mudata saa?atin*  
 the-girl-dual wait-A.PART-dual-fem for hour  
 'The two girls waiting for an hour'; i.e.,  
 'The two girls are waiting for an hour'.

In addition, as (79a) illustrates, activity verbs are volitional. However, they do not necessarily imply a successful conclusion to the action as in (79b):

(79) a. *yaktibuu bi?inaayatin*  
 write-IMP-3pl.masc carefully  
 'They are writing carefully'.

b. *?intadarna saa?atain*  
 waited-PERF-3pl-fem. hour-two  
 'They waited for two hours'.

In (79b), the activity is equally in process at all points during the two-hour period and we do not know whether they encountered whatever or whomever they were waiting for. Time expressions with *in* are accordingly logically incompatible with activities, a characteristic of activities in English, as (80) illustrates:

(80) *\*saaqah fii saa?atain*  
 drove-PAST-3msg in hour-two  
 '\*He drove in two hours'.

The ongoing nature of activity verbs in Arabic as well as in English helps to test Research Hypothesis 1b.

## Research Hypothesis 1b:

**Activities with –ing:** Elementary- and intermediate-level learners will mark [+dynamic] and [-telic] activity verbs with the progressive form with tense distinction being neglected, while lower advanced-level learners will use the correct target tense form regardless of lexical aspect.

It is predicted that elementary- and intermediate-level learners will attach the English progressive marking morpheme ‘-ing’ to activity verbs.

### 2.5.3 Acts

Like their English counterparts (see section 2.4.3), act verbs in MSA are processes that have a terminus or an implied goal. They may have progressive meaning in the Imperfect but only perfective meaning in the active participle:

(81) a. *al bintaani*      *taktubaani*      *risaalatan*  
the-girl-dual-NOM   write-IMP-dual-fem   letter-ACC  
‘The two girls are writing a letter’.

b. *al-bintaani*      *katibataani*      *risaalatan*  
the girl-dual      write-A.PART-dual-fem   letter-ACC  
‘The two girls writing a letter’; i.e.,  
‘The two girls have written a letter’.

MSA act verbs subdivide into two subclasses, corresponding to **achievement** and **accomplishment** in Vendler-Dowty’s terms.

### 2.5.3.1 Achievements

As mentioned above in section 2.4.4.3, achievements are instantaneous events that result in a change and have inherent endpoints:

(82) a. *rafasat*                      *al korata*  
kicked-PERF-3fsg   the-ball-ACC  
'She kicked the ball'.

b. *hashama*                      *al zujaja*  
crushed-PERF-3msg   the-glass-ACC  
'He crushed the glass'.

c. *fatara*                              *al senu*  
came out-PERF-3msg   the-tooth-NOM  
'The tooth came out'.

d. *kabura*                              *al waladu*  
became big-PERF-3msg   the-boy-NOM  
'The boy became big'.

In (82a–82b) *kicking* and *crushing* are momentary processes which are delimited by their measuring arguments *al korata* and *al zujaja* respectively. In (82c) *fatara* is an intransitive verb and in (82d) *kabura* is a qualitative and intransitive verb. All these verbs are compatible with the *in*-adverbial but strange with the *for*-phrase. In this respect, MSA and English agree:

(83) a. *kaburat*                      *fii*      *sanatin*  
became big-PERF-3fsg   prep-in   year-GEN  
'She became big in a year'.

b. \* *kaburat*                      *mudat*   *s?anatin*  
became big-PERF-3fsg   for      a year,



Achievement verbs may have progressive meaning in the Imperfect form but only perfective meaning in the active participle, as in (84):

(84) a. *yaksiru*            *al zujaja*  
break-IMP-3msg    the-glass-ACC  
'He is breaking the glass'.

b. *kaasirun*            *al zujaja*  
break-A.PART-3msg    the-glass-ACC  
'He breaking the glass'; i.e.,  
'He has broken the glass'.

Achievements in Arabic are similar to their counterparts in English in that they are punctual, involve a change of state and have an inherent endpoint. This means that achievement verbs in both languages indicate completion of action and they are therefore naturally associated with past tense marking. However, achievements in Arabic seem to be compatible with the progressive interpretation as indicated by the Imperfect form of an achievement verb (see section 2.5.4 below). It is therefore predicted that Arabic-speaking learners of English will apply the past marking morpheme as well as progressive marking to achievement verbs. In this regard, Research Hypotheses 1c has been stated as follows:

### **Research Hypothesis 1c:**

**Achievements with PAST:** Elementary- and intermediate-level learners will mark [+punctual] and [+telic] achievement verbs with PAST form regardless of the target tense, while lower advanced-level learners will apply the correct target tense form regardless of lexical aspect.

These features (progressive and PAST markings on achievement verbs) also help to test Research Hypothesis 4b:

## Research Hypothesis 4b/Transfer:

The tendency to mark achievement (and accomplishment) verbs with the '-ing' (and PAST) will be prominent among elementary- and intermediate-level learners but will diminish with increasing levels of proficiency.

### 2.5.3.2 Accomplishments

Accomplishments are conceived of as processes which come to a conclusion and are characterized as being transitive and volitional in nature, as (85) illustrates:

(85) *al awladu katabuu risaalatan*  
the-boys-NOM wrote-PERF3pl-masc letter-ACC  
'The boys wrote a letter'.

In (85), writing is a process with a set terminal point or 'climax' which in this case is the completion of writing the letter. Thus, accomplishments co-occur with the *in*-adverbial (indicating the length of time they take to bring the task to fulfillment) but not with the *for*-adverbial, as in (86):

(86) a. *al bintaani katabataa risaalatan fii khamsi daqaa?aqin*  
the-girl-dual-NOM wrote-PERF-dual-fem letter-ACC prep-in five minutes-GEN  
'The two girls wrote a letter in five minutes'.

b. \**al bintaani katabataa risaalatan mudat khamsi daqaa?aqin*  
the-girl-dual wrote-PERF-dual-fem letter-ACC for five minutes

Accomplishments in Arabic, as in English, involve features of activity aspect with an 'incremental theme' (Dowty, 1991; Tenny, 1994). The incremental theme includes a direct object or a goal, which measures out the event described by an activity verb:

- (87) a. *kataba*                    /*katabat*                    *amsi*  
wrote-PERF-3msg /wrote-PERF-3fsg yesterday  
‘He/she wrote yesterday’.
- b. *katabuu*                    /*katabna*                    *risaalatan*    *amsi*  
wrote-PERF-3pl-masc. /wrote-PERF-3pl-fem letter-ACC yesterday  
‘They wrote a letter yesterday’.
- c. *masha*                    /*mashat*                    *amsi*  
walked-PERF-3msg /walked-PERF-3fsg yesterday  
‘He/she walked yesterday’.
- d. *masha*                    /*mashat*                    *?ilaa al-dokaani*    *amsi*  
walked-PERF-3msg /walked-PERF-3fsg prep-to the-store-GEN yesterday.  
‘He/she walked to the store yesterday’.

In (87a) and (87c), the predicates are activity aspects, whereas in (87b) and (87d) they are accomplishment aspects. The direct object *risaalatan* measures out the event described by the activity verb *kataba*; thus the inherent lexical aspect is changed from activity in (87a) and (87c) to accomplishment in (87b) and (87d) (see 2.4.1 and 2.4.2.2). Furthermore, the prepositional phrase *?ilaa al dokaani* or the ‘goal’ also measures out the event described by the activity verb *masha/mashat* in (87c), changing the activity aspect to an accomplishment aspect in (87d) (see sections 2.4.4.2 and 2.4.4.4 for similar treatment in English).

Used intransitively (i.e., without an object), accomplishment verbs may co-occur with a *for*-adverbial; in this respect they are like activity verbs, denoting the time the process was engaged in, as in (88):

- (88) *darasa*                    /*darasat*                    *lemudat*    *saa?atain*  
studied-PERF-3msg /studied-PERF-3fsg for hour-two  
‘He/she studied for two hours’.



What is interesting about these verbs in the present context are the aspectual changes that are wrought by omitting the direct argument (cf. Mittwoch, 1982). Thus, omitting these incremental theme objects changes the interpretation of the sentence to a non-delimited reading because it removes the measuring argument which delimits the event (see also Tenny, 1994:44).

Accomplishments are also characterized by having a progressive meaning in the Imperfect and perfective meaning in the active participle:

(89) a. *al banaatu yaktubna risaalatan*  
 the-girls-NOM write-IMP-3pl-fem letter-ACC  
 'The girls are writing a letter'.

b. *al banaatu kaatibaatun risaalatan*  
 the-girls-NOM write-A.PART-3pl-fem letter-ACC  
 'The girls have written a letter'.

Like achievement verbs, accomplishments in Arabic have inherent endpoints, and are therefore [telic], but they are different in that accomplishments are durative; they are [-punctual]. Moreover, both achievements and accomplishments in Arabic are compatible with past tense and progressive markings. These features (i.e., inherent endpoints and compatibility with the progressive) will help to test Research Hypotheses 1d and 4b.

### Research Hypothesis 1d:

**Accomplishments with PAST:** past: Elementary- and intermediate-level learners will mark [-punctual] and [+telic] accomplishment verbs with PAST form regardless of the target tense form, while lower advanced-level learners will use the correct target tense form regardless of lexical aspect.

## Research Hypothesis 4b/Transfer:

Elementary- and intermediate-level learners will mark achievement and accomplishment verbs with the '-ing' (and PAST), while this behaviour will diminish with increasing level of proficiency.

To summarize, in Arabic, state verbs are characterized by the lack of activity in their Imperfects and participles. Activities and acts (achievements and accomplishments) do have progressive meaning in the Imperfect. Activities also have progressive meaning in the active participle, whilst act participles have only perfective meaning. States and activities are analogous to English states and activities, while the two languages divide up accomplishments and achievements in different ways<sup>10</sup>.

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<sup>10</sup> The last class of MSA verbs is inchoatives which we do not find so central to the discussion of lexical aspect, but "added on" as a further clarification. Inchoatives are characterized by a transformation of some sort – a change of condition or quality, a change of location, or the inception of an activity – a change from non-activity to activity as will be illustrated below. They do not have progressive meaning in their imperfect forms, but may have various kinds of aspectual meaning in the active participle. Inchoatives subdivide into three subclasses: developmentals, inceptives, and movements (McCarus, 1976:20-23). Developmental verbs include verbs of cognition and qualitative verbs in McCarus's terms. Their imperfect forms have, not progressive, but habitual or predictive meaning:

Verb	Participle
<i>nasiya/yansaa</i> 'to forget'	<i>naasiy</i> 'having forgotten'
<i>sakira/yaskaru</i> 'to become drunk'	<i>sakraan</i> 'drunk'

Developmental verbs include a change of state in the imperfect, and denote a distinct act rather than an activity or the inception of that activity.

Qualitative verbs are distributed over three categories of verb: states (statives), acts (achievements) and inchoatives (developmentals). Of these, only act qualitatives have progressive meaning in any form of the verb whereas states and developmentals do not. They differ from each other in that the imperfect tense of the state verb indicates an actionless state, whilst the imperfect of the developmental verb may have habitual meaning. Compare the following three qualitative verbs:

ACT

? *undur ilayhi innahu yakburu* (progressive).  
'Look at it . It is getting bigger'.

## 2.5.4 Grammatical Aspect VS Inherent Lexical Aspect (Arabic)

In view of the above discussion of the interaction between grammatical and lexical aspects, we would propose the following. The Arabic perfective aspect presents a situation as a whole with initial and final points, but without distinction between the various stages that make up the situation. Therefore, a general temporal schema for the perfective, similar to the English one (section 2.4.2.1), can be schematically represented, as follows:

(90) Perfective general temporal schema: I ..... F  
 //

As such, this schema applies to nonstative verbs, but not statives because they have no endpoints. To see this, consider the aspectual interpretation of the following sentences:

---

### STATE

*a-yas?ubu ?alayka* (state).  
 'It is hard for you'.

### DEVELOPMENTAL

*kullamaa yashraabu yaskaru*  
 every time drink-IMP- 3msg get drunk-IMP-3msg  
 'Every time he drinks, he gets drunk' (habitual).

Like all inchoatives, inceptive verbs do not have a progressive reading for the Imperfect. The participle may have a perfective reading for the inchoative meaning or a progressive reading for the activity meaning:

Verb	Participle
<i>naama</i> 'to fall asleep, to sleep'	<i>naa?im</i> 'having fallen asleep, asleep; sleeping'
<i>rakiba</i> 'to mount, get on, to ride'	<i>raakib</i> 'having mounted, gotten on; riding'.



(91) a. *la?iba*                      *bilkorati*                      (Activity – Perfect)  
 played-PERF-3msg    with-prep ball-GEN  
 'He played football'.

b. *katabat*                      *risaalatan*                      (Accomplishment - Perfect)  
 wrote-PERF-3fsg    letter-ACC  
 'She wrote a letter'.

c. *kaatibatun*                      *risaalatan*                      (Accomplishment – Active participle)  
 write-A.PART-3fsg    letter-ACC  
 'She has written a letter'.

d. *wassaluu*                      *al taaifa*                      (Achievement- Perfect)  
 arrived-PERF-3pl-masc.    theTaif-ACC  
 'They arrived Taif'.

Sentences (91a–91d) present the events completed or terminated, depending on the type of aspectual verb, with initial and final points and without any information about the various phases that make up these events. (91a) presents a terminated event of an activity verb in the Perfect form, that has no inherent endpoint. Therefore, the final conclusion of this event is arbitrary. (91b–91d) present completed events that have natural endpoints which are the completion of writing the letter in both the Perfect form and the active participle of accomplishment predicates, and reaching Taif in the achievement predicate. Hence, perfectivity seems to be very natural in events that have inherent endpoints (e.g., accomplishments and achievements).

In contrast, the perfective temporal schema does not apply to statives because they are open-ended. Sentences (92a–92b) below present open states that continue into the present. The Perfect and the active participle denote a present state resulting from the completion of an act. The present condition implies that the effect of the completed act is still apparant. Therefore, no endpoints for statives can appear in the perfective temporal

schema. This characteristic seems to account for the prominent use of the present marking morpheme ‘-s’ with stative verbs and their incompatibility with the progressive (see Appendices B-1 to B-6, C-1 to C-6, and D-1 to D-3).

(92) a. *?arifa*                      *dhaalik*                      (Stative – Perfect)  
           found-out-PERF-3msg    that-ACC  
           ‘He found out that...’

b. *?anaa*    *?aarifun*                      *dhaalik*                      (Stative – Active Participle)  
           I-pron.    Know-A.PART-1st-    that-ACC  
           ‘I have found out that...’

The imperfective aspect, on the other hand, focuses on the internal structure of the situation and may be characterized as expressing a continuous or durative situation. Therefore, the imperfective views a part of the situation without endpoints. The temporal schema for the imperfective can be schematically represented as follows:

(93) Imperfective temporal schema:    I..... ////..... F

To see the interaction of the imperfective with lexical aspect in Arabic, consider the aspectual interpretation of the following sentences, as in (94):

(94) a. *yalabu*                      *bi-*                      *lkorati*                      (Activity – Imperfect)  
           play-IMP-3msg    with-prep    ball-GEN  
           ‘He is playing football’.

b. *zaydun*                      *muntadirun*                      (Activity – Active participle)  
           zayd-NOM    wait-A.PART-3msg  
           ‘Zayd is waiting’.

c. *taktubaani*                      *risaalatan*                      (Accomplishment – Imperfect)  
           write-IMP-dual-fem.    letter-ACC

'They are writing a letter'.

d. *tarfisu*                      *al korata*                      (Achievement – Imperfect)

kick-IMP-3fsg    the-ball-ACC

'She is kicking the ball'.

In sentences (94a–94b), the imperfective spans the internal structure of the activity predicates and presents only a part of the situation without the endpoints. The Imperfect form and the active participle indicate progressive meaning, which is compatible with the successive-stage structure of activities in Arabic. In (94c), the Imperfect denotes progressive meaning for the accomplishment predicate which has also an internal structure of successive phases that is compatible with that of the progressive. In (94d), the Imperfect indicates progressive meaning for the achievement predicate. However, in (95a–95b), the Imperfect form and the active participle do not indicate progressive meaning and therefore stative verbs are quite natural in the present (see sections 2.4.2.1, 2.4.4.1 and 2.5.1).

(95) a. *ya?arifu*                      *al ejaba*                      (Stative – Imperfect)

know-IMP-3msg    the answer-ACC

'He knows the answer'.

\*'He is knowing the answer'.

b. *faahimun*                      *al darsa*                      (Stative – Active participle)

understand-A.PART-3msg    the lesson-ACC

'He understands the lesson'.

\*'He is understanding the lesson'.

To sum up, compared with their English counterparts, Arabic stative verbs are incompatible with the progressive meaning, and the general temporal schema of the perfective does not apply to them. They present open states. Regarding nonstative verbs, the interaction of perfective and imperfective aspects with activities and accomplishments in Arabic and



English is analogous in that the perfective and imperfective temporal schemata apply to them. However, achievements in the languages behave differently in that the progressive is largely incompatible with achievements in English but it is not in Arabic.

## 2.6 Conclusion

In this chapter, the theoretical framework of aspect in English and Arabic has been examined comparatively. It was argued that the concept of time is universal, while tense is not; and that there are two kinds of time: notional and grammatical.

Tense is the grammatical expression of a particular temporal meaning. It has been analyzed in terms of Reichenbach's (1947) and Comrie's (1985) theories of tense. Reichenbach analyzes tense in terms of three temporal points: speech time (S), event point (E), and reference point (R). The distinctions of past, present and future result from the different ordering relations that hold between S and R. Comrie (1985), however, presents a different system in that two time points (time of speech (S) and time of event (E)) and three relations (simultaneity, anteriority and posteriority) are needed to represent the three absolute tenses, and one more time (reference (R)) to represent other tenses. In addition, Comrie makes a distinction between absolute and relative tenses and treats the latter under tense rather than aspect.

Tense and aspect in English have been examined from the perspective of function in terms of six target tenses (present, present perfect, past, past perfect, future, and future perfect) that are the experimental target tenses for the investigation of the acquisition of tense-aspect morphology by classroom adult Arabic-speaking learners of English as a second language.

Grammatical aspect vs inherent lexical aspect were examined. Grammatical aspect, or viewpoint aspect in Smith's (1983, 1997) terms, is the way the speaker views the temporal features of a situation independent of its relation to any reference time. Grammatical aspect is of two types, depending on how much of the situation is made visible: perfective aspect (views a situation in its entirety with a beginning and an ending), and imperfective aspect (views a part of the situation without the final point).

Inherent lexical aspect refers to chronological features inherent in the lexical items which describe the situation as expressed by a morphologically unmarked predicate, regardless of any grammatical marking or time frame. Therefore, aspectual meaning holds for the full verb phrase or predicate rather than verbs in isolation. Vendler's (1967) framework of aspectual categories has been discussed in depth. According to Vendler, four aspectual categories of states, activities, achievements and accomplishments can be distinguished by three features:

- (i) *punctual*, which distinguishes predicates that can be thought of as instantaneous or a single point (*begin to write*) from those with duration (*write a letter*);
- (ii) *telic*, which distinguishes predicates with endpoints (*write a letter*) from those without endpoints (*write*); and
- (iii) *dynamic*, which distinguishes dynamic verbs (e.g., *play, write*) from stative verbs (e.g., *love, want, forget*).

The most familiar division falls between the stative predicates and the non-stative, or dynamic, predicates (activities, accomplishments, and achievements). This division is captured by the feature [dynamic]. States persist over time without change (e.g., *hate, want, need*, etc.). States are completely homogeneous. They have neither an internal structure nor a well-



defined endpoint or final conclusion. They are incompatible with the progressive, and temporal adverbials and verbs such as *in X minutes*, *for X years*, and *take an hour*. Activities are processes that have an internal structure of successive stages with an arbitrary endpoint. They have the part-whole relation of cumulative events. Activities are compatible with the progressive and with adverbials and verbs of simple duration such as *for an hour*, *stop*, and *spend*, but strange with *in an hour* or *take an hour*. Activities have inherent duration in that they involve a span of time (e.g., *sleep* and *snow*). They have no specific endpoint, and as such are atelic. Additional examples of activity verbs include *play*, *walk*, and *run*. Achievements are instantaneous events that result in a change. They have inherent endpoints, and are compatible with an *in*-phrase and *take an hour*, but strange with *spend an hour*, and *for* phrases. Achievements are distinguished from other dynamic verbs by the feature [punctual]. Achievement verbs capture the beginning or the end of an action (Mourelatos, 1981) as in *The race began*. Examples of achievement verbs include *reach*, *die*, and *notice*. Accomplishment verbs share features with activity verbs [-punctual] and achievement verbs [+telic]. Like activity verbs, they have inherent duration, as in *build a house*. Like achievement verbs, they have a goal or an endpoint. In *build a house*, for example, the endpoint is the completion of the house.

Finally, aspectual categories of verb in Modern Standard Arabic (MSA) have been examined in terms of McCarus's (1976) discussion of verbs in MSA. It has been shown that Arabic verbs behave in much the same way as their English counterparts. The aspectual classes of Vendler (1967) are found in MSA with similar sets of verbs falling into each class. McCarus's classification is based on potential progressive meaning in the Imperfect and the range of possible meanings of the active participle. It was concluded that states and activities in Arabic are analogous to English states and activities (see page 84). However, achievements in Arabic can accept the progressive meaning, while achievements in English are incompatible with the progressive (see sections 4.2 and 7.3 for discussion of transfer.) Finally, accomplishments



are analogous in both languages in that they are processes that have an outcome or a change of state. They have inherent endpoints and therefore they are compatible with the *in*-phrase, *take* and *spend*, but strange with the *for*-phrase and ambiguous with *almost*.

# CHAPTER 3

## THE MORPHOLOGY OF THE ARABIC TENSE AND ASPECT SYSTEM

### 3.0 Introduction

We saw in the preceding discussion that Arabic operates similarly to English with respect to inherent aspect. Now we shall look at grammatical aspect and tense. To this end, this chapter presents a detailed critical analysis of the verbal system in Arabic, the L1 in this study, with a focus on discussion of its tense and aspect. It attempts to delineate and elucidate various dimensions and variables involved, in order to give the reader an idea about tense and aspect in Arabic, within the general framework of this thesis. It briefly presents the basic forms of the Arabic verb, verbal inflections and how the concept of time is marked. Then it discusses in detail the Perfect and Imperfect forms as well as the active participle. In the second part, there is a detailed analysis of the tense-aspect system in Modern Standard Arabic (MSA). The third part presents a discussion of the tense and aspect system in English and Arabic from the functional point of view. Examples are provided from MSA and Saudi Arabic Dialect (SAD), where appropriate.

### 3.1. The Arabic Verbal System

Arabic morphology revolves around a framework of consonants called radical consonants or radicals. In addition to the consonants, the Arabic verb consists of short vowels ( $C_1VC_2VC_3V$ )<sup>1</sup>. Traditionally, the verb is divided into

---

<sup>1</sup> C = consonant and V = short vowel.

two types: **basic** and **derived**. The basic verb may consist of three or four consonants, as Table 1 illustrates:

**Table 1: Basic Verb**

Perfect	Imperfect
<p><b>i. Tri-consonantal<sup>2</sup></b></p> <p><b>Pattern:</b> <i>fa?ala</i><sup>3</sup> 'to do' C<sub>1</sub>aC<sub>2</sub>aC<sub>3</sub>a</p> <p><i>kataba</i> 'to write'</p> <p><i>sajada</i> 'to bow'</p>	<p><i>yaf?ulu</i> 'do' yaC<sub>1</sub>C<sub>2</sub>uC<sub>3</sub>u</p> <p><i>yaktubu</i> write-IMP-3msg 'He writes'.</p> <p><i>yasjudu</i> bow-IMP-3msg 'He bows'.</p>
<p><b>ii. Quadri-consonantal</b></p> <p><b>Pattern:</b> <i>fa?lala</i> 'to do' C<sub>1</sub>aC<sub>2</sub>C<sub>3</sub>aC<sub>3</sub>a</p> <p><i>zalzala</i> 'to shake'</p> <p><i>waswasa</i> 'to whisper'</p>	<p><i>yufa?lalu</i> 'do' yuC<sub>1</sub>aC<sub>2</sub>C<sub>3</sub>aC<sub>3</sub>u</p> <p><i>yuzalzilu</i> shake-IMP-3msg 'He shakes'.</p> <p><i>yuwaswisu</i> whisper-IMP-3msg 'He whispers'.</p>

Tri- and quadri-consonantal verbs are commonly used in MSA. The base form *fa?ala* or *fa?lala* for any verb is in the third person singular masculine in the past, corresponding to the English base in the present form, e.g., *run*.

In Classical Arabic (CA), fifteen forms could be derived from the tri-radical root and four forms from the quadri-radical one (Mohammed, 1982:123). In MSA, however, only nine forms are derivable from the former and three from the latter. The other forms are considered unproductive or archaic.

<sup>2</sup> Each tri-consonantal verb in this category follows one of six patterns in both the Perfect and the Imperfect forms (Al Saamarrai, 1980:105).

<sup>3</sup> To indicate verb form, Arab grammarians use three consonants of the verb *fa?ala* 'to do': the first consonant *f* represents the first radical of every verb, the question mark (?) (glottal stop) represents the second radical, and the consonant *l* represents the third.



In general, all other verbal forms are derived from the basic verb through the addition of one, two or three vowels or consonants (?al-?antakii, 1972:173). We should point out, however, that the traditional process of derivation does not hold in every case because some forms are derived, not from a basic verb, but directly from roots that do not underlie any basic verb (e.g., ?akhdarat 'it becomes green'). Table 2 illustrates a few derivations of tri-consonantal and quadri-consonantal verbs.

**Table 2: Derivation of Tri-consonantal and Quadri-consonantal Verbs**

Basic	Derived / Perfect	Derived / Imperfect
<b>i. Tri-consonantal</b> a. <b>Pattern:</b> C <sub>1</sub> aC <sub>2</sub> iC <sub>3</sub> a <i>qabila</i> 'to accept'  <i>wazana</i> 'to weigh'	C <sub>1</sub> aaC <sub>2</sub> aC <sub>3</sub> a <i>qaabala</i> met-PERF-3msg 'He met'.  <i>waazana</i> compared-PERF-3msg 'He compared'.	yuC <sub>1</sub> aaC <sub>2</sub> iC <sub>3</sub> u <i>yuqaabilu</i> meet-IMP-3msg 'He meets'.  <i>yuwaazinu</i> compare-IMP3msg 'He compares'.
b. <b>Pattern:</b> C <sub>1</sub> aC <sub>2</sub> aC <sub>3</sub> a <i>faqada</i> 'to lose'  <i>qatala</i> 'to kill'	?iC <sub>1</sub> taC <sub>2</sub> aC <sub>3</sub> a <i>?ftaqada</i> missed-PERF-3msg 'He missed'.  <i>?iqtatala</i> fought-PERF-3pl 'They fought each other'.	yaC <sub>1</sub> taC <sub>2</sub> iC <sub>3</sub> u <i>yaftaqidu</i> miss-IMP-3msg 'He misses'.  <i>yaqtatiluu</i> fight-IMP-3pl 'They fight each other'.
<b>ii. Quadri-consonantal</b> a. <b>Pattern:</b> C <sub>1</sub> C <sub>2</sub> anC <sub>3</sub> aC <sub>3</sub> a <i>dahraja</i> 'to roll into'  <i>madmada</i> 'to rinse'	taC <sub>1</sub> aC <sub>2</sub> C <sub>3</sub> aC <sub>3</sub> a <i>tadahraja</i> rolled-PERF-3msg 'He rolled into'.  <i>tamadmada</i> rinsed-PERF-3msg 'He rinsed'.	yataC <sub>1</sub> aC <sub>2</sub> C <sub>3</sub> aC <sub>3</sub> u <i>yatadahraju</i> roll-IMP-3msg 'He rolls'.  <i>yatamadmada</i> rinse-IMP3msg 'He rinses'.
b. <b>Pattern:</b> C <sub>1</sub> C <sub>2</sub> anC <sub>3</sub> aC <sub>3</sub> a <i>franqa?a</i> 'to leave, scatter'	?iC <sub>1</sub> C <sub>2</sub> anC <sub>3</sub> aC <sub>3</sub> a <i>?franqa?a</i> left-PERF-3msg 'He left'.	yaC <sub>1</sub> C <sub>2</sub> anC <sub>3</sub> iC <sub>3</sub> u <i>yafranqi?u</i> leave-IMP-3msg 'He leaves'.

In (i.a) and (i.b), the tri-consonantal verbs *qaabala* and *waazana* are derived from the basic verbs *qabila* and *wazana* by changing the short vowel *a* into a long one *aa* of the first radical; and *?iftaqada* and *?iqtatala* from the basic verbs *faqada* and *qatala* by inserting *t* between the first radical of the pattern *fa?ala*, and the second radical, and prefixing a *hamza* (the glottal stop) with a short vowel: *?i*. In (ii.a) and (ii.b), the quadri-consonantal verbs *tadahraja* and *tamadmada* are derived from the basic verbs *dahraja* and *madmada* by prefixing the segment *t* with the root; and *?ifranqa* from the basic verb *franqa?a* by prefixing the *hamza* (?) and the *n* sound after the second radical of the pattern *fa?ala*.

### 3.1.1 Verbal Inflection

As already noted, the Arabic verb, whether basic or derived, has two forms, traditionally called Perfect and Imperfect. The Perfect form is interpreted with past meaning (or completed action), while the Imperfect is interpreted with present meaning (or incomplete action) (see section 3.3). These two forms are inflected for each person (first, second, third), number (singular, dual, plural), gender (masculine, feminine) and mood (indicative, subjunctive, imperative). The inflection varies with verbs of different roots. The Perfect and Imperfect forms are illustrated in the following paradigms; the verbal exemplar chosen is *katab* 'to write' quoted in the traditional way, namely, the unsuffixed third person singular masculine form of the past tense.

Table 3

Paradigm of the Verb *katab* 'to write' : Perfect

	Prefixes	Base	Suffix	Resulting Inflected Form
<b>3<sup>rd</sup> Person</b>				
Singular masc.	-	<i>katab</i>	-a	<i>katab-a</i>
fem.	-	<i>katab</i>	-at	<i>katab-at</i>

Dual	masc.	-	<i>katab</i>	-aa	<i>katab-aa</i>
	fem.	-	<i>katab</i>	-ataa	<i>katab-ataa</i>
Plural	masc.	-	<i>katab</i>	-uu	<i>katab-uu</i>
	fem.	-	<i>katab</i>	-na	<i>katab-na</i>
<b>2<sup>nd</sup> Person</b>					
Singular	masc.	-	<i>katab</i>	-ta	<i>katab-ta</i>
	fem.	-	<i>katab</i>	-ti	<i>katab-ti</i>
Dual	masc.	-	<i>katab</i>	-tumaa	<i>katab-tumaa</i>
	fem.	-	<i>katab</i>	-tumaa	<i>katab-tumaa</i>
Plural	masc.	-	<i>katab</i>	-tum	<i>katab-tum</i>
	fem.	-	<i>katab</i>	-tunna	<i>katab-tunna</i>
<b>1<sup>st</sup> Person</b>					
Singular	masc.	-	<i>katab</i>	-tu	<i>katab-tu</i>
	fem.	-	<i>katab</i>	-tu	<i>katab-tu</i>
Dual	masc.	-	<i>katab</i>	-naa	<i>katab-naa</i>
	fem.	-	<i>katab</i>	-naa	<i>katab-naa</i>
Plural	masc.	-	<i>katab</i>	-tum	<i>katab-tum</i>
	fem.	-	<i>katab</i>	-tunna	<i>katab-tunna</i>

**Table 4**

**Paradigm of the Verb *katab* 'to write': Imperfect**

	Prefixes	Base	Suffix <sup>4</sup>	Resulting inflected Form
<b>3rd Person</b>				
Singular				
masc.	<i>ya-</i>	<i>katab</i>	-u	<i>ya-ktab-u</i>
fem.	<i>ta-</i>	<i>katab</i>	-u	<i>ta-ktab-u</i>
Dual				
masc.	<i>ya-</i>	<i>katab</i>	-aani	<i>ya-ktab-aani</i>
fem.	<i>ta-</i>	<i>katab</i>	-aani	<i>ta-ktab-aani</i>
Plural				
masc.	<i>ya-</i>	<i>katab</i>	-uuna	<i>ya-ktab-uuna</i>
fem.	<i>ya-</i>	<i>katab</i>	-na	<i>ya-ktab-na</i>

<sup>4</sup> These suffixes are attached here to the Imperfect in the indicative mood. In the subjunctive mood and the jussive mood the Imperfect has different endings.



<b>2<sup>nd</sup> Person</b>					
Singular					
	masc.	<i>ta-</i>	<i>katab</i>	<i>-u</i>	<i>ta-ktab-u</i>
	fem.	<i>ta-</i>	<i>katab</i>	<i>-iina</i>	<i>ta-ktabiina</i>
Dual	masc.	<i>ta-</i>	<i>katab</i>	<i>-aani</i>	<i>ta-ktab-aani</i>
	fem.	<i>ta-</i>	<i>katab</i>	<i>-aani</i>	<i>ta-ktab-aani</i>
Plural	masc.	<i>ta-</i>	<i>katab</i>	<i>-uuna</i>	<i>ta-ktab-uuna</i>
	fem.	<i>ta-</i>	<i>katab</i>	<i>-na</i>	<i>ta-ktab-na</i>
<b>1<sup>st</sup> Person</b>					
Singular					
	masc.	<i>a-</i>	<i>katab</i>	<i>-u</i>	<i>a-ktab-u</i>
	fem.	<i>a-</i>	<i>katab</i>	<i>-u</i>	<i>a-ktab-u</i>
Dual	masc.	<i>na-</i>	<i>katab</i>	<i>-a</i>	<i>na-ktab-a</i>
	fem.	<i>na-</i>	<i>katab</i>	<i>-a</i>	<i>na-ktab-a</i>
Plural	masc.	<i>na-</i>	<i>katab</i>	<i>-u</i>	<i>na-ktab-u</i>
	fem.	<i>na-</i>	<i>katab</i>	<i>-u</i>	<i>na-ktab-u</i>

From Tables (3) and (4), it is clear that in the Perfect the suffixes always denote person, number, and gender. In the Imperfect, the prefixes denote gender, person and tense form, while suffixes indicate number, 1<sup>st</sup> person and gender. Unlike English, there is no special grammatical signal, i.e., suffix, in Arabic to indicate third person singular in the present.

A subject that follows a verb (i.e., VS structure<sup>5</sup>) signals only person. In VS structures, the suffix, in the Imperfect and Perfect, does not signal person or number, so there is no agreement in VS structures:

- (1) a. *kataba* / *yaktubu* *al waladaani* *risaalatan*.  
wrote-PERF-3msg. / write-IMP-3msg the-boy-dual -NOM letter- ACC

<sup>5</sup> The traditional classification of Arabic sentences is based on binary choices. Each sentence beginning with a noun is termed a nominal sentence, while one which begins with a verb is a verbal sentence. In addition, a sentence which does not contain a verb is an equative. These categories combine together to yield three possible Arabic sentence types: nominal equative, nominal non-equative, and verbal non-equative. The fourth combination, verbal equative, is ruled out by the fact that equative sentences, as defined above, have no verb (Anshen and Schreiber, 1968:792).

'The two boys wrote / write a letter'.

b. *kataba*                    */yaktubu*                    *al awladu*                    *risaalatan*.  
wrote-PERF-3msg /write-IMP-3msg    the-boys-NOM    letter- ACC  
'The boys wrote/write a letter'.

c.\* *katabaa*                    */yaktubaa*                    *al- waladaani*                    *risaalatan*.  
wrote- PERF-dual-masc. /write-IMP-dual-masc. the-boy-dual- NOM    letter- ACC

d.\* *katabuu*                    */yaktubuu*                    *al-awladuu*                    *risaalatan*.  
wrote-PERF-3pl-masc. /write-IMP-3pl-masc. the-boys-NOM    letter-ACC

Greenberg (1963:58-59) formulates some universals that are relevant here. For example, universal 33 states: "When number agreement between the noun and the verb is suspended and the rule is based on order, the case is always one in which the verb precedes and the verb is in the singular". Kayne (1994:51), quoting work by Greenberg, mentions that there are languages such as Arabic in which there is a particular kind of agreement in SV orders but not in VS orders but that languages in which the reverse is the case do not exist.

Thus, verb and subject display full agreement when subject precedes verb but not when verb precedes subject (see Aoun, Elabbas, and Dominique, 1994; Koopman and Dominique, 1991; Mohammed 1989; van Gelderen, 1996), as (2) illustrates:

(2) a. *al waladaani*                    *katabaa*                    */yaktubaani*                    *risaalatan*.  
the-boy-dual-NOM    wrote-PERF-dual-masc. /write-IMP-dual-masc    letter-ACC  
'The two boys wrote/write a letter'.

b. *al awladu*                    *katabuu*                    */yaktubuuna*                    *risaalatan*.  
the-boys-NOM    wrote-PERF-3pl-masc. /write-IMP-3pl-masc.    letter-ACC.  
'The boys wrote/write a letter'.

c. *\*al waladaani kataba /yaktubu risaalatan*  
 the boy-dual NOM wrote-3msg-PERF /write-IMP-3msg letter-ACC.

d. *\*al awladu kataba /yaktubu risaalatan.*  
 the-boy-3pl.masc.NOM wrote-PERF-3msg /write-IMP-3msg letter-ACC

In (2a) and (2b) the verb agrees with the subject in person, gender, and number. A traditional description of (2a), for example, would describe the *-aa* of *katabaa/yaktubaa* as being the conjugational marker of the masculine dual, and *-uu* of *katabuu/yaktubuu* in (2b) as being the conjugational marker of the third person masculine plural. Different explanations are suggested for this phenomenon. Koopman and Dominique (1991), for example, argue that, in the VS order, the verb, having moved to a higher functional category, simply assigns Case under government and has default number agreement. In the SV order, the moved verb and moved subject agree together under Spec-head agreement, but this is not the case in VS order.

At this point in elaborating on verbal inflection in MSA, it seems in order to call attention to the variation of the final vowel in words after their insertion in the utterance. This variation of the final vowel is determined by different governing operators (*awaamil*) which affect them. It is traditionally known as *i?raab*. *I?raab* can be observed in two cases: the noun, where it corresponds to a system of case markers, and the imperfect verb, where it corresponds to a system of mood markers, as shown in Table 5 below.

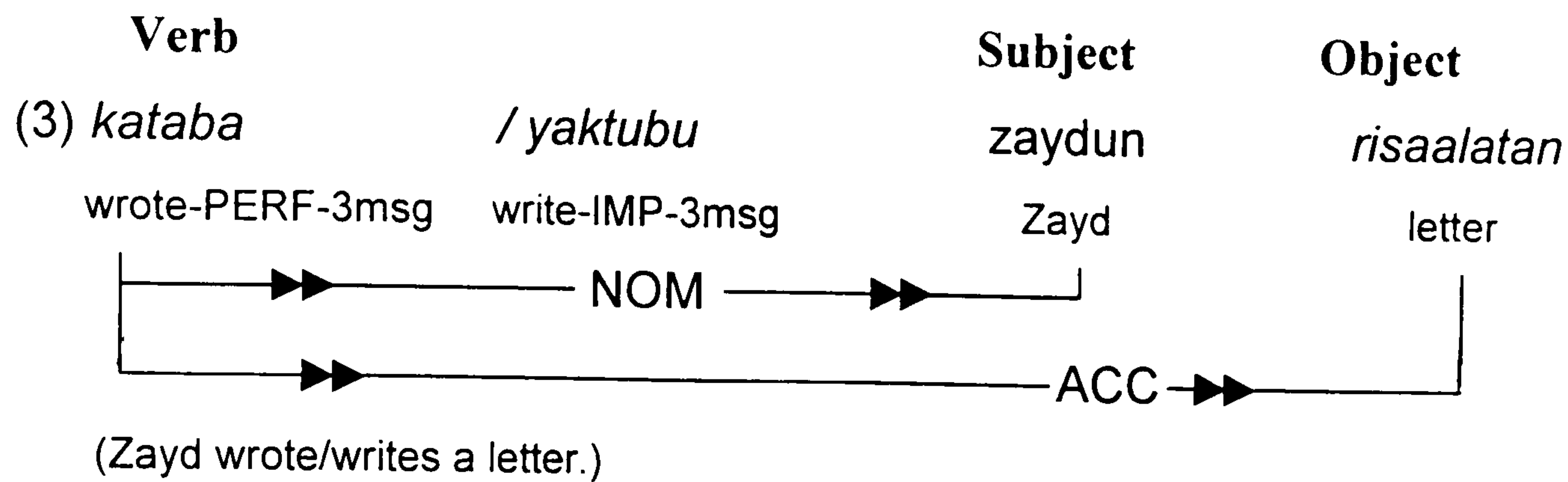
**Table 5: Variation of the Final Vowel**

(adopted from Bohas, Guillaume and Kouloughli, 1990: 54)

Vowel	u	a	i	∅
Technical term	raf	nasb	garr	jazm
Noun	nominative	accusative	genitive	∅
Verb	indicative	subjunctive	∅	jussive



In (3), for example, the government operates so that the verb being in the leading position successively assigns the nominative to the subject and the accusative to the object (and in fact to all other nominative components of the sentence):



The very nature of the data dictates a ternary branching model, with a governing element (i.e., *kataba/yaktubu*) and two governed ones (i.e., *Zayd* and *a letter*), each being affected with a distinctive mark correlated with its semantico-syntactic function within the sentence.

### 3.2 Concept of Time

Unlike English, where the concepts of time as well as tense and aspect have been extensively explored by various linguists of different training and orientation, these concepts do not seem to have been adequately examined in Arabic (cf. Al Saamarrai, 1980:18-19; Mohammed, 1982:45; Wright, 1971:51). This neglect seems to be due in part to most Arab grammarians' preoccupation with syntactic and derivational matters and questions of parsing and rhetoric, and to their perception of function of the Arabic verb as being principally to express the completion or incompleteness of an action, regardless of any temporal implications.

Arab grammarians divide time in connection with the verbal forms into past, present and future. They assign the past to the Perfect (traditionally known as *al-maadi*) and the present and future to the Imperfect (traditionally referred to as *al-mudaari*):

(4) a. *katabaa*                      /*katabataa*                      *risaalatan*  
 wrote- PERF-dual-masc   /wrote-PERF-dual-fem   letter-ACC  
 'They wrote a letter'; or  
 'They have written a letter'.

b. *yaktubuuna*                      /*yaktubna*                      *risaalatan*  
 write-IMP-3pl-masc   /write-IMP-3pl-fem.   letter-ACC  
 'They write a letter';  
 'They are writing a letter'; or  
 'They will write a letter'.

In (4a), the verbs *katabaa/katabataa* indicate past time and a completed action, whereas in (4b) the verbs *yaktubuu/yaktubna* refer to present and future times. This division of time is made according to the astronomical movements (Al Makhzomi, 1964:112) (see Chapter 2, section 2.1). Astronomical or "notional time" contrasts with linguistic or grammatical time. Notional time, as indicated earlier, is an expression of real time, whereas grammatical time is a linguistic expression of time by means of verb forms denoting actions occurring in various time spheres that refer to the temporal relations of the speaker, or of other actions which are brought into juxtaposition with it (Ibid., 146).

The division of time into three spheres seems to imply that an Arabic verb form can denote time and temporal relations independent of the relationship between the tense and the temporal reference of a given verbal form or of a context. This interpretation does not seem to stand up to scrutiny (ibid., 143). We would argue that grammatical time in Arabic is a function of context determined by auxiliary verbs, particles, temporal adverbials, aspects and other lexical and sentential features. Temporal and aspectual relations are expressed in Arabic by the use of these devices (see section 3.5). Figure 1 illustrates possible temporal interpretations implied by the Perfect and Imperfect forms.

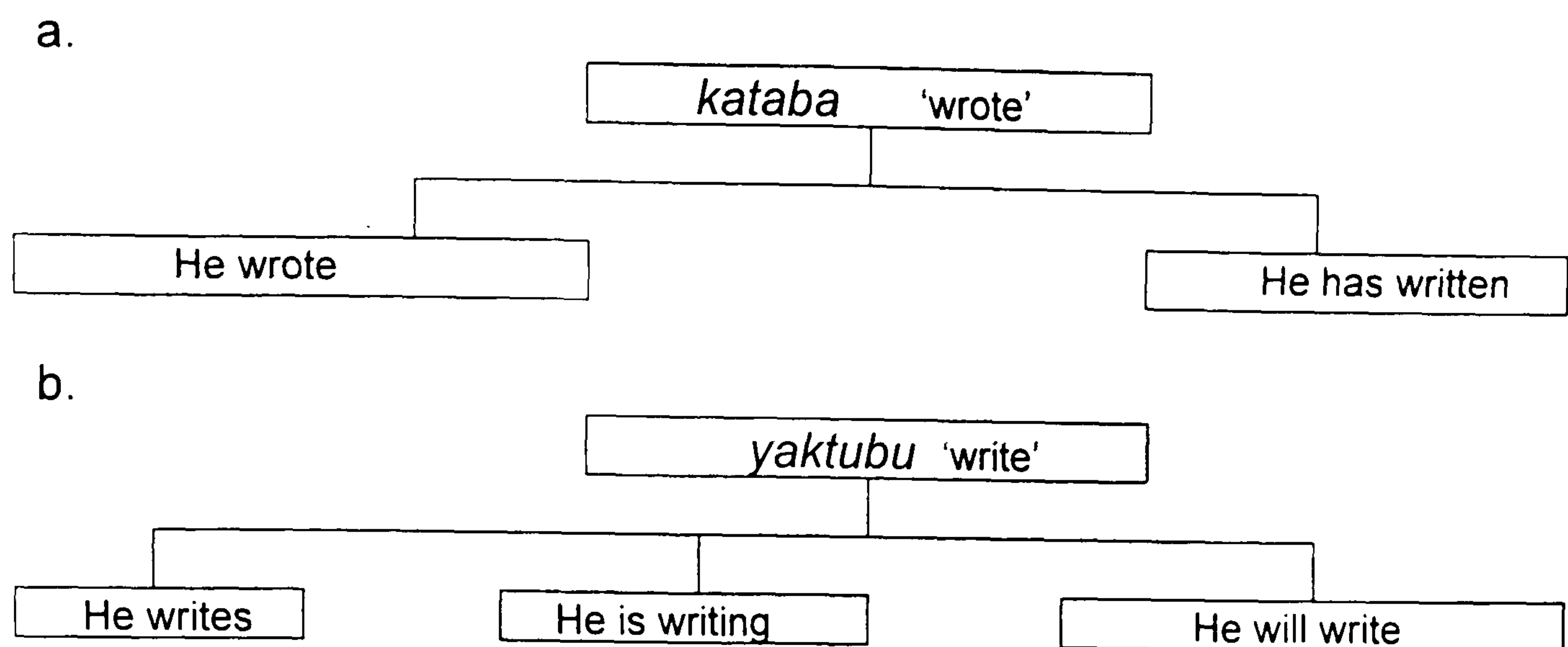


Figure 1

To sum up, the concepts of time as well as tense and aspect have not been adequately examined in Arabic. Arab grammarians divide time into past, present, and future. They assign the past to the Perfect and the present and future to the Imperfect. In English the distinctions of past, present, and future result from the different ordering relations that hold between S and E in Reichenbach's (1947) terms.

### 3.3 Perfect and Imperfect Forms

The question can thus be posed: **do the Perfect and Imperfect forms in Classical Arabic (CA) in themselves denote time and temporal relations?** No. The Perfect form denotes a completed action and the Imperfect an incomplete action which is just commencing or is in progress (see Cantarino, 1974:58; Comrie, 1976; Mitchell, 1978:233; Sibawayh, 1316:2; Wright, 1971:51; among others) as shown above in (4a) and (4b) and in Figure 1. The Perfect and Imperfect do not indicate a close relationship between tense and the temporal reference of a given verbal form or of a sentence. They do not have any reference to temporal relations of the speaker and of other actions which are brought into juxtaposition with them. These relations are crucial in determining in which sphere of time (past, present or future) a Perfect or an Imperfect lies (see Al Makhzomi, 1964:48; Al Saamarrai, 1980:24; Mitchell, 1978:233; among others). The Imperfect form is neutral regarding time



specification (Al Saamarrai, 1980:24; El Badrin, 1982:58; Catford, Palmer, McCarus, Moray and Snider, 1974:97; Mitchell 1978:233); it may refer to present or future, depending on the context, as Figure 1b above illustrates. To facilitate discussion, consider the following example:

- (5) *ya?malu*        */ta?malu*        *alwajiba*  
do-IMP-3msg    do-IMP-3fsg    the-homework-ACC  
'He/she does the homework';  
'He/she is doing the homework'; or  
'He/she will do the homework'.

The Perfect does not necessarily express an action in the past, and similarly, the Imperfect does not necessarily express an action in the present or future. What the verb form indicates is the **completion** or **incompletion** of an action. The perfective/imperfective opposition is not a matter of past versus non-past with regard to the rigid structures of Classical Arabic (CA), since the two forms can be used equally well to refer to past, present or future time (see Cantarino, 1974:50; Hasan, 1963:30-36; Wright, 1971:51). Thus, the Arabic (unlike the English) verbal system appears to be aspectual. The focus is on the action as completed (Perfective) or not completed (Imperfective). To this effect, Travis (1977:63) argues that:

English and Arabic have complementary tense-aspect systems in several respects. The obligatory category for English is Tense; for Arabic, it is Aspect. These obligatory categories are inflected forms in both languages. In a sentence, obligatory Aspect in Arabic may imply Tense or obligatory Tense in English may imply Aspect (Travis, 1977:63).

**Does this mean that the Arabic language is a 'tenseless' language?**

No. Arabic is a tensed language, for the Perfect, Imperfect and the active participle can effectively indicate and express temporal relations by means of a 'Tense-Aspect-Support System' (TASS) which comprises a network of auxiliary verbs, particles, temporal adverbials and lexical and contextual devices. While the Arabic tense system allows relative locations of the point of reference at

any time (see Comrie, 1985:63-64), this does not mean that Arabic obeys no constraints in so doing. Hence the reference point, which is not necessarily the moment of speaking, can be set, for example, by an auxiliary verb such as *kaana*<sup>6</sup> (past tense of 'be') or by other particles or temporal adverbials. As such, establishing a reference point in MSA is similar to that of a reference point in English according to Reichenbach's (1947) framework of tense (see Chapter 2, section 2.2.1). To see this, consider the following examples:

(6) a. *kaanat*                      *taktubu*              *risaalatan*              (past continuous)  
       was-PERF-aux-3fsg    write-IMP-3fsg    letter-ACC  
       'She was writing a letter'.

b. *katabaa*                      *risaalatan*    *amsi*                      (past simple)  
       wrote-PERF-dual-masc    letter-ACC    yesterday  
       'They wrote a letter yesterday'.

c. *sa-/ sawfa*    *yaktubuuna*              */taktubna*              *risaalatan* (future simple).  
       fut.prt.-will    write-IMP-3pl-masc    /write-IMP-3pl-fem    letter-ACC  
       'They will write a letter'.

In (6a), the point of reference is located in the past, in (6b) in the past and in (6c) in the future. Thus, simultaneity with past or future points of reference can be expressed and can determine aspectual value (see section 3.5).

### 3.4 Active Participle (*ismal al faail*)

The active participle in Arabic is a noun (substantive or adjective) derived from a verb in predictable patterns, whose arch-pattern is *FaaMil*, as shown in Table 6 below.

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<sup>6</sup> *kaana* belongs to a group of auxiliary verbs known as *kaana and its sisters*. This group includes *kaana* past tense of 'be', *baata* 'to be or do during the night', *adha* 'to become in the afternoon', *maadama*, *maabareha*, *maanfakah* and *maafati?ah* 'denote actions in the past and are still in process', *dhala* 'to remain', *saara* 'to become', *assbaha* 'to become in the morning' and *maazala* 'be still'. They indicate progressive, durative aspect.



**Table 6: Derivation of *ismal-al faail***

Base Form	Pattern	Active Participle
1. <i>sharaba</i> 'to drink'	(C <sub>1</sub> aaC <sub>2</sub> iC <sub>3</sub> un) <i>faa?lun</i>	<i>shaaribun</i> 'drinking'
2. <i>qaddama</i> 'to present'	(muC <sub>1</sub> aaC <sub>2</sub> iC <sub>3</sub> un) <i>mufa?ilun</i>	<i>muqaddimun</i> 'presenting'
3. <i>saadara</i> 'to confiscate'	(muC <sub>1</sub> aaC <sub>2</sub> iC <sub>3</sub> un) <i>mufaa?ilun</i>	<i>musaadirun</i> 'confiscating'
4. <i>tagaddama</i> 'to progress'	(muC <sub>1</sub> aaC <sub>2</sub> iC <sub>3</sub> un) <i>mutafa?ilu</i>	<i>mutaqaddimun</i> 'progressing'
5. <i>istakhraja</i> 'to deduce'	(mustaC <sub>1</sub> C <sub>2</sub> iC <sub>3</sub> un) <i>mustaf?ilu</i>	<i>mustakhrapun</i> 'deducing'

*Ismal al faail* corresponds partly to the English present participle. However, it differs from its English counterpart in that it can be used **alone** because the sentence in this case is nominal, having no copula ('be'):

- (7) *hindun kaatibatun risaalatan*  
Hind-NOM write-A.PART-3fsg letter-ACC  
'Hind writing a letter', i.e.,  
'Hind has written a letter'.

In (7), no auxiliary or full verb precedes *ismal al faail*. It usually follows the word order **subject + active participle**. However, *ismal al faail* may be preceded by the auxiliary verb *kaana* in the Imperfect form when *kaana* is preceded by a particle such as *laa* 'no' or *?an* 'to', as in (8):

- (8) *yajibu ?an yakuna jaalisaatin*  
has to-IMP-3msg prt-to is-IMP-aux-3pl-fem sit-A.PART-3pl-fem  
'They have to be sitting'.

*Ismal al faail* has two varieties matching the two kinds of Arabic verb: active and passive. An active participle pattern, *sharib*, matches the finite active verb *yashrab*, 'he drinks', and has the meaning 'a person who drinks/a drinker'; a passive participle pattern *mashruub* matches the finite passive verb *yashrab* 'somebody drinks it' 'it is drunk' and has the meaning 'a thing which somebody drinks/something drunk'. Concerning the semantics of Arabic participles, Beeston (1970:35) has made the following observation:



The fundamental semantic value of a participle is that of describing an entity about which the verb can be predicated and nothing more: substantially used, the participle matching "he writes" denotes "person who writes" or "writer"; adjectivally used, the participle matching "he hangs" might appear in a phrase like "a hanging judge" (Beeston, 1970:35).

The active participle is, however, sometimes considered to be a verb denoting an action whose time is indicated by sentential features (Al Makhzomi, 1964:158; Al Saamarrai, 1980:34; Hasaan, 1979:253) such as auxiliary verbs, particles, temporal adverbials and other lexical devices, as is the case with the two verb forms, the Perfect and the Imperfect in CA. Thus, the active participle is also not indicative of temporal or aspectual relations in and of itself, as (9) illustrates:

- (9) *zaydun daaribun akhaakah*  
 'Zayd-NOM beat-A.PART-3msg brother-your-ACC  
 'Zayd beating your brother'; i.e.,  
 'Zayd is beating your brother';  
 'Zayd beat your brother'; or  
 'Zayd will beat your brother'.

In (9), the active participle has three possible readings: (i) present continuous, (ii) past simple, and (iii) future simple, a case similar to the Imperfect form interpretations mentioned earlier (see section 3.3). However, by the use of a temporal adverbial, or one of the TASS devices, the active participle can effectively and clearly refer to specific temporal and aspectual other relations in MSA:

- (10) a. *zaydun daaribun akhaakah ?al?aana*  
 Zayd-NOM beat-A.PART-3msg brother-your-ACC now  
 'Zayd beating your brother now'; i.e.,  
 'Zayd is beating your brother now'.
- b. *hindun daaribatun akhaakah amsi*  
 Hind-NOM beat-A.PART-3msg brother-your-ACC yesterday.  
 'Hind beating your brother yesterday'; i.e.,

'Hind beat your brother yesterday'.

- c. *al-awladaani*                      *daaribaani*                      *akhaakah*                      *gadan*  
the-boy-NOM-dual-masc    beat-A.PART-dual-masc    brother-your-ACC    tomorrow.  
'They beating your brother tomorrow'; i.e.,  
'They will beat your brother tomorrow'.

This possibility exists as well in SAD:

- (11) *?alheen al-walad waagif*                      *ma?*                      *al-daktuur*  
now                      the-boy-NOM    stand-A.PART-3msg    prep-with    the-doctor-GEN  
'Now the boy standing with the doctor'; i.e.,  
'Now the boy is standing with the doctor'.

In (11), the active participle expresses progressive meaning. The verb *wagaf* 'to stand or stop' expresses durative aspect.

In addition to the above uses, the active participle indicates that an action was taking place without interruption in the past if the participle is preceded by *kaana* (past tense of verb 'be') and its so-called sisters (e.g., *amsaa* 'to become in the evening', *baata* 'to be or do during the night', *dhalla* 'to remain' etc), as (12) illustrates:

- (12) a. *kaanat*                      *waaqifatan*                      (MSA)  
was-PERF-aux-3fsg    stand-A.PART-3fsg  
'She standing'; i.e.,  
'She was standing'.

- b. *kaan*                      *waagif*                      *ma?*                      *al doktuur*                      (SAD)  
was-PERF-aux-3msg    stand-A.PART-3msg    prep-with    the-doctor-GEN  
'He standing with the doctor'; i.e.,  
'He was standing with the doctor'.

In (12a) and (12b), the active participle expresses the past continuous tense and the progressive aspect (non-habitual imperfective). The point of reference is located in the past. Hence, the Arabic tense system allows relative

locations of the point of reference at any point of time (see Comrie, 1985:63-64), in all of MSA and SAD. As a simultaneous tense, however, there is a constant factor. The participle structures show imperfective aspectual value.

**Is there a separate perfect aspect? And if so, in which tenses does it occur?**

There is no morphologically separate set of forms which are invariably associated with perfect (as opposed to imperfect) aspectual meaning. Perfect aspect is commonly indicated by the perfect or 'past' verb forms. In other words, the perfect tense is not always expressed by perfect forms, although perfect forms always *do* express completed action. However, to express the present relevance of a past action, the active participle can be used by itself to indicate present perfect meaning or, in conjunction with *kaana* (past tense of 'be'), to form the pluperfect (both perfect-in-the-past and past-in-the-past), and with *yakuun* (present tense of 'be') to form the future perfect tense, as (13) illustrates:

(13) a. *zaydun kaatibun risaalatan* (MSA)  
 Zayd-NOM write-A.PART-3msg letter-ACC  
 'Zayd writing a letter'; i.e.,  
 'Zayd has written a letter'.

b. *?indama wasaluu kaana zaydun kaatiban risaalatan* (MSA)  
 when arrived-PERF-3pl-masc was-PERF-aux-3msg Zayd-NOM write-A.PART-3msg letter-ACC  
 'When they arrived, Zayd had (just) written a letter'.

c. *yum jau kaan al walad kaatib al risaala* (SAD)  
 when arrived-PERF-3pl was-PERF-3msg-aux the-boy-NOM write-A.PART-3msg the- letter-ACC  
 'When they arrived, the boy had (just) written the letter'.

d. *sa-/sawfa yakuna kaatibaatin risaalatan* (MSA)  
 fut-prt-will is-IMP-aux-3pl-fem write-A.PART- 3pl-fem letter-ACC  
 'They will have written a letter'.



Furthermore, we would note that the active participle is used to express a temporary state up to the present time:

(14) a. *lana saa?taani waaqifuuna huna* (MSA)  
 we hour-dual stand-A.PART-1pl. here  
 'We standing for two hours here'; i.e.,  
 'We have been standing for two hours here'.

b. *hena waagifeen saa?atain* (SAD)  
 we stand-A.PART-1pl-masc hour-dual  
 'We standing for two hours'; i.e.,  
 'We have been standing for two hours'.

Note that the action in (14a) and (14b) is of uninterrupted duration.

The expression of recent past tense (equivalent to English *just* in *he went/has just gone*) and perfect aspect is similar. Such a condition is obtained by *litwahi* 'just' in MSA, and *duba* or *taw* 'just' in SAD, where the past tense is required with a defined point in the past, as in (15) and (16):

(15) A: *?ina aliun?* (MSA)  
 'where Ali?', i.e.,  
 'Where is Ali?'

B: *khaarijun litawhi?*  
 go out-A.PART-3msg just  
 'going he just?', i.e.,  
 'Has he just gone?'

C: *la kharaja mundu fatratin*  
 prt-no went out-PERF-3msg since period of time  
 'No, he went out a long time ago'.

(16) A: *ween ali ?* (SAD)  
 'where Ali?',  
 'Where is Ali?'

B: *tawwah taali?*

just go-out -A.PART- 3msg

'just he going-out?'

'Has he just gone out?'

C: *la la, tal?a min zamaan*

prt.-no no went-out-PERF-3msg prep-from time

'No, no -he went out ages ago'.

From the above discussion, it is clear that perfect tenses in MSA are not always expressed by perfect forms. The active participle can also express the meaning of (i) present perfect, (ii) present perfect continuous, (iii) past perfect, and (iv) future perfect (see section 3.5 below).

### 3.5 MSA Tenses

In the following discussion, we present a detailed analysis of the realization of tenses in MSA<sup>7</sup>. For this purpose, TASS devices (i.e., auxiliaries, particles, temporal adverbials, etc.), which are traditionally used, are more effectively utilized to realize various tenses in MSA. Forms of verbals with examples from MSA and SAD are provided. The inclusion of SAD in the discussion is based, as already noted (see section 1.4), on the assumption that a one-sided approach to transfer is inadequate. That is to say both MSA and SAD spoken by the subjects in this study are considered in our discussion of the Arabic tense and aspect system as related to the acquisition of tense and aspect. Another important feature of the present analysis is the use of the active participle, along with the Perfect and Imperfect forms, to express and indicate specific temporal and aspectual relations.

A careful analysis of MSA reveals that there are eight tenses: **present simple, past simple, past continuous and emphatic past, recent past,**

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<sup>7</sup> The analysis provided does not claim to be exhaustive or complete.

**remote past, future simple, future continuous, and future perfect.** This analysis is consistent with that of Sieny's (1986). Out of these tenses, four are periphrastic (i.e., with *kaana*): past continuous, remote past, future continuous, and future perfect. The past continuous is realized by two verbal forms: (a) *kaana* + imperfect, and (b) *kaana* + active participle. The remote past is realized by *kaana* + *qad* + perfect, and by *kaana* + *qad* + active participle. The form *sa-/sawfa* + *yakuunu* is used to realize the future continuous, and *sa-/sawfa* + *yakuunu* + perfect to realize the future perfect. This shows that the realization of specific temporal and aspectual relations can only be achieved by means of TASS devices.

### 3.5.1 Present Simple

As examples (17) through (19) below illustrate, the present simple is realized by the Imperfect form with a set of personal prefixes and suffixes (see Table 4). This form is traditionally known as *al-muddaari* and is represented by the arch-pattern *YaFMaI*. In (17-19), both MSA and SAD, present time is signalled by the prefixes *ya-* or *ta-*, which also indicate person, gender and number (see Table 4).

(17) a. *ya?amalu al-tabeebu fii al-mustashfaa* (MSA).  
 work-IMP-3msg the-doctor-NOM prep-in the-hospital-GEN  
 'The doctor works in the hospital'.

b. *ya?amal al-tabeeb fii al- mustashfaa* (SAD)  
 work-IMP-3msg the-doctor-NOM prep-in the-hospital-GEN  
 'The doctor works in the hospital'.

(18) A: *?ina hindun?* (MSA)  
 'where Hind?';  
 'Where is Hind?'

B: *talabu fii al hadeqati*  
 play-IMP-3fsg prep-in the-garden-GEN  
 'She is playing in the garden'.



(19) A: *ween hind?* (SAD)

'where Hind?';  
'Where is Hind?'

B: *talab fii al hoosh*  
play-IMP-3fsg prep-in the-yard-GEN  
'She is playing in the yard'.

Interestingly, the Imperfect form may also express progressive meaning in certain contexts, as in (18) and (19). Note that neither MSA nor SAD has periphrastic progressive forms to represent progressive meaning in the surface structure. A possible question is how one may differentiate between progressive and non-progressive meaning. This can be done by sentential or contextual implications as in (18) and (19), or by using a temporal adverbial such as *?al?aana* and *?alheen* 'now', as in (20):

(20)a. *yaktubaani /taktubaani ?al?aana* (MSA)  
write-IMP-dual-masc /write-IMP-dual-fem now.  
'They are writing now'.

b. *yaktubuun ?alheen* (SAD)  
write-IMP-3pl.masc now.  
'They are writing now'.

The present tense, like its English counterpart, can also express future time, as in (21), and habituality, as in (22). Note that the SAD examples are similar to their MSA counterparts, except in that they show no variation of the final vowel, a feature strictly observed in MSA. This variation is determined by different governing operators (*?waamil*), and is known as *i?raab* (see section 3.1.1 above).

(21) a. *yussaafiruu /yussaafirna gadan* (MSA)  
travel-IMP-3pl.masc. /travel-IMP-3pl.fem tomorrow.  
'They travel tomorrow'.

b. *yussafir* /*tussafir* *baaker* (SAD)  
 travel-IMP-3msg /travel-IMP-3fsg tomorrow.  
 'He/she travel tomorrow'.

(22) a. *yadhabuuna* *?ila* *almdrasati* *kula yawmin* (MSA)  
 go-IMP-3pl-masc prep-to the-school-GEN every day  
 'They go to school every day'.

b. *kul yawm yaruuh* /*taruuh* *?ila* *almdrasa* (SAD)  
 every day go-IMP-3msg /go-IMP-3fsg prep-to the-school-GEN.  
 'Every day he/she goes to school'.

Thus, the present simple in MSA is realized by the Imperfect form, which has a number of temporal functions such as indicating progressive meaning, future, and habituality (see section 3.6.2 below).

### 3.5.2 Past Simple

The past simple tense is realized by the Perfect form, to which is added a set of personal suffixes (see Table 3). It is referred to as *al-maadi* and is represented by the arch-pattern *FaMala*. Consider the following examples:

(23) a. *kataba* /*katabat* *risaalatan* (MSA)  
 wrote-PERF-3msg /wrote-PERF-3fsg letter-ACC  
 'He/she wrote a letter'.

b. *kaburaa* /*kaburataa* *bisur?atin* (MSA)  
 grew-PERF-dual-masc /grew-PERF-dual-fem quickly.  
 'They grew quickly'.

c. *katab* /*katabat* *risaala* (SAD)  
 wrote-PERF-3msg /wrote-PERF-3fsg letter-ACC  
 'He/she wrote a letter'.

d. *sharibuu*                      /*sharibna*                      *amsi*                      (MSA)  
drank-PERF-3pl.masc. /drank-PERF-3pl- fem yesterday  
‘They drank yesterday’.

In (23a), (23b) and (23c), the Perfect form tense refers to an indefinite time in the past, whereas it refers to a definite time in (23d) by use of the temporal adverbial *amsi* ‘yesterday’. Note, however, that the suffixes *-a*, *-aa*, *-uu*, *-na*, and *-at*, indicate person, gender and number rather than past time, which is indicated rather by the internal vocalic change represented by an infix. The infix may be */a/*, */u/* or */i/* as in *kataba*, *kaburaa*, and *sharibuu* respectively (see examples 23a, 23b, and 23c, and section 3.6.1).

### 3.5.3 Past Continuous

As (24a) through (24c) show, the past continuous tense is realized by the auxiliary verb *kaana* (the past tense of ‘be’) followed by the imperfect form of a main verb. This form expresses progressive meaning in the perfect form, and the auxiliary verb *kaana* functions as a tense carrier. The past continuous tense in these examples expresses imperfectivity without habituality (Comrie, 1976:20). However, it can express imperfectivity and habituality simultaneously if the sentence includes a temporal adverbial such as *kula yawm* ‘every day’, as in (25a) and (25b). The inclusion of a temporal adverbial seems obligatory unless the context expresses habituality as in narrative. It is, in this case, more pragmatic than linguistic.

(24) a. *kaana*                      *yaktubu*                      /*kaanat*                      *taktubu*                      (MSA)  
was-PERF-aux-3msg write-IMP-3msg /was-PERF3fsg-aux write-IMP-3fsg  
‘He/she was writing’.

b. *kaan*                      *yaktub*                      /*kaanat*                      *taktub*                      (SAD)  
was-PERF-3msg-aux write-IMP-3msg /was-PERF-3fsg-aux write-IMP-3fsg  
‘He/she was writing’.

c. *kaanataa*                      *taktubaani*                      *kula yawmin*                      (MSA)  
was-PERF-aux-dual-fem write-IMP-dual dual-fem every day.



'They were writing every day'.

d. *kaanuu*                      *yaktubuun*                      *kul ywam*                      (SAD)  
was-PERF-aux-3pl. masc   write-IMP-3pl-masc   every day.

'They were writing every day'.

(25) a. *kaanaa*                      *waaqifiin*                      (MSA)  
was-PERF-aux-dual-masc.   stand-A.PART-dual-masc

'They standing'; i.e.,

'They were standing'.

b. *kaanuu*                      *waagifiin*                      (SAD)  
was-PERF-3pl-aux   stand-A.PART-3pl-masc.

'They standing'; i.e.,

'They were standing'.

In addition to this form (i.e., *kaana* + imperfect), the past continuous can also be expressed by the auxiliary verb *kaana* + active participle, as in (25a) and (25b) above.

Furthermore, an emphatic version of this tense can be realized by using the particle *laqad*<sup>8</sup> + *kaana* + Imperfect, as in (26) below:

(26) *laqad kaanuu*                      *yaktubuuna*  
prt           was-PERF-aux-3pl-masc   write-IMP-3pl-masc  
'They were writing'; i.e.,  
'They had been writing'.

Three forms are, therefore, used to realize the past continuous tense in MSA: (a) *kaana* + imperfect, (b) *kaana* + active participle, and (c) *laqad* + *kaana* + imperfect.

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<sup>8</sup> *qad* is a particle which expresses emphasis or approximation of the past to the present.

### 3.5.4 Recent Past

By the recent past we mean the verbal phrase which consists of the particle *qad* and the perfect form of a main verb (see also Sieny, 1986). In (27) and (28) this form expresses a past situation with a present result.

- (27) *qad katabat hindun risaalatan* (MSA)  
prt. wrote-PERF-3fsg Hind-NOM letter-ACC  
'Hind wrote a letter'; i.e.,  
'Hind has just written a letter'.

- (28) A: *ween ahmad?* (SAD)  
where Ahmad?  
'Where is Ahmad?'.  
  
B: *gidhuu raah*  
prt went out-PERF-3msg  
'He went out'; i.e.,  
'He has just gone out'.

Thus, the recent past in MSA can be realized by one verbal form consisting of *qad* + perfect.

### 3.5.5 Remote Past

As (29a) and (29b) below show, the remote past can be expressed by *kaana* + (*qad*) + a perfect form of a main verb. In these examples, this form expresses an activity or situation which occurred before another time in the past. The inclusion of the particle *qad* is not obligatory, however.

- (29) a. *kaana qad katabaa risaalatan ?indama wassala zaydun* (MSA)  
was-PERF-aux-dual-masc. prt. wrote-PERF-dual-masc letter-ACC when arrived-PERF-3msg Zayd-NOM  
'They had (already) written a letter when Zayd arrived'.  
  
b. *lamma jaa kaanuu gad raahuu* (SAD)  
when came-PERF-3msg was-PERF-3pl masc prt went out-PERF-3pl masc  
'When he came, they had (already) gone'.

The remote past can also be expressed by the verbal phrase *kaana* + active participle:

(30) a. *lama wasslna kuna kaatibaatin risaalatan* (MSA)

when arrived-PERF-3pl-fem was-PERF-aux-3pl-fem write-A.PART-3pl.fem letter-ACC

'When we arrived, they had (just) written a letter'.

b. *yuum jaa ali kaanuu rayyheen* (SAD)

when arrived-PERF-3msg Ali-NOM was-PERF-3pl-masc go out -A.PART 3pl-masc

'When Ali arrived, they had (just) gone out'.

Thus, the remote past in MSA can be realized by two verb forms: (a) *kaana* + (*qad*) + perfect, and (b) *kaana* + active participle.

### 3.5.6 Future Simple

As (31a) and (31b) below illustrate, future time is expressed by the prefix *sa-* and the particle *sawfa* in MSA or by the prefix *bi-* and the auxiliary *yabi* in SAD. The prefix *sa-* and the particle *sawfa* are used interchangeably without any change in meaning. Note that though traditionally *sa-* indicates remote future, modern usage does not always conform to this rule. In (31b), the auxiliary *yabi/tabii* literally means 'want', but it functions like 'will'. (31c) and (31d) are ungrammatical because the future particle is followed by a noun phrase, thus violating the normal word order (i.e., prefix/particle + imperfect).

(31) a. *sa-/sawfa yaktubaani /taktubaani risaalatan* (MSA)

fut-prt-will write-IMP-dual-masc /write-IMP-dual-fem letter-ACC

'They will write a letter'.

b. *bi-/yabi yaruuh /tabi turuuh jeddah* (SAD)

fut-prt.will/ fut-aux-want-3msg go-IMP-3msg / fut-aux-want-3fsg go-IMP-3fsg Jeddah

'He/she will go to Jeddah'.

c. \**sa-/sawfa ali yaktubu* (MSA)

fut.prt-will Ali-NOM write-IMP-3msg





e. *?in darasat najahat* (MSA)  
 prt-if studied-PERF-3fsg succeeded-PERF-3fsg  
 'If she studied, she would succeed'.

f. *?ida daras najah* (SAD)  
 prt-if studied-PERF-3msg succeeded-PERF-3msg  
 'If he studied, he would succeed'.

In (33a), (33b), (33d), and (33e), the form consisting of the particle *lau* or *?in* 'if' plus the perfect/imperfect form of a main verb expresses future time in conditional clauses. In (33c) and (33f), *?ida* plus the perfect form indicates future time, too. The use of the present in conditional clauses to denote future time is similar to its counterpart in English.

### 3.5.7 Future Continuous

By future continuous we mean the verbal phrase which consists of the prefix *sa-* or the particle *sawfa* plus *yakuunu* plus active participle in MSA, or the prefix *bi* plus *yakuun* plus active participle in SAD, as shown in (34a) and (34b) respectively.

(34) a. *sa-/sawfa yakuunaani naa?imeen* (MSA)  
 fut-prefix /prt-will is-IMP–aux-dual-masc. sleep-A.PART-dual-masc  
 'They will be sleeping'.

b. *bi- /yabi yakkuun naa?im* (SAD)  
 fut-prt-will /fut-aux-want-3msg is-IMP-3msg sleep-A.PART-3msg  
 'He will be sleeping'.

### 3.5.8 Future Perfect

By future perfect we mean the verbal phrase which consists of *sa-/sawfa* or *bi-/yabi* + *yakuun* + perfect, as in (35a) and (35b) or *sa-/sawfa* + *yakuun* + *qad* + perfect, as in (35c) below.

- (35) a. *sa-/sawfa takuunu katabat alrisaalata* (MSA)  
 fut-prefix /prt-will is-IMP-aux-3fsg wrote-PERF-3fsg the letter-ACC  
 'She will have written a letter'.
- b. *bi-/ yabi yakuun katab alrisaala* (SAD)  
 fut-prt-will/ want-IMP-3msg-aux is-IMP-aux wrote-PERF-3msg the-letter-ACC  
 'He will have written the letter'.
- c. *sa-/sawfa yakuunu qad kataba alrisaalata* (MSA)  
 fut-prefix/prt-will is-IMP-3msg-aux prt. wrote-PERF-3msg the letter-ACC  
 'He will have written the letter'.

To sum up, there are eight tenses in MSA that express or indicate specific temporal and aspectual relations. These tenses are effectively realized by using the Perfect or Imperfect form and active participle in conjunction with TASS devices. Two verbal forms (*kaana* + imperfect, and *kaana* + active participle) are used to realize the past continuous, while one form (*laqad* + *kaana* + imperfect) is used to realize the emphatic version of past tense. The recent past is realized by *qad* + perfect, and the remote past by *kaana* + *qad* + perfect, and *kaana* + active participle. Future time is indicated by *sa-/sawfa* + imperfect, by negation particles *lan* and *laa* + imperfect, or by conditional particles *lau*, *?in*, and *?ida* + imperfect. Finally, future continuous is realized by *sa-/sawfa* + *yakuunu* + active participle, and future perfect by *sa-/sawfa* + *yakuunu* + perfect. Thus, more than one verbal form may be used to express a particular tense in Arabic.

## 3.6 Temporal Functions of the Perfect and Imperfect Forms

### 3.6.1 Perfect Form

This is the form traditionally referred to in Arabic as *al-maadii* 'past' whose arch-pattern is *FaMala*. It denotes an action that occurred and was completed in the past, whether recent or remote, definite or indefinite (Adass,



1991; Akoor, 1991; Al Makhzomi, 1964; Al Saeed, 1972; Al Saamarrai, 1980; Al Saaqi, 1977; Hasaan, 1979; among others). The main uses of this form may be summarized, as in Table 7 below.

**Table 7: Functions of the Perfect Form**

Function	Example
1. To express an indefinite time in the past.	◆ <i>katabat</i> <i>risaalatan</i> wrote-PERF-3fsg              letter-ACC 'She wrote a letter'.
2. To express a definite time in the past.	◆ <i>katabaa</i> <i>risaalatan</i> <i>amsi</i> <sup>9</sup> wrote-PERF-dual-masc      letter-ACC      yesterday 'They wrote a letter yesterday'.
3. To indicate that something happened in the past and may always happen.	◆ <i>?itafaqa al-nahawyoona alaa ?an</i> ..... agreed-PERF-3pl.masc.the-grammarians-NOM prep-on prt.-that... 'The grammarians (have) agreed that.'
4. To indicate that an action or event had occurred frequently in the past (Al Saamarrai, 1980; Al Makhzomi, 1964).	◆ <i>?shraaqat al-shaamsu</i> shone-PERF-3fsg              the-sun-NOM 'The sun shone'.
5. For performative declarations, i.e., something happened while one was speaking and as a consequence of the utterance.	◆ <i>bi?atuka al-sayyarata</i> sold-PERF-1msg-you              the-car-ACC 'I (have) sold the car'.
6. To indicate future time in conditional sentences (Al Makhzomi, 1964:112-3).	◆ <i>?in darasuu njahuu</i> prt-if studied-PERF-3pl-masc succeeded-PERF-3pl-masc 'If they studied, they would succeed'.
7. In prayers.	◆ <i>rahema allahu akhaakah</i> was-PERF-aux.-3msg-merciful God-NOM brother-your-ACC

<sup>9</sup> A temporal adverbial is required to refer to a definite past time.

	'God may have mercy on your brother'.
8. For past with present result.	<p>◆ <i>laqad katabataa risaalatan</i></p> <p>Prt. wrote-PERF-dual-fem letter-ACC</p> <p>'They wrote a letter'; i.e.,</p> <p>'They have (just) written a letter'.</p>

### 3.6.2 Imperfect Form

Traditionally, this form is known as *al-mudaari* 'present', which is represented by the arch-pattern *yaFMaI*. It denotes the occurrence of an action or event in the present and future (Adass, 1991; Akoor, 1991; Al Makhzomi, 1964; Al Saeed, 1972; Al Saamarrai, 1980; Al Saaqi, 1977; Hasaan, 1979; among others). Put another way, the Imperfect indicates the occurrence of an action during or after the time of speaking. Wright (1971:18) claims that this form merely refers to "a begun, incomplete, enduring existence, either in present, past or future time". Hence, it is neutral to any time specification (see Mitchell, 1973:233). However, modern Arab linguists mention many uses of it. AlMakhzomi (1964) identifies three and Al Saamarrai (1980) four. In addition, other uses are given, determined by the presence of function words or prefixes. The main uses of the imperfect form are summarized, as in Table 8.

**Table 8: Functions of the Imperfect Form**

Function	Example
1. To express general states, actions or processes which are generally timeless and therefore valid for any time.	<p>◆ <i>yatabakharu al maa?u</i> evaporate-IMP-3msg the-water-NOM 'Water evaporates'. (generic aspect)</p> <p>◆ <i>yaktubu / taktubu rasaa?lan</i> write-IMP-3msg / write-IMP-3fsg letters-ACC 'He/she writes letters. (generic action)</p>
1. To indicate an action that occurs at the present time.	<p>◆ <i>?afhamu maa taquulu</i> understand-IMP-1msg prt.-what say-IMP-1msg 'I understand what you are saying'.</p> <p>The verb <i>faham</i> 'to understand' and <i>?arif</i> 'to know' may mean 'to know' or 'to come to understand', being verbs of perception/</p>

	cognition, expressing ingressive aspect.
3. To express future time in relation to a past event (Al Makhzomi, 1964; Al Saamarrai; 1980).	◆ <i>dhahabat</i> <i>tazurahu</i> went-PERF-3fsg      visit-IMP-3fsg-him 'She went to visit him'.
4. To express progressive meaning.	◆ <i>yaktubaa</i> <i>risaalatan</i> <i>?al?aana</i> write-IMP-dual-masc letter-ACC      now 'They are writing a letter now'.
5. To express future time in general, especially in the presence of a future time adverbial.	◆ <i>ya?tii</i> <i>gadan</i> come-IMP-3msg      tomorrow  'He (will) come tomorrow'.
6. To express a habit.	◆ <i>yastiqidu</i> <i>mubakiran</i> <i>kula yawmin</i> get up-IMP-3msg      early every day 'He gets up early every day'.

As Table 8 above shows, six temporal functions may be identified for the Imperfect form, determined by the presence of function words or prefixes.

### 3.7 Contrastive Analysis of Tense and Aspect in English and Arabic

At this point in our discussion of tense and aspect in MSA, it is appropriate to contrast tense and aspect in English and Arabic from the perspective of functional equivalence because structural, formal equivalence is often misleading (Sieny, 1986; Widdowson, 1979). Lado (1957) points out that the same grammatical function might be expressed through different 'media' in two different languages. In our case, the same verb form, even in the same language, may be used to express different functions. Therefore, the functional equivalence between tense and aspect may be summarized, as in Table 9 through Table 20. These tables are organized in terms of English, unlike the previous ones (Tables 7 and 8).



## Table 9 - 20: Functional Equivalence between Tense and Aspect (FETA)

**Table 9: FETA - Present Simple**

English	Arabic
<p>1. He/she writes a letter. (event)</p> <p>2. Classes begin tomorrow. (future)</p>	<p>1. Same:</p> <p>◆ <i>yaktubu / taktubu risaalatan</i> write-IMP-3msg / write-IMP-3fsg letter-ACC 'He/she writes a letter'.</p> <p>2. Different; future time is expressed by:</p> <p>i. present simple:</p> <p>◆ <i>tabda?u al-derasatu gadan</i> begin-IMP-3fsg the-classes-NOM tomorrow. 'Classes begin tomorrow'.</p> <p>Or</p> <p>ii. future time forms:</p> <p>◆ <i>sa-/sawfa tabda? al-derasatu gadan.</i> fut-prt.-will begin-IMP-3fsg- the-classes NOM tomorrow. 'Classes will begin tomorrow'.</p>

**Table 10: FETA - Present Continuous**

English	Arabic
<p>1. He is writing a letter. (action in progress)</p>	<p>1. Different; present continuous is indicated by:</p> <p>a. present simple:</p> <p>◆ <i>yaktubaa risaalatan</i> write-IMP-dual-masc letter-ACC 'They are writing a letter'.</p> <p>or</p> <p>b. active participle with no finite form:</p> <p>◆ <i>ana musqin ?alekah</i> pron-I -NOM listen-A.PART prep-to-you 'I am listening to you' (Sieny, 1986).</p>

2. He is coming tomorrow. (future)	<p>2. Different; future simple forms are used (for plans and arrangements):</p> <p>◆ <i>sa- / sawfa ya?tyaani gadan.</i>  fut.prt-wil come-IMP-dual-masc tomorrow.  'They will come tomorrow'.</p>
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**Table 11: FETA - Present Perfect**

English	Arabic
1. They have written a letter.	<p>1. Different; present perfect is expressed by:</p> <p>a. present simple:</p> <p>◆ <i>?arifahu mundu sanawaatin</i>  know-IMP-1msg-he since years  'I know him for years'; i.e.,  'I have known him for years'.</p> <p>b. past simple:</p> <p>◆ <i>hada ?hsanu kitabin qar?athu</i>  this best book read-PERF-I-NOM it-ACC  'This is the best book I read'; i.e.,  'This is the best book I have ever read'.</p> <p>c. recent past:</p> <p>◆ <i>qad kataba risaalatan</i>  prt. wrote-PERF-3msg letter-ACC  'He has just written a letter'.</p>

**Table 12: FETA - Present Perfect Continuous**

English	Arabic
1. I have been waiting for you for an hour.	<p>1. Different; present perfect continuous is expressed by:</p> <p>a. present simple:</p> <p>◆ <i>?antadiruka saa?atan</i>  wait-IMP-1msg-I hour  'I wait for you for an hour'; i.e.,  'I have been waiting for you for an hour'.</p>

	<p>Or</p> <p>b. past continuous:</p> <p>◆ <i>kaanaa yantadiraanikah saa?atan</i>  was-PERF-aux-dual-masc. wait-IMP-dual-masc-  you hour  'They were waiting for you for an hour'; i.e.,  'They have been waiting for you for an hour'.</p>
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**Table 13: FETA – Past Simple**

English	Arabic
1. They wrote a letter.	<p>1. Same:</p> <p>◆ <i>katabaa</i>                      <i>risaalatan</i>  wrote-PERF-dual-masc.      letter-ACC  'They wrote a letter'.</p>

**Table 14: FETA – Past Continuous**

English	Arabic
1. He was writing.	<p>1. Different; two forms are used:</p> <p>i. <i>kaana</i> + imperfect:</p> <p>◆ <i>kaana</i>                      <i>yaktubu</i>  was-PERF-aux-3msg      write-IMP-3msg  'He was writing'.</p> <p>ii. <i>kaana</i> + active participle:</p> <p>◆ <i>kaana</i>                      <i>jaalisan</i>  was-PERF-aux-3msg      sit-A.PART-3msg  'He sitting'; i.e.,  'He was sitting'.</p>

**Table 15: FETA – Past Perfect**

English	Arabic
1. He had written a letter.	<p>1. Different; many forms are used:</p> <p>i. remote past:</p>



	<p>◆ <i>kaanat qad katabat risaalatan</i> was-PERF-aux3fsgprt. wrote-PERF3fsg letter-ACC 'She had (already) written a letter'.</p> <p>b. past continuous:</p> <p>◆ <i>kaanat taktubu risaalatan</i> was-PERF-3fsg-aux write-IMP-3fsg letter-ACC 'She was writing a letter'.</p> <p>ii. recent past:</p> <p>◆ <i>qad katabuu risaalatan</i> prt wrote-PERF-3pl.masc letter-ACC 'They wrote a letter'; i.e., 'They have (just) written a letter'.</p>
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**Table 16: FETA – Past Perfect Continuous**

English	Arabic
1. He had been writing a letter.	<p>1. Different; past perfect continuous is indicated by:</p> <p>a. past continuous:</p> <p>◆ <i>kuna yaktubna risaalatan</i> was-PERF-aux-3pl-fem write-IMP-3pl.-fem letter-ACC 'They were writing a letter'; i.e., 'They had been writing a letter'.</p> <p>b. emphatic past continuous:</p> <p>◆ <i>laqad kaanuu yaktubuna</i> prt was-PERF-aux-3pl.masc. write-IMP- 3pl.masc. 'They were writing a letter'; i.e., 'They had been writing a letter'.</p>

**Table 17: FETA \_ Future Simple**

English	Arabic
1. He will write a letter.	<p>1. Different; three forms can be used :</p> <p>a. future simple:</p> <p>◆ <i>sa-/ sawfa yaktubaani risaalatan</i> fut-prt-will write-IMP-dual-masc letter- ACC</p>

	<p>'They will write a letter'.</p> <p>b. present simple:</p> <p>◆ <i>tassilaani gadan</i> arrive-IMP-dual-fem. tomorrow 'They will arrive tomorrow'.</p> <p>c. active participle + future temporal adverbial:</p> <p>◆ <i>zaydun qaadimun gadan</i> Zayd-NOM come-A.PART- 3msg tomorrow. 'Zayd coming tomorrow'; i.e., 'Zayd is coming tomorrow'.</p>
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**Table 18: FETA – Future Continuous**

English	Arabic
1. He will be writing a letter.	<p>1. Different; two forms can be used:</p> <p>a. future continuous:</p> <p>◆ <i>sa-/ sawfa takuuna na?imatan</i> fut-prt-will is-IMP-aux-3fsg sleep-A.PART-3fsg 'She will be sleeping'.</p> <p>b. present simple:</p> <p>◆ <i>?araakah</i> see-IMP-1msg-you 'I will be seeing you' (Sieny, 1986:54).</p>

**Table 19: FETA – Future Perfect**

English	Arabic
1. He will have written a letter.	<p>1. Same:</p> <p>◆ <i>sa-/ sawfa yakuunuu qad katabuu risaalatan</i> fut-prt-will is-IMP-aux-3pl.masc prt. wrote-PERF 3pl. masc letter-ACC 'They will have written a letter'.</p>

**Table 20: FETA – Future Perfect Continuous**

English	Arabic
1. He will have been writing for an hour.	<p>1. Different; future perfect is used:</p> <p>◆ <i>sa-/ sawfa takuunaani qad katabataa</i></p>

	<p><i>mudata saa?atin</i></p> <p>fut-prt-will is-IMP-dual-fem.prt. wrote-PERF-dual-fem hour</p> <p>'They will have written for an hour'.</p>
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As Tables 9–20 have shown, there is no one-to-one relationship between forms expressing tense and aspect in English and Arabic. Even in cases where the English and Arabic verb forms appear to be similar in their form classification (e.g., present simple, past simple, past continuous, future perfect...etc.) their functions hardly match. For example, whereas English uses the past simple tense to express a habit in the past, Arabic employs the past continuous. The following example is given in English along with its equivalent in Arabic:

(36) a. He drank tea every day last week.

b. *kaana yashrabu alshaai kula yawmin al?isbu al maadia*  
 was-PERF-aux-3msg drink-IMP-3msg the-tea-ACC every day last week  
 'He was drinking tea every day last week'.

Furthermore, Arabic verb forms are used to express functions different from their counterparts. Thus, Arabic often uses at least two verbal forms to express a verbal form in English (see also Lado, 1957). In this regard, Ellis (1994: 299) argues that the difficulty of learning a second language depends on the distance between the target language and the first language. Where the two languages are closely related, learning is facilitated; and where they are distant, it is not helped. Corder (1967) subscribes to this view. This old-fashioned approach to transfer is replaced by an innovative one proposed by Vainikka and Young-Scholten (1994), who claim that what transfers in early stages of L2 acquisition are only lexical categories and their projections but not functional categories (See section 7.3.)



## 3.8 Implications For Language Acquisition

Our discussion of the morphology of the Arabic tense and aspect system reveals the following implications for the acquisition of English by Arabic-speaking learners of English:

- (i) Since neither variety of Arabic has a special grammatical signal to indicate third person singular, Arabic-speaking learners would encounter many difficulties in using the third person morpheme '-s'. They would fail to attach this morpheme to the English verb. As a result, uninflected forms would be frequently used as an attempt at present reference, which is usually indicated in Arabic by means of prefixes such as *ta*, *ya*, *na*, and *a* attached to the Perfect form (See sections 3.1.1, and 3.5.1.)
- (ii) Regarding the progressive, neither MSA nor SAD has periphrastic progressive forms to represent progressive meaning in the surface structure. Progressive meaning in Arabic can be expressed by the Imperfect form, the active participle, or by *kaana* + Imperfect (See sections 3.2, 3.5.1, and 3.5.3). This means that the construction of progressive tenses is different from that of their counterparts in English. As such Arabic-speaking learners of the lower proficiency level would encounter difficulties in acquiring progressive forms in English in terms of either (a) using auxiliary verb 'be' with the base form without inflection, or (b) attaching the '-ing' ending to the base form without the auxiliary verb 'be', resulting in transfer.
- (iii) The lack of one-to-one relationship between forms expressing tense and aspect in English and Arabic would lead to difficulties in acquiring different tenses such as present perfect, present perfect continuous, past perfect, future perfect ...etc, and consequently transfer would occur. Arabic-speaking learners would use various verbal forms to express the functions of English tenses. They would, for example, use the Arabic past simple tense for the English present perfect (See section 3.5.) However, similar tense

forms such as present simple and past simple would be easily acquired (See sections 7.4 for elaboration on transfer.)

### 3.9 Conclusion

We have noted that Arabic verbs are built on a framework of consonants called radical consonants or radicals, and short vowels. Verbs are divided into two types: basic and derived. The Arabic verb, whether basic or derived, has two forms traditionally known as Perfect and Imperfect. The interpretation for the Perfect is with past meaning (or completed action) and for the Imperfect with present meaning (or incomplete action). These two forms are inflected for person, number, gender and mood.

VS structures have no agreement, as in (37):

- (37) *yalabu*                      *alawladu*  
play-IMP-3msg              the-boys-NOM  
'The boys are playing'.

whereas SV structures have full agreement, as in (38):

- (38) *alawladu*              *yalabuuna*  
the-boys-NOM              play-IMP-3pl  
'The boys are playing'.

We have also argued that the two verbal forms in Arabic (Perfect and Imperfect), traditionally referred to as *al-maadi* and *al-muddari*, and also the active participle (*ismal al faail*), do not express temporal and aspectual relations in and of their own right. Such relations are effectively obtained by the use of TASS devices, namely, auxiliary verbs, particles, temporal adverbials, and other lexical and contextual features, as shown in section 3.5. These devices qualify and enable the two verbal forms and the active participle to express specific tenses and aspects.

Tense is thus seen as a contextual function which is not always associated with a particular verbal form, and which chooses appropriate TASS devices as required by context to express temporal and aspectual relations that may be distinguished by means of these devices and features. The Arabic verbal system is highly aspectual, where the focus is on the action as completed (perfective) or incomplete (imperfective). Furthermore, it has been noted that there is no one-to-one relationship between forms expressing tense and aspect in English and Arabic. Arabic often uses at least two equivalent verbal forms to express a verbal form in English, and possibly vice versa.



# CHAPTER 4

## THE ACQUISITION OF TENSE AND ASPECT

### 4.0 Introduction

Over the last two decades the acquisition of tense-aspect morphology has been intensively investigated to account for the observation that emerging verb inflections appear to function in ways distinct from the target. This investigation has shown an interesting universal pattern in both first- and second-language acquisition. The development of tense-aspect morphology is strongly influenced by the lexical aspect inherent in the verb to which inflections are attached. This tendency has been observed in French (Bronchart and Sinclair, 1973), Italian (Antinucci and Miller, 1976), Greek (Stephany, 1981), and English (Bloom, Lifter, and Hafitz, 1980; Shirai and Andersen, 1995). The same tendency has also been observed in SLA. Robison (1990,1995), Bardovi-Harlig (1998), Collins (1998), and Jabbari (1998) study the acquisition of English, Andersen (1991) and Ramsay (1990) investigate the acquisition of Spanish, Housen (1994) examines the acquisition of Dutch, and Shirai and Kurono (1998) study the acquisition of Japanese.

The occurrence of this phenomenon in various languages indicates, as we argued earlier (see Chapter 1, section 1.0), that the universal innate aspectual values of punctuality, telicity, and dynamicity provide the basic characterization of aspectual categories. The variations that occur among the

aspectual systems of languages are departures from the general characterization of these categories. Thus, aspectual categories are not language-dependent. People distinguish the basic aspectual categories by using three universal aspectual values: [dynamic], [punctual], and [telic]. There appears to be, therefore, a common feature in all languages making stative verbs [-dynamic], activity verbs [+dynamic] and [-telic], achievement verbs [+punctual] and [+telic], and accomplishment verbs [-punctual] and [+telic] (see Chapter 2, section 2.4.4).

The above tendency, which has come to be known simply as the Aspect Hypothesis (Andersen and Shirai, 1994), has appeared under different names and formulations, including the Defective Tense Hypothesis (Weist, Wysocka, Witkowska-Stadnik, Buczowska and Konieczna, 1984), the Primacy of Aspect Hypothesis (Robison, 1990) and the Relative Defective Tense Hypothesis (Andersen, 1989). The Defective Tense Hypothesis states: "In beginning stages of language acquisition only *inherent* aspectual distinctions are encoded by verbal morphology, not tense or grammatical aspect" [emphasis original] (Andersen, 1991:307) (see section 4.1 for elaboration).

Robison (1990) proposed the Primacy of Aspect Hypothesis, explaining that "aspect is primary in the sense not that morphemes that denote aspect in the target language are acquired first, but that target language verbal morphemes, independent of their function in the target language, are first used by the learner to mark aspect" (1990:316). However, Robison found that the evidence from a single learner of English suggested that, with respect to timing, only a weaker aspect hypothesis holds. He concluded his study by observing that "verbal morphology correlates with lexical aspect *at least* during some stage in the development of interlanguage" [emphasis original]. Andersen and Shirai (1994) have also reformulated the Aspect Hypothesis; in the most current formulation, these authors maintain the importance of the initial influence of aspect (see Robison, 1990) but do not explicitly, as Bardovi-Harlig (1998:473) argues, set aspectual influence in opposition to encoding tense or grammatical aspect: "first



and second language learners will initially be influenced by the inherent semantic aspect of verbs or predicates in the acquisition of tense and aspect markers associated with or affixed to these verbs”.

This chapter is divided into three sections. In the first section, previous studies on the L1 acquisition of tense and aspect are examined; the discussion covers studies in favour of or against the Aspect Hypothesis. The following section reviews first early important studies on the L2 acquisition of tense and aspect and then the most recent ones, highlighting agreements and disagreements as they arise in the discussion. The chapter then concludes with a summary of the main points covered.

## **4.1 The First-language Acquisition of Tense and Aspect**

As has just been noted, a series of studies in L1 acquisition of various languages has provided evidence that children acquiring an L1 are strongly influenced by the semantic aspect inherent in the verb to which verb morphology is attached. In other words, children acquire verb morphology by marking inherent lexical aspect rather than tense or grammatical aspect in the early stages of language acquisition, but mark target tense distinctions in the later stages. In this section, we shall discuss the most important studies on the acquisition of tense-aspect morphology, as summarized in Table 1 below. The discussion will cover studies supporting or disputing the Aspect Hypothesis, relating the issues, where appropriate, to the present study.



**Table 1: Studies on the Aspect Hypothesis in first language acquisition**  
(arranged by L1)

<b>Study/L1</b>	<b>N</b>	<b>Learner Characteristics</b>
<b>English</b>		
Bloom et al (1980)	4	English-speaking children observed from 1;9 to 2;6
Shirai (1991)	3	American children ranging from 1;6 to 4;10
Shirai and Andersen (1995)	3	English children ranging from 2;3 to 4;10, 1;6 to 2;3, and 1;6 to 4;9
<b>French</b>		
Bronchart and Sinclair (1973)	74	French children ranging from 2;11 to 8;7
<b>Italian</b>		
Antinucci and Miller (1976)	8	One English child from 1;9 to 2;2, and seven Italian children ranging from 1;6 to 2;6
<b>Japanese</b>		
Cziko and Koda (1987)	1	Japanese child from 1;0 to 4;11
<b>Polish</b>		
Weist et al (1984)	6	Polish children ranging from 1;7 to 2;5
<b>Spanish</b>		
Eisenberg (1982)	2	Spanish children ranging from 1;4 to 2;4

As Table 1 shows, Bronchart and Sinclair (1973) investigated the use of inflectional morphology by 74 French-speaking children ranging from 2;11 to 8;7 (years; months). The subjects were divided into five groups. They were asked to describe actions that the researchers performed with toys (cars, dolls, and animals). Bronchart and Sinclair observed that children used present-tense verb forms for durative atelic verbs such as *naviguer* 'swim', and perfective past forms for actions with clear end results (i.e., achievement and accomplishment verbs such as *sauter* 'jump'). Younger children almost exclusively restricted perfective past form (*passé composé*) to verbs with an end result; verbs not denoting a result remained in their present-tense form. Imperfective past (*imparfait*) was

seldom used by younger children, i.e., its development is much slower than perfective past. The children in the two oldest groups, however, used correct verb forms regardless of the type of aspectual verb.

Antinucci and Miller (1976) found a similar tendency in longitudinal studies based on the conversational data of seven Italian-speaking and one English-speaking child. The English subject's age range was from 1;9 to 2;2 and the Italian subjects' age range was from 1;6 to 2;6. The English subject used past tense inflection only for telic verbs. The Italian group also used past tense inflection in the past participle (*passato prossimo*); the 'past' inflections for activity and stative (i.e., both activity and stative verbs were [-telic]) verbs are in the imperfect tense.

Both Antinucci and Miller and Bronchart and Sinclair appealed to cognitive development to explain their results. They claimed that young children are unable to use tense morphology deictically because they have an undeveloped concept of time. The claim, then, is that children use past-tense morphology to encode the notions that are more relevant to them (i.e., events with observable end results). We reject this explanation on the grounds that adult L2 learners, as in the present study and other previous studies (see section 4.2), who approached the task of English language learning with a fully-developed concept of time, revealed the same tendency as that shown by children acquiring their first language. This suggests that adult L2 learners are guided in their acquisition of tense-aspect morphology by their innate knowledge of universal aspectual values, namely, punctuality, telicity, and dynamicity (see sections 6.7 and 7.2).

Bloom, Lifter, and Afitz (1980) investigated the longitudinal development of verb inflections by four English-speaking children, ranging from 1;9 to 2;6 using spontaneous longitudinal data. They found results similar to Bronchart and Sinclair's and Antinucci and Miller's. Children used past inflections (irregular/*ed*) with accomplishment and achievement verbs; the progressive '*-ing*' morpheme



mainly with activity verbs. Bloom et al, however, emphasized the aspectual contours of actions (i.e., inherent aspect) rather than the end state of actions, thus de-emphasizing the cognitive limitation explanation given by Bronchart and Sinclair (1973), and Antinucci and Miller (1976).

Bickerton (1981) attempted to account for the acquisition of tense-aspect morphology using his Language Biogram Hypothesis (LBH). Based on his pidgin and creole studies, Bickerton claims that language ontogenesis demonstrates the operation of two innate aspectual distinctions, state-process distinction (SPD) and punctual-non-punctual distinction (PNPD), which children are genetically equipped with. To support his LBH, Bickerton (1981) interpreted Bronchart and Sinclair's and Antinucci and Miller's studies as evidence for his PNPD, claiming that children encode punctuality rather than tense when they use past morphology. He also interpreted studies by Brown (1973) and Kuczaj (1978) as evidence for his SPD, since anglophone children observe this distinction by avoiding *-ing* with stative verbs such as *see*, *want*, etc. This, Bickerton claimed, is because children are born with the SPD.

The above cited studies show an agreement with the general prediction of the Aspect Hypothesis. However, disagreements do exist in this regard. Weist, et al (1984) disputed the claims of Bronchart and Sinclair, Antinucci and Miller, and Bloom et al, which they labelled 'the Defective Tense Hypothesis', that the earliest tense morphology only encodes aspect due to an undeveloped concept of time. Using longitudinal and cross-sectional data from six Polish children ranging from 1;7 to 2;5, they claimed that children marked both tense and aspect (both are grammaticalized in Polish) at early stages, thus, providing a counterexample to the Aspect Hypothesis. However, Bloom and Harner (1989) re-analyzed tables in Weist et al (1984) and found that Polish children were biased in their use of tense-aspect morphology with verb types.



According to Weist et al's (1984:348) version of the Defective Tense Hypothesis, only telic verbs receive past-tense inflection; tense distinctions will be redundant and will only accompany aspectual distinctions; only references to immediate past situations will be made. These claims seem too strong. More importantly, the issue to be dealt with here is whether children are guided by inherent semantic aspect in their use of tense-aspect morphology, not whether they can use past morphology deictically.

Another possible counterexample to the Aspect Hypothesis was given by Eisenberg (1982) who analyzed spontaneous longitudinal data from two Spanish children. One child was observed from 1;4 to 2;4 and the other was from 1;10 to 3;0. Eisenberg's data showed that telic and atelic verbs do not link with perfective and imperfective aspects, respectively, thus providing a counterexample to the Aspect Hypothesis. However, Gonzales (1989) re-analyzed Eisenberg's data within Vendler's (1967) framework and concluded that her data were consistent with the Aspect Hypothesis.

Cziko and Koda (1987) provided another possible counterexample. They indicated that their Japanese subject, ranging from 1;0 to 4;11, was not influenced by inherent lexical aspect. They attempted to test Bickerton's (1981) two hypotheses, the PNPD and SPD. They reported that they found no relationship between past verbal inflection and punctuality. However, they found that the progressive marker was not extended to stative verbs - a result consistent with the SPD.

Although there appear to be some disagreements over the exact formulation of the Aspect Hypothesis, most recent research has established a solid ground for it.

Shirai (1991) investigated the acquisition of verbal morphology by three American children acquiring English as an L1. The subjects' age range was from

1;6 to 4;10. He found that children predominantly associated the past inflection with achievements and the progressive inflection with activities and achievements. Shirai explained the occurrence of progressive with achievement verbs was because these verbs were like activity verbs, in that they did not have an inherent end point and prototypically refer to action-in-progress. However, Shirai (1991) explained his results in terms of the Distributional Bias Hypothesis (DBH), that the distribution of inflections can also be observed in the input. The DBH was also used by Ramsay (1989b), Andersen (1989b), and Shirai and Andersen (1994) to account for data from adult L2 learners of Spanish and English. This claim implies that the observed tendencies in L1 and L2 acquisition merely represent a more or less faithful mirror of input or of native adult language use. If this is the case, L1 and L2 acquisition would be reduced to “an input phenomenon” (Rohde, 1996: 117-118). The DBH is rejected in the present work as an alternative explanation for the phenomenon of inherent lexical aspect (see sections 6.7 and 7.4).

Shirai and Andersen (1995) examined the acquisition of tense-aspect morphology using speech samples of three children acquiring English in their home environment. The subjects' age ranges were 2;3 to 4;10, 1;6 to 2;3, and 1;6 to 4;9. They found that children started using past inflections predominantly with achievement, accomplishment, and resultant state verbs, and progressive inflections with activity and iterative achievement verbs, and then extended later to cases that differ semantically from the prototype. Thus, early development of tense-aspect morphology is strongly influenced by lexical aspect inherent in the verb or predicate, with tense distinctions being neglected.

These results have been reinforced by studies probing the acquisition of other first languages: Greek (Stephany, 1981), Hebrew (Berman, 1985), Portuguese (Simões and Stoel-Gammon, 1979), Spanish (Jacobson, 1986), and Turkish (Aksu Koc, 1988). In general, each study has found that inherent semantic aspect constrains the distribution of inflections: past inflections appear



first with verbs that could be considered telic or punctual before they uniformly indicate anterior reference to all verbs; imperfective or progressive inflections associate with more durative predicates.

To summarize, the studies on the L1 acquisition of tense-aspect morphology fall into two groups, one supporting the Aspect Hypothesis (e.g., Shirai and Andersen, 1995; Antinucci and Miller, 1976; Bronchart and Sinclair, 1973; Shirai, 1991), and the other disputing it (e.g., Cziko and Koda, 1987; Eisenberg, 1982; Weist et al, 1984). It can be concluded that these disagreements stem from unnecessary confusion due to terminological differences such as inherent lexical aspect and situational aspect (cf. Bickerton, 1981; Weist, 1989) and from analysis of data. In the following section, we shall review the most important studies on L2 acquisition of tense and aspect morphology. These studies are again divided into two groups: early important studies and most recent studies.

## **4.2 The Second-language Acquisition of Tense and Aspect**

In the last decade, the interest in the acquisition of verbal inflections has spawned numerous L2 studies with various language combinations. In general these studies show that English verbal morphology is similarly used in L2 acquisition to mark aspectual distinctions in a non-native like manner, namely, that L2 learners, like L1 learners, associate telic predicates with past tense (or perfective) markers and atelic predicates with imperfective (or progressive) markers in the early stages of acquisition. However, unlike L1 acquisition, L2 learners often extend the use of progressive marker to stative verbs in English and other L2s, as evidenced also in the present study. Table 2 summarizes the L2 studies relevant to the Aspect Hypothesis.



**Table 2: Studies on the Aspect Hypothesis in second language acquisition**  
(arranged by L1) (adapted<sup>1</sup> from Andersen and Shirai, 1994).

<b>Study</b>	<b>N</b>	<b>Learner Characteristics</b>	<b>L1</b>
<b>English</b>			
Collins (1998)	91	Francophone university students in Quebec, Canada	French
Rothstein (1985)	1	3 years in USA	Hebrew
Kumpf (1984)	1	28 years in USA	Japanese
Shirai and McGhee (1988)	1	6 months in USA	Japanese
Mishina (1993)	3	Uninstructed, in USA	Japanese
Nixon (1986)	1	1- 6 months in USA	Mandarin
Yoshitomi (1992)	1	7 years in USA	Mandarin
Bayley (1991)	20	Not described	Mandarin
Huang (1993)	5	Uninstructed, in USA	Mandrin
Bardovi-Harlig and Reynolds (1995)	182	Foreign university students in USA	Mixed
Jabbari (1998)	45	Children ranging from 9 to 13, classroom SLA, in UK	Persian
Robison (1995)	26	Puerto Rican university students	Puerto Rican
Flashner (1982)	3	2,3, and 4 years in USA	Russian
Cushing (1987)	1	1.5 years in USA	Serahuli
Kumpf (1982)	1	30+ years in USA	Spanish
Robison (1990)	1	Less than 3 years in USA	Spanish
Robison (1993)	26	1st year university students	Spanish
H. Taylor (1987)	1	1-10 months in USA	Spanish
Economides (1985)	1	12 + months in USA	Vietnamese
Bardovi-Harlig (1992)	135	Foreign students in USA	Mixed
Bardovi-Harlig (1998)	51	Foreign university students	Mixed
<b>Dutch</b>			
Housen (1994)	1	Adult American, Dutch foreign-language classes + contact with native speakers of Dutch (both in the USA and the Netherlands)	English
<b>Spanish</b>			
Andersen (1986, 1991, 1992)	2	8-14 years old	English

<sup>1</sup> I have updated this table by adding studies conducted since 1994.

Ramsay (1989a, 1990)	30	Classroom SLA	English
<b>French</b>			
Kaplan (1987)	16	Classroom SLA	English
Bergström (1993)	118	Classroom SLA	English
Kihlstedt (in press)	2	Classroom SLA	English
<b>Japanese</b>			
Shirai and Kurono (1998)	20	Classroom SLA	Mixed

As Table 2 shows, most of the studies report on adult L2 learners, and relevant studies on SLA of tense and aspect are on English, Spanish, French, Dutch, and Japanese. The English data generally revealed that (a) past morphology is strongly affiliated with achievement and accomplishment verbs (Cushing, 1987; Economides, 1985; Flashner, 1982; Robison, 1990; Rothstein, 1985; Shirai and McGhee, 1988; Taylor, 1987), and (b) *-ing* is strongly associated with imperfective aspect and/or durative (i.e., state, activity, and accomplishment) verbs, with activity verbs receiving more *-ing* marking (Cushing, 1987; Economides, 1985; Kumpf, 1982; Rothstein, 1985; Taylor, 1987).

In these studies, the **overextension of progressive markers is different from that found in L1 acquisition**. This probably occurs as a result of overgeneralization or when L1 marks progressive. As Andersen and Shirai (1994) suggest, the L2 learner has a first language on which to map L2 forms (see section 7.4 for elaboration on this tendency as shown in the present work). These researchers speculatively pose the question: what influence does L1 have on the development of tense and aspect? L2 studies of tense-aspect morphology showed that the association of aspect marker(s) *-s*, *-ing*, and PAST form with lexical aspectual categories, interacts with a learner's L1 tense and aspect system - unlike L1 acquisition of tense and aspect, where the interaction is between the universal aspectual values and language input. A case in point is Flashner (1982). In her analysis of the interlanguage of three Russian immigrants, she found that the aspect marking *-ed* and the irregular past forms



indicated perfective aspect (telic aspect), while the base form marked imperfective aspect (atelic aspect). Flashner attributed the use of past forms for 'perfective' contexts and the base form for 'imperfective' contexts to transfer from Russian. It seems that many of the native languages of the subjects in the preceding studies have imperfective aspect, which is strongly linked with durativity (Comrie, 1976; Weist et al, 1984). It is plausible that these learners affiliate the *-ing* form with imperfective aspect in their first languages, because progressive is part of imperfectivity (Comrie, 1976). This implies that the influence of L1 transfer on SLA can lead to a biased selection of verbal morphology. Accordingly, the Arabic tense-aspect system is considered in detail (see Chapter 3), and relevant research hypotheses posed, hypothesizing that while the learners have their L1 as the initial state of SLA, they will resort to their native language only to the extent that universal principles of tense and aspect are not violated (see Jabbari, 1998). Arabic-speaking learners would, for example, use base forms of stative verbs as an attempt at present reference since Arabic verbs are not inflected for third person singular (i.e., there is no grammatical signal in Arabic to indicate third person singular). The tendency to use uninflected forms seems to be a universal characteristic of early stages of language acquisition (See Bradford, 1992; Brown 1973). Moreover, learners would mark achievement and accomplishment verbs with past tense and the progressive. The use of past marking with achievement and accomplishment verbs is consistent with the universal entailments of these verbs. However, marking achievements with the progressive is consistent with the characterization of achievement verbs in Arabic, but not in English. It is a departure from the general characterization of aspectual categories. Therefore, marking achievements with the progressive can not be a violation of constraints on aspectual categories (See section 7.4 for elaboration on transfer.)

The studies of Spanish L2 acquisition further endorsed the Aspect Hypothesis. Andersen's (1986, 1991, 1992) quasi-longitudinal study of two anglophone children studying Spanish as a second language clearly indicated



that the past perfective (*preterit*) morphology was associated with achievement verbs, while the past imperfective morphology was associated with stative and activity verbs. The order of emergence of the past perfective was “achievement→ accomplishment→ activity→ state”, while a slower development of imperfective past followed the course of “state→ activity → accomplishment→ achievement”. Ramsay’s (1989a, 1989b, 1990) cross-sectional studies of 30 classroom Spanish learners also revealed the same tendency as those of Andersen’s.

French L2 studies on the acquisition of tense and aspect also support the Aspect Hypothesis. Kaplan’s (1987) study of 16 classroom native English speakers learning French as a second language indicated that learners used perfective past forms with telic events, but present form with atelic aspect (i.e., states). Bergström (1993) investigated the acquisition of tense and aspect by 118 classroom students, using a Cloze test. An example, the elementary-level learners associated past marking with achievement verbs (79.6%), activity (73.8%), accomplishment verbs (60.3%), and states (38.5%). Thus, the studies in the L2 acquisition of French support the general prediction of the Aspect Hypothesis.

The above cited studies clearly indicate that there is general agreement with the Aspect Hypothesis. However, disagreements do exist. Kumpf’s (1984) study is a possible counterexample to the general predictions of the Aspect Hypothesis. Based on her study of a 28-year-old Japanese speaker, she concluded that her subject used base forms for completed actions in the foreground, while frequently using past tense markers for stative verbs, activity verbs being marked with *-ing* in the background.

An apparent counterexample to the Aspect Hypothesis was given by Meisel (1987). Based on his study of 45 adult learners of German as a second language, he claimed that the aspectual system is “a very marginal phenomenon”. However, Meisel’s (1987) study, as Andersen and Shirai (1994)

point out, does not constitute a problem for the Aspect Hypothesis because the Aspect Hypothesis only deals with the acquisition of verbal morphology, whereas Meisel's focus was on how past time reference is encoded in interlanguage, including other devices like adverbials, discourse organization, and so forth (cf. Long and Sato, 1984).

Bardovi-Harlig (1992) investigated 135 foreign students in the USA with mixed L1 backgrounds by using an elicitation technique in the form of responses to a Cloze test. She claimed that her study did not support the Aspect Hypothesis. Her learners marked target tense forms regardless of lexical aspect. However, a re-examination of the 19 low-level learners in her study by Andersen and Shirai (1994:142) showed that the correct placing of past simple forms on achievement verbs (63.2%) was much more frequent than those on activity (35%) and state (31.6%) verbs.

Bardovi-Harlig and Reynolds (1995) investigated the acquisition of the past simple tense in a cross-sectional study of 182 adult learners of different L1 backgrounds at six levels of proficiency by using a series of Cloze passages. They found essentially the same pattern as Robison (1995) reported for his oral interviews: achievements and accomplishments showed the highest use of past simple, activities the highest use of progressive, and states the highest use of present simple. They also observed that the gap between telic and atelic predicates narrowed with increasing proficiency level. Bardovi-Harlig and Reynolds (1995) left unanswered the question of L1 effects.

Bardovi-Harlig (1998) examined the influence of narrative structure and lexical aspect on the use of tense-aspect morphology by 51 adult learners of English of different backgrounds at various proficiency levels by means of 74 narratives (37 oral and written pairs). The study showed that achievements and accomplishments exhibited the highest rate of past tense inflection and activities the highest rate of progressive inflection, thus lending further support to the



Aspect Hypothesis. Bardovi-Harlig (1998) again left unanswered the question of L1 effects.

Collins (1998) investigated the acquisition of tense and aspect in the context of the past simple tense by 91 francophone university students learning English as a second language grouped into 9 levels, using a Cloze test. She found that students showed more appropriate use of past with accomplishment and achievement verbs and least appropriate use with stative verbs; high use of present marking with stative verbs; high rate of progressive with activity verbs. She also found that the learners' use of the English perfect, which is similar in form but not in function to the French *passé composé*, occurs more frequently with telic events.

Housen (1994) investigated the acquisition of tense and aspect in a case study of an adult American learning Dutch through both formal instruction in Dutch foreign-language classes and through informal contact with native speakers of Dutch (both in the US and in the Netherlands) by analyzing two approximately 90-minute recordings of free conversation. Housen found that in the earlier stages of his subject's development, past tense morphemes first appeared on punctual and/or dynamic verbs in past time-sphere contexts only. Stative verbs favoured present tense morphology. At a later stage past tense morphology spread along the punctual-durative and stative-dynamic continua.

Jabbari's (1998) cross-sectional study of 45 Persian children grouped into three proficiency levels from beginning to lower advanced tested the Primacy of Aspect Hypothesis using three tasks: (1) grammaticality judgement, (2) gap-filling, and (3) story retelling. The subjects' age range was from 9 to 13 years. The study showed a high use of progressive marking with activity verbs, past marking with achievement verbs and present marking with stative verbs for the lower level learners, while higher level learners showed a high use of correct target tense forms.



Robison (1995) examined the Aspect Hypothesis by analyzing the oral interviews of 26 college-aged Puerto Rican learners of English grouped into four proficiency levels. The study showed that inflections associated more with lexical aspect at lower levels of proficiency but with tense at higher levels. The results suggested a significant interdependence of verb inflections and inherent semantic aspect at each proficiency level; learners associated *-s* with states, *-ing* with activities, and past with punctual verbs, with past spreading to all punctual or telic predicates among the highest-level learners. The association of inflections with tense increases with proficiency level: lower-level learners associate *-s* and past primarily with lexical aspect, higher-level learners primarily with tense.

Unlike other studies that examined the distribution of verbal morphology in past-time contexts (e.g., Bayley, 1994; Bardovi-Harlig and Reynolds, 1995; Bardovi-Harlig and Bergström, 1996; Collins, 1998), Robison (1995) included all predicates in the interviews regardless of temporal reference, thus providing evidence for the distribution of tense-aspect morphology across temporal contexts, including cases in which learners have used past with achievement verbs that denote a present or future event. Therefore, Robison's (1995) interpretation of past as a marker of aspectual class is particularly persuasive and his study lends strong support to the Aspect Hypothesis.

Finally, Shirai and Kurono (1998) tested the Aspect Hypothesis using 20 adult learners of Japanese as a second language of mixed backgrounds by means of oral interviews and grammaticality judgement test. They found that the past marking (*-ta*) associated strongly with achievement verbs and the progressive/durative marking (*-te i-*) with activity verbs. They also observed that the learners used past morphology with state verbs much less frequently than NS. Their findings therefore support the Aspect Hypothesis and extend the applicability of the Aspect Hypothesis to a non-Indo-European language.

To sum up, L2 research on the acquisition of tense-aspect morphology supports the general predictions of the Aspect Hypothesis. Learners start off by linking verbal inflections with lexical aspectual categories of verb, with correct tense distinction being neglected in the early stages, while they mark tense regardless of inherent lexical aspect at later stages.

## 4.3 Conclusion

The relevant research literature on L1 and L2 acquisition of tense-aspect morphology has been reviewed. It has been argued that the phenomenon of Aspect Hypothesis is observed in both L1 and L2 acquisition cross-linguistically. The Aspect Hypothesis can be summarized as follows:

- (i) Learners use past or perfective marking on achievement/accomplishment verbs, eventually extending use to activity and state verbs;
- (ii) In languages that encode the perfective/imperfective distinction morphologically, imperfective past appears later than perfective past, and imperfect past marking begins with stative and activity (atelic) verbs, then extends to accomplishment and achievement (telic) verbs;
- (iii) In languages that have progressive aspect, progressive marking begins with activity, then extends to accomplishment/achievement verbs; and
- (iv) Progressive marking is rarely incorrectly overextended to stative verbs (in L1 acquisition).

This tendency (the Aspect Hypothesis) has been observed in French (Bronchart and Sinclair, 1973), Italian (Antinucci and Miller, 1976), Greek (Stephany, 1981), and English (Bloom et al, 1980; Shirai and Andersen, 1995).

However, conflicting findings are presented by Weist et al (1984) in the acquisition of Polish and by Eisenberg (1982) in the acquisition of Spanish. Nevertheless the same tendency has been observed in SLA by Kaplan (1987) in the acquisition of French, Robison (1990, 1995), Bardovi-Harlig and Reynolds (1995), Bardovi-Harlig (1998), Collins (1998) and Jabbari (1998) in the acquisition of English, Andersen (1991) and Ramsay (1990) in the acquisition of Spanish, Bardovi-Harlig and Bergström (1996) in the comparative study of English and French, and Shirai and Kurono (1998) in the acquisition of Japanese. Possible counterexamples to the Aspect Hypothesis are presented by Kumpf (1984) and Bardovi-Harlig (1992) in the acquisition of English and Meisel (1987) in the acquisition of German.



# CHAPTER 5

## THE STUDY

### 5.1 Purpose and Scope

The purpose of this thesis is to investigate the acquisition of tense-aspect morphology by classroom adult Arabic speakers of English (AS) as experimental group with adult native speakers (NS) as control group. It examines how AS use verb inflections with aspectual verbs in the early stages of their language acquisition, clarifying how developing verb morphology aligns with inherent lexical aspect and how this association varies across proficiency levels (elementary, intermediate, lower advanced, and NS). As seen in Chapter 2, the expectation is that verb inflections associate strongly with inherent lexical aspect at lower levels of proficiency, but with tense at higher levels. This study tested the Aspect Hypothesis by using classroom adult Arabic-speaking learners of English as a second language, replicating early work in terms of Vendler's (1967) four lexical categories of verb (state, activity, achievement, and accomplishment), and by application of a wider range of target tenses (present, present perfect, past, past perfect, future, and future perfect) and three data elicitation tasks (grammaticality judgement (GJT), gap-filling (GFT), and finally story retelling (RT)). In this respect, the study is unique, as there are only a few studies so far that involve a variety of temporal contexts (e.g., Jabbari, 1998; Robison, 1995). Another specific feature of the study is the fact that, to the best of my knowledge, this study is the first piece of in-depth research probing the acquisition of tense and aspect by Arabic-speaking learners of English as a second language. The data indicate, as for Jabbari's study, a distributional bias consistent with the Aspect Hypothesis.

In addition, the study investigates possible explanations for the phenomenon of the acquisition of tense-aspect morphology across levels of proficiency by analyzing the data from three elicitation tasks. The data indicate a distributional bias for the elementary- and intermediate-level learners whose use of tense-aspect morphology is dominated by inherent lexical aspect regardless of tense distinctions. They also point to a uniform use of tense markers by the lower advanced-level learners independent of lexical aspect – a distributional pattern endorsed by NS behaviour. The Aspect Hypothesis is thus strongly supported. Adult Arabic-speaking learners, who have a mature L1 grammar and are in an instructed environment, have clearly reactivated their innate knowledge of universal aspectual values in their acquisition of tense-aspect morphology which they have used as a starting point for the acquisition of grammatical aspect and tense distinctions by the lower advanced level. In other words, “innateness” was claimed to account for the influence of inherent lexical aspect. In the following section, we review the general and specific questions as well as the Research Hypotheses.

## **5.2 Research Questions and Hypotheses**

The general research question is: how do adult Arabic-speaking learners of English as a second language use English verbal morphology in their acquisition of tense and aspect? The following two specific questions are addressed: do adult Arabic-speaking learners of English rely more on inherent lexical aspect than tense in their acquisition of English verbal morphology? And if they do, how does this early system vary across speaker range in terms of increasing English language proficiency?

The hypotheses of the study are stated in terms of Vendler's (1967) four categories of lexical aspect, and are formulated and applied to the descriptive results of earlier research outlined above (cf. Chapter 4). They also address the role of Arabic L1 transfer in the process of acquisition of tense and aspect in English.



## Research Hypothesis 1

- i. **Statives with -s:** Elementary- and intermediate-level learners will use the present tense form -s to mark [-dynamic] stative verbs with tense distinction being neglected, while lower advanced-level learners will mark stative verbs with the correct target tense form independently of lexical aspect.
- ii. **Activities with -ing:** Elementary- and intermediate-level learners will mark [+dynamic] and [-telic] activity verbs with the progressive form with tense distinction being neglected, while lower advanced-level learners will use the correct target tense form regardless of lexical aspect.
- iii. **Achievements with PAST:** Elementary- and intermediate-level learners will mark [+punctual] and [+telic] achievement verbs with PAST form regardless of the target tense, while lower advanced-level learners will apply the correct target tense form regardless of lexical aspect.
- iv. **Accomplishments with PAST:** Elementary- and intermediate-level learners will mark [-punctual] and [+telic] accomplishment verbs with PAST form regardless of the target tense form, while lower advanced-level learners will use the correct target tense form regardless of lexical aspect.

## Research Hypothesis 2/Continuity of Lexical Aspect

Elementary- and intermediate-level learners will show the narrowest and most significant association of -s with stative verbs, -ing with activity predicates and PAST with achievement and accomplishment predicates, while lower advanced-level learners will extend the domains to include all categories of aspectual verbs. The lower advanced-level learners will show the weakest dependence, if any, of verb morphology upon lexical aspect.



### **Research Hypothesis 3/Influence of Tense**

The dependence between verb inflection and tense is weakest with the lowest-level learners and strongest with the most advanced-level learners.

### **Research Hypothesis 4/Transfer**

The tendency

- (i) to use the past simple instead of present perfect, and
- (ii) to mark achievement and accomplishment verbs with '-ing' (and PAST)

will be prominent among elementary- and intermediate-level learners but will diminish with increasing level of proficiency.

It is expected that native speakers (NS) will treat tense and grammatical aspect independently of inherent lexical aspect, as in the TL.

## **5.3 Methodology**

### **5.3.1 Subjects**

The subjects of this cross-sectional study were 90 classroom adult Arabic-speaking Saudi male learners, aged between 19 and 27, at three levels of proficiency from beginning to lower advanced: 40 elementary, 25 intermediate and 25 lower advanced. The subjects were all male because of the strict social segregation between males and females. All informants were enrolled in the Intensive English Programme (IEP) at Riyadh Military Hospital and Prince Sultan Cardiac Centre, Riyadh, Saudi Arabia. In the IEP, classes

met for 20 hours a week. Students had received instruction in reading, writing, listening, speaking and grammar for three months by NS teachers at the time of administering the three elicitation tasks. They were high school graduates and had studied English for 6;0 to 7;6 (years; months). Their previous English language instruction included, among other things, the verb *to be*, present, present continuous, present perfect, present perfect continuous, past, past continuous, past perfect, future, and future perfect tenses, as revealed by the researcher's survey of Saudi Arabian English language curricula for intermediate and high schools<sup>1</sup>. Teaching in schools is based on the audio-lingual method and behaviourist learning theories. Rules of grammar are explicitly taught. Students and teachers mostly use the Arabic language, and Arabic translation is usually provided in class.

The subjects' contact with English was virtually confined to the English classroom (5 hours a week X 32 weeks per academic year in intermediate and secondary schools). Classroom instruction does not seem to be effective and proficiency level of learners is generally poor. No subject had contact with English outside the classroom, nor had any been in an English speaking environment, except for three subjects from the lower advanced level. None of the subjects had been taught by native speakers until the three-month period of instruction by NS. The previous teachers were Arabic speakers who had studied English at university, where they had earned a degree in English language (and literature).

In order to place the learners at appropriate levels, the proficiency level of subjects was measured by the Oxford Placement Tests (OPT). These tests come in two sections, Listening and Grammar, which test language skills as well as knowledge of English as a language system. The Listening Test involves 100 items. The students have in front of them, in written form, the items being tested and must make their choice of the correct answer on the basis of what they hear on the tape. The Grammar Test is a 100-item multiple-choice test of grammar in which many of the items test reading comprehension

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<sup>1</sup> English language instruction begins in Saudi Arabian state schools at the age of 13.



and meaning, in that they are presented in a sequence providing both situational and linguistic contexts. The subjects' scores were between 90 to 160 out of 200. The subjects were divided into three groups, 40 at elementary level, 25 at intermediate level, and 25 at lower advanced (based on a banding of scores from the OPT), with scores ranging from 90 to 120, 121 to 140, and 141 to 160. According to the latter cut-off points, the learners are borderline lower advanced-level learners (see Appendix A-9). The subjects' scores were compared with their test results to check the OPT reliability and were found to be reliable.

The control group consisted of 25 adult native speakers of English (NS), between the ages of 21 to 36, working in the hospital as nurses. All NS were from the U.K.

### **5.3.2 Experiments**

The study presented here on the acquisition of tense and aspect employed three elicitation techniques adapted from Jabbari (1998): (1) grammaticality judgement task (GJT), (2) gap-filling task (GFT) for written data elicitation, and (3) story retelling task (RT) for oral data elicitation involving a variety of contexts. The first two tasks involved a wide range of target tenses (present, present perfect, past, past perfect, future, and future perfect) and the latter included present, past and future times<sup>2</sup> (Appendices A-3 and A-7). The question that may arise is: why were three data-elicitation tasks used in this study rather than just one? The inclusion of these techniques was deemed essential to enhance the reliability of experiments and the validity of results. They provided ample room for an adequate investigation of the acquisition of tense and aspect by Arabic-speaking learners of English as a second language, and function as mutually confirmatory tests. Moreover, having a wide range of target tenses permits direct comparison of tense and inherent lexical

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<sup>2</sup> The difference between target time and target tense is that the former covers both absolute and relative tenses whereas the latter does not. For example, future time can refer to either future simple or future perfect tense.



aspect in terms of their relative effect on inflection and on how each varies across proficiency level, and creates a balance between target tenses and inherent lexical aspect.

Another factor considered in this study was the role of Arabic L1 transfer in the two varieties of Arabic: written, namely, Modern Standard Arabic (MSA), and spoken in the form of Saudi Arabian dialect(s) (SAD), which were considered potential sources of interference errors (Research Hypotheses 4a and 4b). Controlling this variable was necessary in order to obtain an accurate interpretation of the results. Only a few studies have considered this variable (e.g., Collins, 1998; Jabbari, 1998; Shirai and Kurono, 1998).

Thus, the hypotheses of the study could be tested adequately within the framework of the Aspect Hypothesis and Vendler's schemata of aspectual verb classification so that the limitations of previous research on the role of inherent lexical aspect in L2 acquisition of tense and aspect were avoided.

By contrast, previous research other than Jabbari's (1998) study employed either written elicitation tasks or oral interviews, focusing only on past reference (e.g., Andersen, 1991; Antinucci and Miller 1976; Bardovi-Harlig and Bergström, 1996; Kaplan, 1987, to name a few; see sections 4.1 and 4.2). As a consequence, other target tenses were left untreated. To refer to past time, one could use the present perfect, past perfect or past simple tense to describe a situation. Data elicitation would, therefore, have limitations. Firstly, obligatory target tenses cannot be determined to check whether L2 learners have produced the correct target tense form. Secondly, these data cannot indicate precisely to which target tenses learners apply verb inflections with inherent lexical aspect. Thirdly, such learners' performances are difficult to interpret. For instance, accomplishment predicates usually outnumber other aspectual categories. Additionally, the number of stative verbs is limited; 'be' is widely used as a stative class in learners' performance (cf. Bardovi-Harlig and Bergström, 1996 for written production by French learners of English). Fourthly, the role of L1 transfer was not considered with the exception of a few studies

[e.g., Collins' (1998) study of francophone university students, Jabbari's (1998) study of Persian children and teenagers studying in the United Kingdom, and Shirai and Kurono's (1998) study of adult learners of Japanese students] (see section 4.2). Finally, a few studies also employed the grammaticality judgement technique to tap L1 and L2 learners' competence (e.g., Gass and Ard, 1984; Jabbari, 1998; Shirai and Kurono, 1998). Shirai and Kurono's (1998) study, for example, was a longitudinal study to investigate the acquisition of Japanese finite verb forms (*-ru* (non-past), *-ta i-ru* (non-past durative), and *-te i-ta* (past durative)) by using multiple-choice acceptability judgement tests (see section 4.2). In what follows, we shall describe in detail the three elicitation tasks used in this study, i.e., the GJT, GFT and RT.

### 5.3.2.1 Grammaticality Judgement Task (GJT)

What does a GJT show? The GJT, as a means of testing subjects' intuitions about tense and aspect, allows the investigator to include sentences that either observe or violate universal constraints or principles, and to create a balance between all lexical aspectual categories of verb (stative, activity, achievement, and accomplishment) and target tenses (present, present perfect, past, past perfect, future, and future perfect). In Davies and Kaplan's (1998:183) words, "grammaticality judgements also allow researchers to fairly easily gather specific types of data for testing hypotheses generated about particular grammatical structures".

Specific controls were built into the design of the experiment relating to the sentences used. First, repetitions of the same verb token more than once with target tenses were avoided and inherent lexical aspects were kept constant. For example, the verb *walk* as an activity aspect was changed from one test item to other activity tokens such as *run*, *write*, *play*, *eat*, etc. Second, to construct the sentences systematically, the number of sentences used was in accordance with the number of aspect markings in each target tense. When the target tense was, for instance, the past perfect tense, four morpho-syntactic variants such as *-s*, *-ing*, *PAST*, and 'had' were constructed for each



lexical aspect of stative, activity, achievement, and accomplishment. The first three aspect markings were possible English verbal inflections and the last was the correct target tense form, i.e., the past perfect tense (see Appendix A-3 for complete GJT test items). For example, target tense 'past perfect', verb type 'stative' is as shown in (1):

- (1)a. The teacher was angry because Ali was late for class and he **forgets** his books.
- b. Majid heard a funny noise. It was not the first time. He **hearing** it several times before.
- c. It was not the first time that Ali needed my help. He **needed** it several times before.
- d. Yesterday Saad met one of his old friends. He **had not seen** him for several years.

There were three groups of GJT test items and four types of lexicalization of lexical aspectual categories that were randomly presented to the subjects. To choose the sentences for presentation to each learner, we used the following 'Latin square' technique (Ferguson, 1959c):

Table 1

Sentence Variants				
Group 1	A	B	C	D
Group 2	B	C	D	A
Group 3	C	D	B	A

In the above design, there are four morphological variants producing four lexicalizations which were randomly presented to the subjects. The letters A, B, C, and D refer to the four morpho-syntactic variants of the *-s*, *-ing*, PAST, and 'had' respectively (see 1a-1d above). There were three sets of target sentences: Group 1, Group 11, and Group 111 (see Appendix A-3).

The sentences were selected to exemplify either adherence to or violations of constraints on lexical aspect. Violations (i.e., incorrect association of aspect markings: *-s*, *-ing*, and PAST with aspectual verbs) were included to



test whether the elementary- and intermediate-level learners selectively mark inherent lexical aspect regardless of tense (see Research Hypotheses 1a -1d) and the correct target tense form was included to see if the subjects would choose the correct target tense form. The progressive marking *-ing* without auxiliary 'be' was included because research literature on L1 and L2 Acquisition of English indicates that learners typically use the morpheme *-ing* without auxiliary 'be' in the early stages of language acquisition (see Bradford, 1992; Jabbari, 1998; and sections 4.1 and 4.2). The results of the GFT and RT converged with those of the GJT in that the elementary- and intermediate-level learners significantly supplied the verbal morpheme *-ing* without auxiliary 'be' in these two tasks (see Appendices C-1 to C-6 and D-1 to D-3).

A selection of 120 sentences, 108 experimental and 12 practice, were constructed for the GJT. Within the set of 108 experimental sentences, 88 were targets and 20 distractors (7 grammatical and 13 ungrammatical). The selection was made on a different basis from that of Jabbari's (1998) in that new verb phrases were used. Some examples of distractors follow:

- (2)a. Khalid like to play tennis in the afternoons.
- b. I prefer red apples to green ones.
- c. That new balls is cheaper than those old ones.
- d. I do not know whether Ali goes to school.

A 4-point scale was used in this study for learners to mark their choices of "absolutely unacceptable", "possibly unacceptable", "possibly acceptable", and "absolutely acceptable", coded 1, 2, 3, and 4, respectively. This scale would give learners more flexibility in expressing their intuitive judgements regarding test items, and give the researcher more insights into the process of acquisition of tense and aspect morphology. Jabbari (1998) used a five-point scale of "very bad", "bad", "I don't know", "good", and "very good". The "I don't know" category does not seem to belong in the scale. On the "no information" reading, it is a different sort of information from "I can't decide" or "not sure".

Shirai and Kurono (1998) used the choices of “correct”, “incorrect”, and “not sure”.

The sentences were arranged to be of comparable length and structural complexity. The lexicon was carefully selected to be within the range of knowledge of all subjects and a vocabulary list with Arabic glosses for most content words was given (see Appendix A - 5). Shirai and Kurono (1998) used a similar instrument.

**Instructions** were another crucial variable in the construction of the GJT. Clear instructions illustrated with examples were provided in English and Arabic to make sure that the subjects understood the task and did not rely on prescriptive grammar. To this end, before undertaking the test questionnaire, the subjects were presented with a detailed instruction sheet which informed them that their intuitions about what was an acceptable sentence in English were being sought. This was followed by an explanation of the notion 'acceptable' rather than 'grammatical'. Subjects were told that intuitions about acceptable sentences were often the result of a 'feel' for the sentence rather than knowledge of a rule (see Appendix A-4).

All Arabic subjects were told in Arabic that speakers may have different intuitions about what is 'possible' and 'absolute' and that they were to concentrate on how they felt about the sentences they would encounter. In this way, they would not view the questionnaire as a grammar test with correct and incorrect responses determined by prescriptive rules. They were told that after each entry on the test questionnaire they would be presented with four choices: “absolutely unacceptable”, “possibly unacceptable”, “possibly acceptable” and “absolutely acceptable” on a four-point-scale. They were instructed to select the category that best reflected their intuitions concerning the entry and were given a demonstration session using the 12 practice sentences to show them how to mark their choices on the four-point-scale. The examiner was present throughout the administration and told the informants to feel free to ask clarification questions.



The importance of clear and detailed instructions as a result of initial pilot testing with native and non-native speakers was evident. Without instructions, or with minimal instructions, native and non-native subjects appeared to perform inconsistently. However, when the instruction sheet (see Appendix A-4) was added and when the non-prescriptive character of judgements was emphasized, the consistency of the subjects' performance improved dramatically. This instrument was used by Bley-Vroman, Felix, and Ioup (1988).

**Timing** the task was another essential factor, and was guided by an estimate of the time that the subjects would need to consult their intuitions rather than their explicit grammatical knowledge. To establish this parameter, the time to be allocated was decided during the pilot testing stage by testing three subjects at each proficiency level who were not subjects of the study. The time taken by these pilot subjects was averaged and set as the time allotted for this task (i. e., 75 minutes). Other researchers such as Shirai and Kurono (1998) did not time their grammaticality judgement tests.

### **5.3.2.2 Gap-filling Task**

The experimental group and the control group were each presented with 72 test items consisting of three tokens per aspectual category of verb (stative, activity, achievement, and accomplishment) and with six target tenses (present, present perfect, past, past perfect, future, and future perfect) giving a total of:  $3 \times 4 \times 6 = 72$  items. Like the GJT, the selection was made on a basis different from that of Jabbari's. Along lines similar to the GJT, there were three sets of target sentences, i.e., three types of lexicalization of aspectual verbs (group 1, group 11, and group 111) which were randomly presented to the subjects (see Appendix A-7). The temporal reference for these tenses was established by context or by a temporal adverbial. The subjects were given the base form of each verb and asked to supply the correct form in the sentence. All items were targeted third person singular as this is the only way to



distinguish between base and present simple responses in English. Only two previous studies observed this technique, Collins (1998) and Jabbari (1998).

Like the GJT, the sentences were constructed to create an obligatory context for a target tense form through the use of a temporal adverbial or verb tense form (see Appendix A-7), and the same GJT sentences were used in the GFT where appropriate. The sentences were of comparable length and structural complexity, and the lexicon was carefully selected to be within the comprehension of subjects to preclude any possible comprehension difficulties that might impede the interpretation of target tenses and inherent lexical aspect. To this end, a vocabulary list with Arabic glosses for most content words was also given (see Appendix A-8). The subjects were allowed 75 minutes to fill in the blanks with the correct forms of the verbs. A sample of the GFT items with the correct tense forms is given below:

- (3) a. Saad (love) **has loved** his wife for 20 years and he still loves her.  
(Stative)
- b. For the last three years Majid (play) **has played** football for Al Nassir and he is going to play again this year. (Activity)
- c. Omar (jump) **has jumped** into the pool four times in the last twenty minutes and he's still jumping in and out. (Achievement)
- d. Mohammed (already/post) **has already posted** two letters this morning and he's writing another one now. (Accomplishment)

**Instructions** were made very clear in both English and Arabic and examples were provided to show subjects how to supply the correct verbs. Like the GJT, the **timing** of the task was decided by averaging the times taken by 12 pilot subjects: 9 non-native speakers, three subjects from each proficiency level, and three NSs, on the basis that subjects should be given a time adequate for consulting their intuitions rather than their explicit grammatical knowledge.

### 5.3.2.3 Re-telling Task

A story re-telling task was used to elicit the AS and NS spontaneous performance on the acquisition of tense and aspect. Many studies of L1 and L2 acquisition have elicited narratives through the retelling of silent films and performed stories (e.g., Chafe, 1980; Tomlin, 1984). As Chafe (1980:xii) observes, many studies have found it "useful to collect examples of different people talking about the same thing in order to see what similarities and differences emerged between verbalizations of what was, at least to a large extent, the same knowledge". Story Retelling tasks, as Bardovi-Harlig (1992:268) says, "provide narratives in which the sequence of events is known to the researcher independently of the narratives themselves". Hence, comparability across speakers and independent verifiability of the story are achieved.

The particular film selected for this study was a 13-minute excerpt from the serial *Mom*. This particular excerpt was chosen because there was a series of discrete, easily identifiable action sequences as well as some simultaneous action ideal for examining the encoding of tense and aspect. The excerpt included two sets of actions, each of which was appropriate for the elicitation of the three target times (present, past and future) yielding adequate data from the subjects. These actions or situations motivated the subjects to use aspectual verbs.

**How were the three target times elicited?** The subjects were asked to watch a silent segment of the film (to avoid complications of listening comprehension) but then it was stopped and they were asked to describe what had happened (to shift them to 'past time'). Then, while they were watching the next segment of the film, they had to describe what was happening right then to shift them to 'present time'. Finally, the film was switched off again and they were asked to guess what would happen 'next' in order to shift them to 'future time'. All responses were tape recorded. These three steps were repeated twice illustrating more situations and consequently more aspectual verbs were



elicited from the subjects. Thus, the limitations of previous research were avoided in that the subjects were usually interviewed to describe what they had done to prompt them to refer to past 'time', leaving the present and the future untackled.

In view of the complicated nature of coding procedure for lexical aspect and due to its importance to this study, the remainder of this chapter is devoted to a detailed discussion of this topic.

### 5.3.3 Coding Procedures

In the following section, we shall discuss the classification procedure for lexical aspect from two perspectives: (i) semantic and (ii) syntactic, and then dwell on the two levels of aspectual choice, namely, grammatical and lexical. Finally, we shall discuss the coding of grammatical aspect and how the data were statistically analyzed.

#### 5.3.3.1 Semantic Perspective

Semantically, the predicates were classified as state, activity, achievement, or accomplishment. As discussed earlier, **states** are stable, homogenous situations which do not involve change, and therefore the endpoints of a state, beginnings and endings, cannot be part of the state itself. States have no dynamics and persist over time (e.g., *love, like, want, know*, etc.). **Activities** are dynamic and durative, but without a necessary endpoint (atelic). They are homogenous i.e., their stages do not differ) and can begin or end arbitrarily, at any stage (i.e., they have arbitrary endpoints) (e.g., *run, play, walk, write* etc.). **Achievements** and **accomplishments** both involve a process which leads up to a well-defined terminal point, and is intimately bound up with the terminal point so that once the process is under way the event cannot be prevented from occurring. Achievements take place instantaneously, and are reducible to a single point in time (e.g., *notice, start, stop, leave* etc.).



Accomplishments have some duration, but have a necessary endpoint (e.g., *write a letter, draw a circle, paint a picture* etc.). There is a hierarchical relationship between these situations. The situations can be divided into state versus dynamic. Dynamic situations are divided into activity versus telic situations, and finally telic situations include achievements and accomplishments. These properties are mentioned in Comrie (1976), Dowty (1979), Lakoff (1966), Leech (1970), Mourelatos (1981), Smith (1997), Vendler (1967) and Verkuyl (1993), among others (see sections 2.4.4 and 2.5.3 for detailed discussion of aspectual categories).

### 5.3.3.2 Syntactic Perspective

Syntactically, operational tests were applied for each of the dimensions: state/non-state; activity/non-activity; and accomplishment/achievement. These tests were required to operationally define the categories and avoid the risk of circularity in definitions and subjectivity in classifying lexical aspect, consequently enhancing the validity of the study.

Based on Shirai and Andersen (1995), the following four steps (i-iv) were taken to determine inherent lexical aspect in the RT within Vendler's (1967) four-way classification of aspectual categories.

- (i) Read a small subset of transcribed discourse until the interpretation of the sentence(s) being coded was clear. This interpretation was facilitated by linguistic and extralinguistic contexts.
- (ii) Determine if repetition was involved, and code as either unitary, iterative, habitual, or iterative-habitual following the criteria below:

The criteria for iterativity is simply whether or not the situation referred to is a single unitary state/event/process. For example, *he rang the bell once yesterday, he swam for 15 minutes yesterday, and he knows English* are

coded as unitary, while *he rang the bell for a few minutes* is coded as non-unitary (i.e., repeated) in that there is a repetition of the action of ringing.

Brinton (1988) suggests three subcategories for repeated situations:

- (4) a. Iterative: He rang the bell for a few minutes.
- b. Habitual: He went to school for a month.
- c. Iterative-habitual: He rang the bell for a few minutes for a month.

According to Brinton (1988:54), iterative “portrays actions repeated on the same occasion”, while habitual “portrays actions repeated on different occasions”. The iterative-habitual category indicates that the actions are not only repeated several times but also on each of these occasions. In the RT, no cases of habitual or iterative actions or situations as marked cases were produced while unitary situations as default contexts were produced (e.g., *He is walking to school*). This is because the task did not require the subjects to describe their daily activities which would then have forced them to produce repeated and habitual actions (i.e., marked situations). The assumption is that marked situations change the type of the unmarked or default aspectual categories (i.e., unitary situations). (4a) as an iterative action should be classified as an activity rather than an achievement aspect, while sentences (4b) and (4c) as habitual and iterative-habitual situations should be classified as stative rather than accomplishment and achievement aspects, respectively. That is to say, iterative situations denote a process without an endpoint, while habitual and iterative-habitual situations entail that every point within the situation is identical to every other point and that any part of the situation is identical to the whole situation.

- (iii) Remove grammatical aspect and tense (e.g., -s, -ing and PAST) from the sentence (for example, *he drives*, *he is driving* and *he drove* should be *he drive* as default values without grammatical aspect). The presence of inflections might bias the assessment of inherent lexical aspect in favour of the hypotheses of the study. Grammatical aspect (or viewpoint aspect) and inherent lexical



aspect are two levels of aspectual choice (see sections 1.1.2, 2.4.2 and 2.5.4). In referring to a situation in which *John drove yesterday*, the speaker can select from a variety of choices, as in (5):

- (5) a. John drove (yesterday).
- b. John was driving.
- c. John was driving to school.

If the speaker's goal is simply to assert the fact that John drove (yesterday), (5a) will suffice. If he wants to add more dynamicity to the assertion, he can choose to impose a grammatical aspect as in (5b). If he wants to assert additionally that John was in the process of driving to school, he can choose (5c). The point here is that a sentence includes two aspectual choices: grammatical aspect (namely, which verbal morphemes to use) and inherent lexical aspect (which words to use). From an inherent lexical aspect perspective, (5a) and (5b) are activity aspect, while the predicate (5c) is an accomplishment aspect. As for grammatical aspect, (5a) is perfective since the sentence presents a complete event that does not have a goal, and also the information that the event was terminated, while (5b) and (5c) are progressive or imperfective because the two sentences present a part of the same event but do not convey whether the goal was reached.

- (iv) Apply steps 1- 3 of the following operational tests to determine the sentence's inherent aspect in the GJT, GFT, and RT.

### **Step 1: State or Non-State**

Does it have a habitual interpretation in present simple tense?

If no→State (e.g., *He loves her* (non-habitual implies state).

If yes→ Non-State ( e.g., *He works* (habitual implies non-state)

→ Go to Step 2



As already noted (sections 2.3.1 and 3.6.2), simple present in both English and Arabic has a habitual or generic reading for non-stative verbs, as (6) illustrates:

- (6) a. He drinks tea every day. [Activity]
- b. He leaves early every day. [Achievement]
- c. He types his letters every day. [Accomplishment]
- d.\* He believes in God every day. [Stative]

In (6a, 6b, and 6c), the activity verb *drinks*, the achievement verb *leave*, and the accomplishment predicate *type his letters* are habitual and grammatical; in (6d) the stative verb *believes* is neither habitual and nor grammatical. This habitual interpretation of the present simple tense of course excludes so-called 'sport commentators' or 'reportage' when describing events, as in (7):

(7) The play begins and the music stops:

“ The curtain rises, Ahmad walks into the centre of the room and then a short man enters”.

In (7), the verbs *rises*, *walks* and *enters* are accomplishment, activity, and achievement verbs respectively, which in this context do not indicate habituality.

### **Step 2: Activity or Non-Activity**

Does “X is Ving” entail “X has Ved” without an iterative/habitual meaning? In other words, if you stop in the middle of Ving, have you done the act of V?

If yes → Activity ( e.g., *He stopped studying* entails that *he has studied*).

If no → Non-activity (e.g., *He stopped walking to the station* entails He has not walked) → Go to Step 3.

### Step 3: Accomplishment/Achievement

If test (a) does not work, apply test (b), and possibly (c).

a. If “X Ved in Y time (e.g., 10 minutes)”, then “X was Ving during that time”.

If yes → Accomplishment ( e.g., *He wrote a letter.*)

If no → Achievement (e.g., *He left early.*)

b. Is there ambiguity with *almost* ?

If yes → Accomplishment (e.g., *He almost wrote a letter* has two readings: he almost started writing a letter/ he almost finished writing a letter.)

If no → Achievement (e.g., *He almost noticed a picture* has only one reading.)

c. “X will VP in Y time (e.g., 10 minutes)” = “X will VP after Y time”.

If no → Accomplishment (e.g., *He will write a letter in 10 minutes* is different from *He will write a letter after 10 minutes* because the former can mean that he will spend 10 minutes writing a letter, but the latter does not.)

If yes → Achievement (e.g., *He will start singing in an hour* can have only one reading, which is the same as in *he will start singing after an hour*, with no other reading possible.)

Each of the tests entails inserting a verb phrase into a frame and then assessing whether the result is acceptable. To apply the tests impartially, the verbs in the data were listed in the base form along with their VP complement. One test at a time was applied to all the verbs on the list. This precluded the possibility of circular results; the presence of inflections might bias the assessment of inherent lexical aspect in favour of the hypotheses of the study (see Chapter 7, section 7.8.2.1). To obtain valid results, inherent lexical aspect had to be ascertained independently of morphology. Before thus isolating predicates, a gloss was assigned to each predicate whose meaning might become ambiguous out of context. If the tests for a given dimension agreed, the verb clearly had one or the other aspect. If one test contradicted the other

two, the majority result was assumed, but the classification was viewed as marginal.

One weakness of previous research is the lack of precise description of the procedures for classifying inherent lexical aspect. Only eight studies have included operational tests for verb classifications (Jabbari, 1998; Robison, 1990, 1995; Shirai, 1993; Shirai and Andersen, 1995; Shirai and Kurono, 1998; Weist et al, 1984). In this respect, we agree with Shirai and Andersen's (1995) view that a precise description of the verb classification procedure is of particular importance in that researchers often use different procedures, which may cause disagreement. The operational tests used in this study were adapted from a number of studies on inherent-aspectual classification: Comrie (1976), Dowty (1979), Fillmore (1975), Lakoff (1966), Robison (1990, 1995), Shirai (1993), Shirai and Andersen (1995), Shirai and Kurono, (1998), and Vendler (1967), among others. Dowty's (1979:60) Table I was informative<sup>3</sup>.

In addition to the above-mentioned diagnostic tests, there are other operational tests we used in defining our aspectual categories as discussed in detail earlier (see Chapter 2, sections 2.4.4.1, 2.4.4.2, 2.4.4.3, and 2.4.4.4). In what follows, we shall discuss coding for grammatical morphemes and target tenses in each task.

### **5.3.3.3 Coding for Grammatical Aspect**

To enter and analyze the data on the three tasks by the statistical package SPSS for Windows, standard coding procedure was followed for target tenses, verb types, aspectual markings and groups. Six files were created in the SPSS, one file for each target tense, containing all relevant data for the four groups.

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<sup>3</sup> Dowty's (1979) Table 1 is a list of various linguistic tests for verb classification. Dowty's aspectual classes are defined as based on the operator *Do*, *Become*, and do not treat duration (i.e., punctuality) as an essential feature. The classification system used in the present study, on the other hand, relies on duration/punctuality to distinguish achievement from accomplishment.



For the RT, the transcribed data were coded based on verb type, aspect marking and target times (i.e., present, past and future). The subjects used different tense forms to refer to these times, and these were coded similarly to the data from the other two tasks.

In addition to initial codes, code transformations were also required in order to identify the precise source of significant values of chi square and to calculate the cell values of particular verb types with particular aspect markings.

Furthermore, additional code transformations were required in order to calculate aspectual versus inflectional markers used by the subjects in each target tense on the GJT, GFT, and RT.

### **5.3.4 Analysis**

To ensure evidence was valid concerning the use of verb morphology in the RT, the following steps were taken:

1. Inclusion of all clauses that have verbs including those in negative clauses, in nonfinite clauses, and after modals, since non-native-like uses of '-s', '-ing', or PAST arose in these contexts (see Chapter 6, sections 6.1.3.2 and 6.1.3.3).
2. Exclusion of formulaic utterances (e.g., *I think, I do not know, you know*), ambiguous forms, verbs that do not conjugate for past tense (e.g., *hit, put, cut*), forms resulting from mimicry of the interlocutor, or verbs appearing in the uninflected form except for third person singular, supporting the claim that present inflections affiliate with state predicates since uninflected forms function for present reference in English (see, for example, sections 6.1.2.1, 6.1.3.1, and 6.2.2.1). Such cases present insufficient evidence that the morpheme is being used productively.

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Chi square tests were used to check the association of verb type and aspect marking in the GFT and RT. The rationale for using chi square tests to analyze the data on the GFT and RT is that the subjects were required to provide the correct target tense forms in the former and verb type and verbal morphology in the latter, and we needed to calculate the frequency of verbal morpheme(s) with verb type(s) for all target tenses.

In the GJT, the association of verb type with aspect marking and with correct tense form was controlled. The learners were directed to mark their choices on the questionnaire on a 4-point scale of (1) “absolutely unacceptable”, (2) “possibly unacceptable”, (3) “possibly acceptable”, and (4) “absolutely acceptable”.

To identify the precise source of the significant values of chi square and to calculate the cell values of particular verb types with particular aspect markings in the GFT and RT, the total chi square was separated into its component parts by collapsing the data in rows and columns so as to simplify the table and the null hypothesis which is associated with the table. This procedure is functionally similar to the Tukey test used in the GJT in order to identify which cells were statistically significant. In the following chapter, we shall present and discuss the results of the study in detail.

## **5.4 Conclusion**

In this chapter, it has been noted that the main purpose of this cross-sectional study was to investigate the acquisition of tense-aspect morphology by 90 classroom adult Arabic-speaking learners of English as a second language (AS). The study also attempted to examine how AS used verb inflection with aspectual categories of verb in the early stages of their language acquisition, clarifying how developing verb morphology aligns with inherent lexical aspect rather than tense or grammatical aspect.



The Research Questions and Hypotheses were stated in Vendler's (1967) four-way classification of aspectual categories of verb and formulated to test the Aspect Hypothesis. They also addressed the role of L1 transfer in the process of acquisition of tense-aspect morphology in English.

The study employed three data elicitation tasks and a wide range of target tenses. The GJT consisted of 108 experimental sentences using a 4-point scale to measure learners' intuitions regarding the acceptability of the items. The GFT consisted of 72 experimental sentences, three tokens per aspectual category. The RT was performed using a 13-minute excerpt for the elicitation of the three target times (present, past, and future).

Lexical aspects were classified from two perspectives: semantic and syntactic. Semantically, the predicates were classified as state, activity, achievement, or accomplishment. Syntactically, four steps were adopted to determine the categories of lexical aspect, including five operational tests (see section 5.3.3.2). Finally, the data on the three tasks were coded and analyzed by the statistical package SPSS for Windows. Repeated measures MANOVA, Tukey test and chi square tests were applied to the data to see whether the association of verb types with aspect markings was significant.

# CHAPTER 6

## RESULTS AND DISCUSSION

### 6.0 Introduction

This chapter presents the results of the study of acquisition of tense-aspect morphology by Arabic-speaking learners of English as a second language. The sections are organized according to the acquisition of target tenses: present, present perfect, past, past perfect, future, and future perfect, and task. Each section begins with an overall view of the association of verb types and aspect markings and then examines in detail the association of present marking '-s', progressive marking '-ing', and PAST marking, either with '-ed' or irregular forms, with verb types, in accordance with the Research Questions and Hypotheses detailed in Chapter 5, section 5.2. This is followed by an investigation of the emergence and development of target tenses from the semantic perspective. Based on the findings of the study, we shall argue that the early use of tense-aspect morphology is constrained by inherent lexical aspect (or what Comrie (1976) calls semantic aspect and Smith (1983, 1997) situational aspect) at elementary and intermediate levels, while (at lower advanced level) later use is constrained by temporal reference regardless of inherent lexical aspect - a result endorsed by the NS (control group) behaviour. In addition, we shall try to demonstrate that for elementary and intermediate levels, lexical aspect exerts more control over verb inflection than tense does, whereas tense controls the use of verb inflections at lower advanced level as well as the variation across proficiency levels. We shall also compare the performance of the experimental group with that of the control group on the GJT, GFT, and RT, and present a scenario for the acquisition of tense/aspect. Finally, in section 6.7, we shall discuss the results in view of the Research Questions and Hypotheses, the

principles of tense-aspect acquisition and use: (i) the Relevance Principle (Bybee, 1985, and Slobin, 1985), (ii) the Congruence Principle (Andersen, 1993), and (iii) the One to One Principle (Andersen, 1984), the prototype model of language acquisition, and finally Bickerton's (1981) Language Biogram Hypothesis (LBH) as a complementary explanation.

## **6.1 Target Tense: Present**

### **6.1.1 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GJT**

As already noted (sections 5.1 and 5.2), the purpose of this thesis was to investigate the acquisition of tense-aspect morphology by adult Arabic speakers of English (AS) within Vendler's (1967) framework of aspectual categories of verb (stative, activity, achievement, and accomplishment), involving a larger array of target tenses (present, present perfect, past, past perfect, future, and future perfect) by means of three data-elicitation tasks (the GJT, GFT, and RT). In this section, the influence of lexical aspect was investigated in the context of present simple by means of the GJT. For this purpose, 12 test items out of 88 target sentences on the GJT, three items per aspectual category, were constructed with three verbal morphemes: '-s', '-ing', and PAST, for each lexical aspect of stative, activity, achievement, and accomplishment. These variants were attached to the verbs in such a way that adherence to or violations of innate universal aspectual distinctions were created (see Appendix A-3). A four-point scale was used to measure learners' intuitive judgements of the acceptability of the test items as absolutely unacceptable (1), possibly unacceptable (2), possibly acceptable (3), and absolutely acceptable (4). Typical examples of the biased association of verb types and aspect markings for the elementary- and intermediate-level learners are given in (1) (see Appendix A-3 for complete GJT test items). The circled number coincides with what Arabic subjects are expected to circle due to inherent aspect



(see sections 1.0, 1.2, 4.1, 4.2 and 5.1). Note, however, that NS are expected to show no distributional bias.

(1) a. Last year Khalid was only interested in tennis but now he **enjoys** swimming.

1 2 3 ④

b. The play begins and the music stops:  
**"Then a short man entered"**.

1 2 3 ④

c. Majid is a great football player. **He running very fast** and shoots accurately.

1 2 3 ④

d. Dr. Al Shuhri **operated on four patients** every Monday but on Tuesday he goes to Al Kharj.

1 2 3 ④

The subjects' choices were analyzed by a repeated measures MANOVA, which showed that the interaction of verb types and aspect markings across the groups was statistically significant ( $F(18, 300) = 2.14121, P < 0.005$ ). This interaction is represented by the following bar graphs. On the horizontal axis, there are four groups: (1) elementary, (2) intermediate, (3) lower advanced, as experimental groups, and (4) NS as control group. For each group, the type of aspect marking (AM) ('-s', '-ing', and PAST) is shown. On the vertical axis, the mean acceptability ratings are shown with the maximum based on a four-point scale: absolutely unacceptable (1), possibly unacceptable (2), possibly acceptable (3), and absolutely acceptable (4).



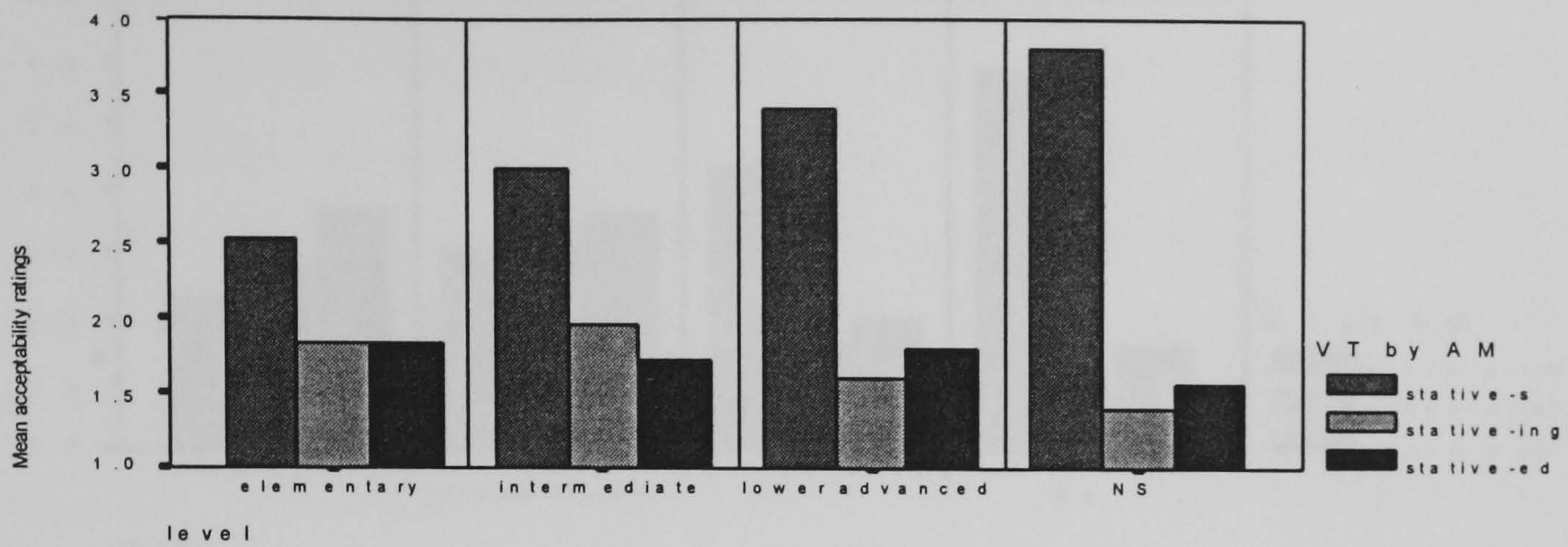


Figure 1. MAR (mean acceptability ratings) – **Statives**. Stative verbs exhibit a biased use of the present tense marker ‘-s’ in the elementary and intermediate levels. In the lower advanced level, the correct target tense form dominates.

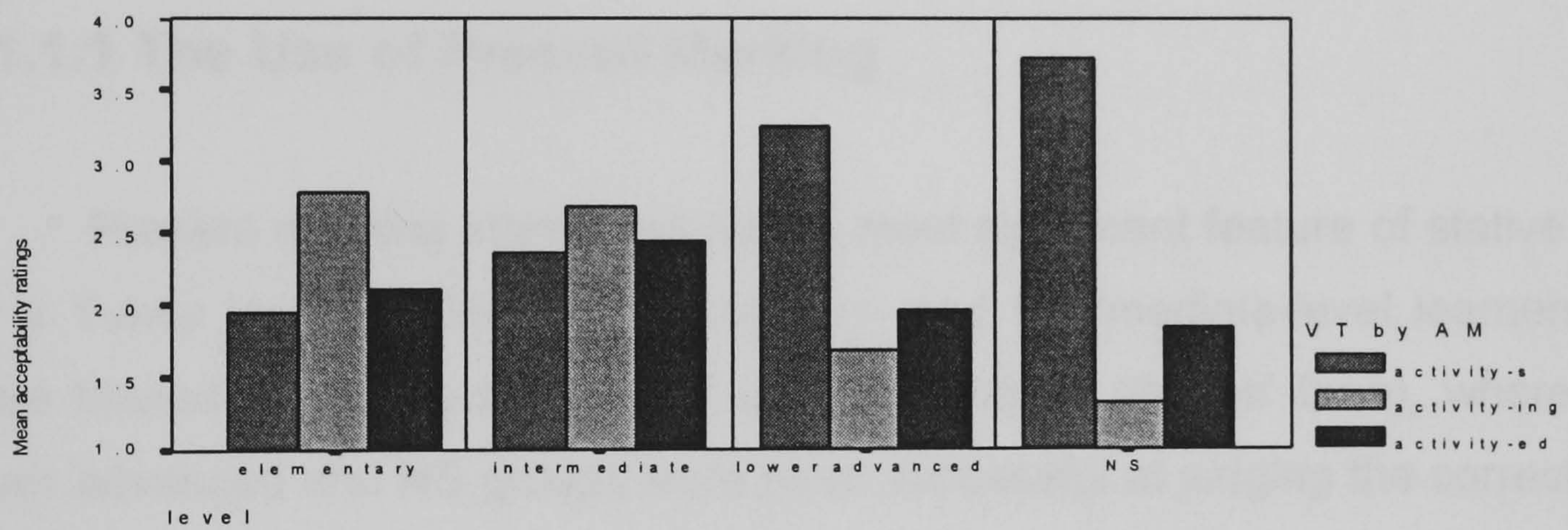


Figure 2. MAR – **Activities**. Progressive marking ‘-ing’ links strongly with activity verbs in the elementary and intermediate levels, but is replaced by the correct target tense form ‘-s’ in the lower advanced level.

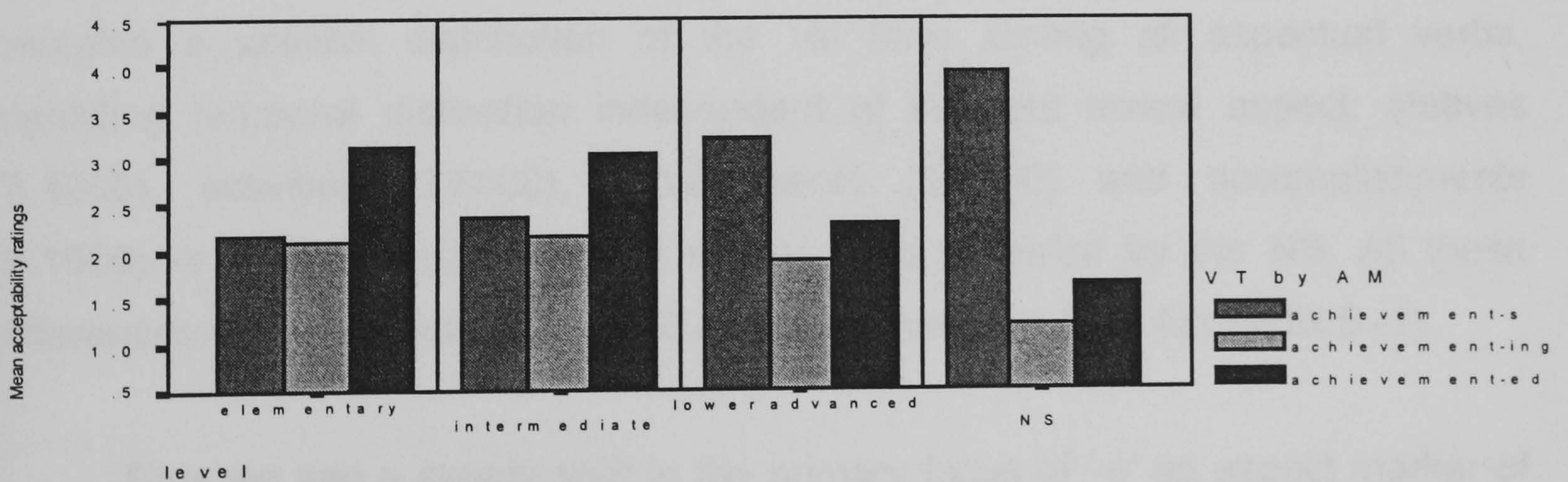


Figure 3. MAR – **Achievements**. Achievement verbs exhibit a strong alliance with PAST marking in the elementary and intermediate levels, but this tendency is rectified in the lower advanced level.





Figure 4. MAR – **Accomplishments**. Like achievements, PAST marking affiliates significantly with accomplishment verbs in the elementary and intermediate levels, though the correct target tense form ‘-s’ aligns with accomplishment aspect in the lower advanced level.

### 6.1.1.1 The Use of Present Marking

Present marking stands out as the most significant feature of stative verbs. As a Tukey test revealed, the elementary- and intermediate-level learners were more biased at judging the correct aspect marking (the ‘-s’ form), whereas the lower advanced and NS groups were more successful at judging the correct target tense form. The elementary and intermediate level groups showed a strong preference for associating the ‘-s’ morpheme with statives (2.5250, 3.0000) over activities (1.9500, 2.3600), achievements (2.1750, 2.3600) or accomplishments (2.1500, 2.5600) respectively. On the other hand, the lower advanced group revealed a uniform distribution of the ‘-s’ form among all aspectual verbs, signalling temporal distinction independent of inherent lexical aspect: statives (3.4000), activities (3.2400), achievements (3.1600) and accomplishments (3.1600), a pattern endorsed by a similar trend revealed by the NS. All these differences were significant at ( $P < 0.5$ ) confidence level (see Appendix B–1).

Thus we see a steady shift in the primary focus of ‘-s’ as aspect marker of stative verbs at the elementary and intermediate level groups, to present reference at the lower advanced level group. The use of ‘-s’ as present reference is reinforced by the response of the NS (control) group. Though each group



associates ‘-s’ with present tense contexts, elementary- and intermediate-level learners show a distinctly more biased association of ‘-s’ with stative verbs. The association of ‘-s’ with all other aspectual verbs increases steadily with proficiency level and the biased use of ‘-s’ disappears and is replaced with a virtually uniform distribution of the present morpheme. What we find here, then, is a confirmation of the study’s prediction: third person singular marking correlates more with **lexical aspect** at elementary and intermediate levels, but more with **tense** at the lower advanced and NS levels (cf. Research Hypotheses 1a and 2). These findings corroborate those from Jabbari (1998) and Robison (1995), working on different languages with differently designed tests and with different learner’s characteristics.

#### **6.1.1.2 The Use of Progressive Marking**

Progressive marking bears a distinct association with activity aspect. A Tukey test revealed significant differences between the elementary and intermediate level groups on the one hand, and the lower advanced and NS groups on the other. The former used the ‘-ing’ morpheme more selectively to mark activities (2.7750, 2.6800) than statives (1.8250, 1.9600), achievements (2.1000, 2.1600) or accomplishments (2.3750, 2.3600), respectively. The predominant association of the ‘-ing’ morpheme with activity verbs for these groups decreased significantly with rising level of proficiency in the lower advanced level and NS groups from (2.7750, 2.6800) to (1.6800, 1.3200). This dramatic change from the biased and significant association of activities with the ‘-ing’ form in the elementary and intermediate level groups to an insignificant one in the lower advanced level group is consistent with Research Hypothesis 2, namely, that elementary- and intermediate-level learners will show the narrowest and most significant association of ‘-ing’ with activity verbs.

Consistent with Hypothesis 4b (that the tendency to mark achievement and accomplishment verbs with the ‘-ing’ will be prominent among the elementary- and intermediate-level learners, but will diminish with increasing level of proficiency), the elementary and intermediate level groups affiliated the ‘-ing’ form significantly with achievements and accomplishments. A Tukey test showed that there were significant differences in the use of the progressive form with achievements between the elementary, intermediate, and lower advanced level groups on the one hand and the NS group on the other. However, contrary to Hypothesis 4b, there were no significant differences between the elementary and intermediate level groups compared with the lower advanced level group. The affiliation of ‘-ing’ with punctual events remained high at the lower advanced level, implying that Arabic L1 influence was still very active. Achievements are compatible with the progressive in Arabic but not in English (See sections 2.5.4, 4.2 and 7.3.)

The affiliation of progressive marking with accomplishments was also significant. A Tukey test revealed significant differences between the elementary and NS groups, but none between the elementary and the lower advanced, indicating that use of the ‘-ing’ was high – a result contrary to Research Hypothesis 4b. This tendency dropped insignificantly (from (2.3750) in the elementary to (1.8000) in the lower advanced level group) presumably due to a strong influence from Arabic, the native language of the learners, but significantly from (2.5600) in the intermediate level to (1.8000) in the lower advanced level, probably as a result of an increasing level of proficiency.

Regarding the use of ‘-ing’ form with statives, there were no significant differences between the four groups (1.8250, 1.9600, 1.6000 and 1.4000 in order of increasing level). This seems to indicate that the elementary and intermediate level groups have acquired the progressive morpheme in English, helped by their innate knowledge of universal aspectual values. Thus, statives do not align with progressive marking, but with the present tense marker ‘-s’ (see section 6.1.1.2 above). This finding is reinforced by Jabbari (1998) and Robison (1995).



### 6.1.1.3 The Use of PAST Marking

As Appendix B–1 shows, the interaction of PAST marking (both ‘-ed’ and irregular forms) with achievements and accomplishments was statistically significant. The elementary and intermediate level groups revealed a strong preference for associating PAST marking with achievements (3.1250, 3.0400) and accomplishments (2.8250, 2.8000) over statives (1.8250, 1.7200) or activities (2.1000, 2.4400). The weak association of PAST marking with statives indicates that statives do not align with PAST marking but, rather, with present aspect marking (see sections 2.4.4.1 and 6.1.1.1). The fact that there were no significant differences in the use of PAST marking with punctual events between the intermediate and the lower advanced level groups (2.2800) implies that lexical aspect was not mediated by level of proficiency. There was a continued effect of lexical aspect even at higher levels of proficiency. This finding is corroborated by Collins (1998).

Consistent with Research Hypothesis 3 (the dependence between verb inflection and tense being weakest with the lowest level and strongest with the most advanced level learners), the use of ‘-ing’ and PAST aspect markings showed the weakest correlation with activities (1.6800, 1.3200), achievements (2.2800, 1.6400) and accomplishments (2.0000, 1.8000) in the lower advanced level group, a pattern endorsed by the NS group. In contrast, the lower advanced and NS groups were more accurate in judging the correct target tense form ‘-s’, which they extended to all aspectual verbs to mark temporal distinction independent of the inherent semantic aspect of the verb: statives (3.4000, 3.8000), activities (3.2400, 3.7200), achievements (3.2000, 3.9200) and accomplishments (3.1600, 3.9200) respectively (see figures 1 through 4 above). These findings are reinforced by Robison (1995).



## 6.1.2 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GFT

Like the GJT, the GFT was used to test the Aspect Hypothesis involving six target tenses (present, present perfect, past, past perfect, future, and future perfect) and four aspectual categories (stative, activity, achievement, and accomplishment). As tabulated in Appendix A–7, 12 test items out of 72 target sentences on the GFT (three items per aspectual category) were constructed to provide obligatory present tense contexts for the subjects to supply the correct target tense form of the verb in brackets. Typical examples of the biased association of verb type with aspect marking for the elementary- and intermediate-level learners are given below:

- (2) a. Last month Majid went running every day but now it is hot. He  
(prefer) **prefers** to go swimming.
- b. Majid is a good runner. He (run) **running** very fast
- c. He usually (reach) **reached** Jeddah early but he is late today.
- d. Dr. Al Shuhri (operate) **operated on five patients** every Monday  
but on Tuesday he goes to Al Kharj.

The subjects' responses were coded and entered into an SPSS spreadsheet based on verb type, aspect marking, target tense and level of proficiency (see section 5.3.3.2). Chi square tests were applied to test the association of verb type and aspect marking across the levels of proficiency. The overall chi square values of the association of aspect marking with verb type were significant ( $X^2(15, N = 480) = 167.896, P < 0.000$ ), ( $X^2(33, N = 300) = 126.468, P < 0.000$ ), ( $X^2(21, N = 300) = 35.229, P < 0.027$ ) and ( $X^2(12, N = 300) = 28.417, P < 0.005$ ) for each of the four groups (Appendix B–1). The following bar graphs represent this effect across levels of proficiency. Like the GJT, the vertical axis shows the total number of cases of aspect marking (AM) (e.g., '-s', '-ing', and PAST, etc.) produced by the subjects. In addition, there were three items for each



verb type (here, stative) and for each target tense (here, present tense) with 40 subjects in the elementary, and 25 subjects in each of the other groups. Thus, the maximum number of '-s' morpheme cases for the elementary level group is 70 out of 120. On the horizontal axis, there are four groups presented from low to high level as well as NS.



Figure 5. TNC (total number of cases) – **Statives**. Stative verbs exhibit a biased use of the present marking form '-s' and a significant occurrence of uninflected forms in the elementary and intermediate levels, but the correct tense form appears in the lower advanced level.



Figure 6. TNC – **Activities**. The progressive marking with and/or without auxiliary 'be' affiliates strongly with activity aspect in the elementary and intermediate levels to be replaced by the correct target tense form '-s' in the lower advanced level.



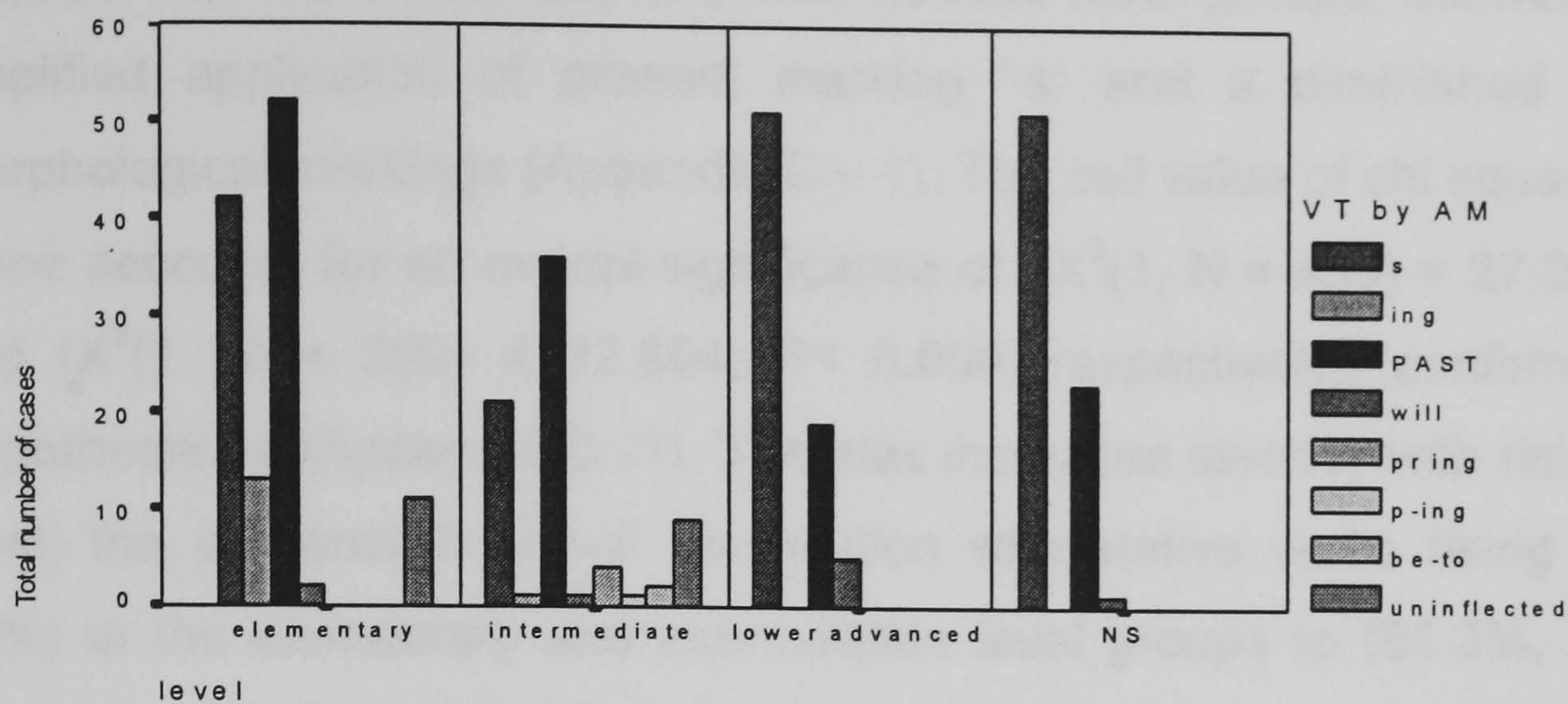


Figure 7. TNC – **Achievements**. PAST marking links significantly with achievement verbs in the elementary and intermediate levels, but this tendency reduces dramatically in the lower advanced level as a result of the strong use of the correct target tense form.

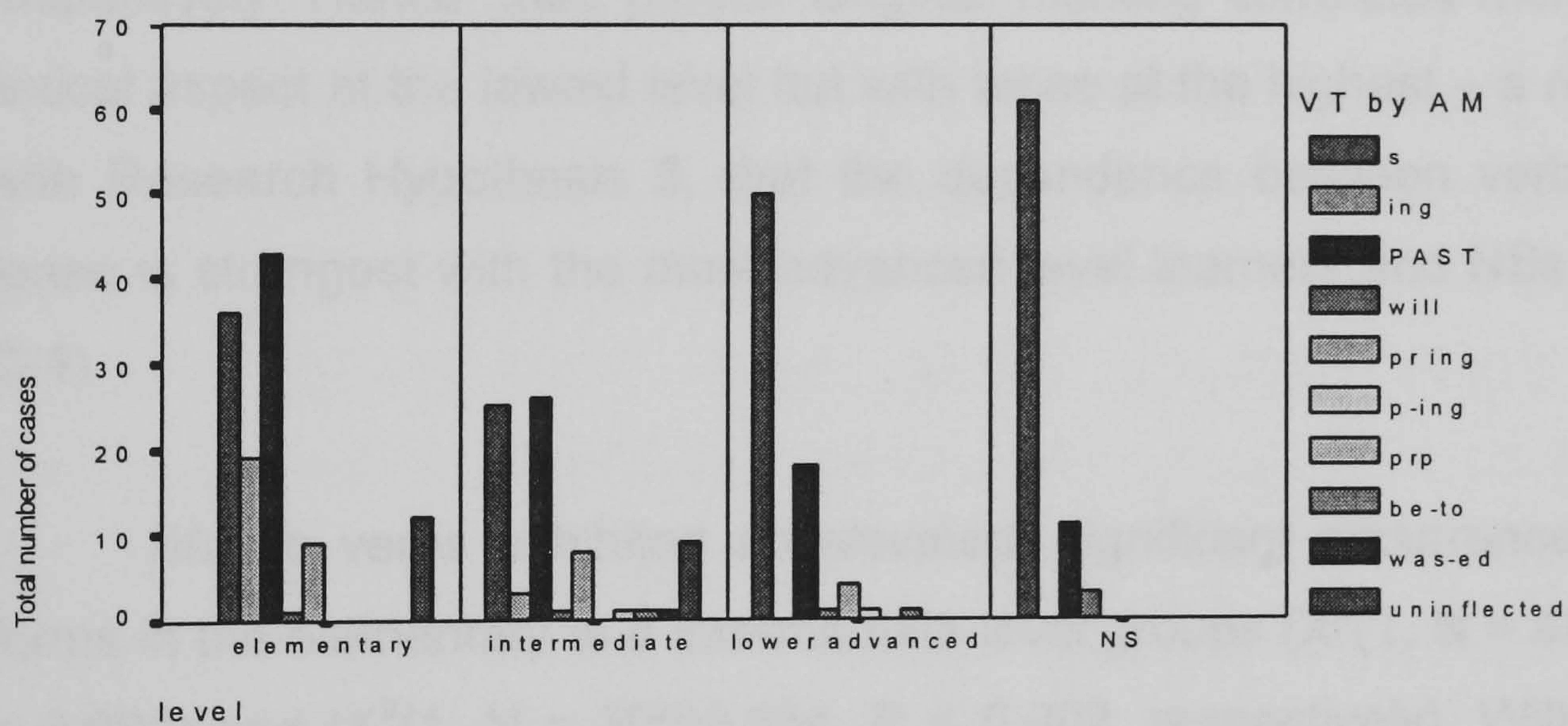


Figure 8. TNC – **Accomplishments**. Like achievement aspect, accomplishment verbs associate strongly with PAST marking in the elementary and intermediate levels, but not in the lower advanced level.

### 6.1.2.1 The Use of Present Marking

As seen earlier (section 6.1.1.1), stative verbs associate strongly with the present marking form ‘-s’. This result is further reinforced by the GFT data which show that the use of present marking stands out as the most salient feature of



statives. For the elementary and intermediate level groups, statives exhibited an amplified application of present marking '-s' and a diminished use of other morphological markings (Appendix C – 1). The cell value of chi square for stative-s alone accounts for an overall significance of ( $X^2(1, N = 480) = 27.074, P < 0.000$ ) and ( $X^2(1, N = 300) = 22.694, P < 0.000$ , respectively), confirming Research Hypothesis 1a (Appendix C -1). The bias increases steadily with rising proficiency level, the percentage of '-s' association with stative verbs rising from (58.3%, 60%) in the elementary and intermediate level groups to (81.3%, 81.3%) in the lower advanced and NS groups. In fact, the lower advanced and NS subjects used the correct target tense marker '-s' predominantly with all aspectual verbs regardless of inherent lexical aspect, as opposed to the trend revealed by the elementary and intermediate level groups: statives (81.3%, 81.3%), activities (72%, 80%), achievements (68%, 68%) and accomplishments (66.7%, 81.3%) respectively. Hence, third person singular marking correlates more with inherent lexical aspect at the lowest level but with tense at the highest – a result consistent with Research Hypothesis 3, that the dependence between verb inflection and tense is strongest with the most advanced level learners and NSs (see Appendix C-1).

Stative verbs exhibited an elevated, significant occurrence of uninflected forms in the elementary and intermediate level groups ( $X^2(1, N = 480) = 26.006, P < 0.000$ ) and ( $X^2(1, N = 300) = 9.854, P < 0.002$ , respectively). With rising level of proficiency, preference for the uninflected form dropped to zero in the lower advanced level group. This tendency has been observed in L1 and L2 acquisition (see Housen, 1994; Robison, 1995). Interesting in this regard is that by re-analyzing Jabbari's (1998) GFT tables on the target tense present, it was found that the uninflected-form tendency, which Jabbari (1998) did not report, is as strongly represented (at 40.9%) as the association of stative verbs with the present tense marker '-s' for low-level learners. This implies that the use of uninflected verbs is probably a universal characteristic in early language

acquisition – a conclusion corroborated by Omar (1973) who observed a tendency for the uninflected form among children acquiring their Egyptian Arabic.

Since uninflected forms function for present reference in English, these significant values provide further support for the claim that present inflections associate with stative verbs. The omission of -s is multi-causal. It could be developmental since the acquisition of the -s morpheme takes some time (as has been observed in L1 and L2 acquisition - see Bradford, 1992; Housen, 1994; Robison, 1995). However, since coda clusters are prohibited in Arabic, it is possible in this case to also interpret omission of -s as evidence of an L1 influence (see Chapter 3, section 3.1.1).

### **6.1.2.2 The Use of Progressive Marking**

As Appendix C-1 shows, the use of progressive marking bears a distinct correlation with activities. For the elementary and intermediate level groups, progressive marking without auxiliary 'be' associates significantly with activities: ( $X^2(1, N = 480) = 77.873, P < 0.000$ ) and ( $X^2(1, N = 300) = 11.574, P < 0.001$ ) – a result supported by the GJT data (see section 6.1.1.2). Like the omission of -s, the omission of auxiliary 'be' could be developmental as has been observed in L1 and L2 acquisition (see also Bradford, 1992; Omar, 1973); in fact the acquisition of the progressive marker '-ing' is one of the earliest inflections acquired (Omar, 1973). However, since neither MSA nor SAD has periphrastic progressive forms to represent progressive meaning in the surface structure, the omission of auxiliary 'be' could be interpreted as evidence of L1 influence, a possibility supported by the findings of El Badrin (1982) (see section 3.5.1). The present continuous form was statistically significant for the intermediate and lower advanced level groups ( $X^2(1, N = 300) = 46.773, P < 0.000$ ) and ( $X^2(1, N = 300) = 9.091, P < 0.003$ ) respectively). The predominant affiliation of progressive marking with activities in the elementary and intermediate level groups decreased considerably with rising level of proficiency in the lower advanced group, from 45% and 36% in the



elementary and intermediate level groups to 9.3%. This remarkable change was brought about by spreading of the correct target tense form (i.e., –s) uniformly to all aspectual verbs regardless of their inherent semantics (see Appendix C -1). The significant value of the present continuous form in the lower advanced level group implies that lexical aspect was not mediated by level of proficiency. The influence of lexical aspect remained high even at a higher level of proficiency (see Research Hypothesis 2: the elementary and intermediate level learners will show the most significant association of progressive marking with activity aspect, while the lower advanced level and NS groups will show the weakest dependence, if any, of verb morphology on lexical aspect).

Consistent with Hypothesis 4b, Arabic speakers in the elementary level group significantly affiliated progressive marking without auxiliary 'be' with achievements ( $X^2(1, N = 480) = 5.733, P < 0.017$ ), while this effect was not significant for the intermediate and lower advanced groups. Moreover, the association of the present continuous with achievements was significant for the elementary and intermediate level groups ( $X^2(1, N = 480) = 5.517, P < 0.019$ ) and ( $X^2(1, N = 300) = 5.197, P < 0.023$ ), but not for the lower advanced and NS groups.

The affiliation of accomplishments with the present continuous was significant only for the elementary level group: ( $X^2(1, N = 480) = 8.621, P < 0.003$ ). With increasing levels of proficiency, the elevated application of progressive marking to punctual events found in the elementary and intermediate level groups dropped to zero in the lower advanced level group, and the affiliation of progressive with accomplishments plummeted in the lower advanced level group. The dramatic decrease of progressive marking in the lower advanced level is endorsed by the NS behaviour (see Appendix C-1).

Statives exhibited only one case of association with progressive marking - much less than its expected value of (21.8). The progressive is consistently scarce



among statives in all groups. Thus statives do not align with progressive marking. Rather, they strongly associate with present reference (see sections 6.1.1.1 and 6.1.2.1above).

### 6.1.2.3 The Use of PAST Marking

As with the GJT data (section 6.1.1.3), PAST marking aligns strongly with achievement and accomplishment aspects. In the GFT data, a biased application of PAST marking was the most significant feature of achievements and of accomplishments (though to a lesser extent than is the case with punctual events), for the elementary and intermediate level groups ( $X^2(1, N = 480) = 25.574, P < 0.000$ ) and ( $X^2(1, N = 300) = 25.156, P < 0.000$ ), and ( $X^2(1, N = 480) = 8.351, P < 0.004$ ) and ( $X^2(1, N = 300) = 3.904, P < 0.048$ ) respectively. Jabbari (1998) found that accomplishment aspect was not statistically significant for lower-level learners. The affiliation of PAST marking with achievements was also statistically significant for the NS group. This result indicates that lexical aspect was not mediated by level of proficiency, in that there was a continued effect of lexical aspect even at higher levels of proficiency. Interesting in this regard is that Jabbari's (1998) GFT tables on the target tense present support this finding. Re-examination of his tables clearly showed the high use by the NS of accomplishment-PAST (20.9%) relative to accomplishment-s (44.2%). With increasing proficiency, however, the link between PAST and telic verbs weakened. The lower advanced and NS groups marked verbs with the correct target tense form (i.e., -s form) and spread it from its concentration on statives into all aspectual verbs. Thus, Research Hypothesis 2, namely, that the elementary and intermediate level groups will attach '-s' morpheme to statives, progressive marking to activities and PAST marking to telic events, while the lower advanced and NS groups will expand the domains of the correct target tense form uniformly to all aspectual verbs, is confirmed (see Appendix C-1).



### 6.1.3 The Overall Association of Verb Types with Aspect Markings Across the Groups in the RT

As already noted (sections 6.1.1 and 6.1.2), the GJT and GFT data confirm the general prediction of the Aspect Hypothesis, that the present tense marker '-s' links with stative verbs, progressive marker with activity verbs, and PAST marking with achievement and accomplishment verbs. Would the RT data confirm these results? Chi square tests of the spontaneous speech of the subjects in 'present time' contexts showed that the interaction of each verb type with aspect marking was significant: ( $X^2(27, N = 473) = 410.459, P < 0.000$ ), ( $X^2(30, N = 331) = 231.422, P < 0.000$ ), ( $X^2(27, N = 278) = 103.093, P < 0.000$ ) and ( $X^2(18, N = 196) = 65.820, P < 0.000$ ) for the four groups from lowest to highest level. Figures 9 through 12 represent this correlation.

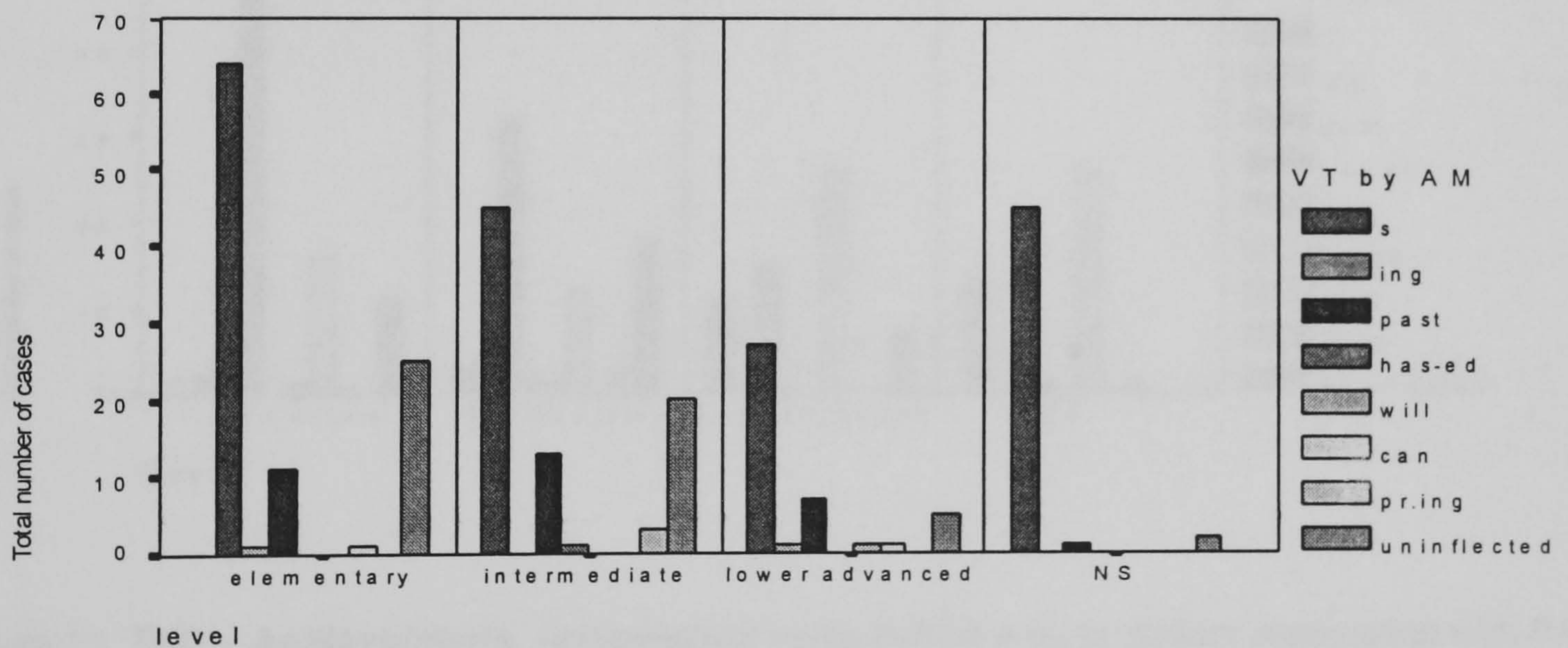


Figure 9. TNC - **Statives**. Stative verbs show a biased use of the present form '-s' and a significant occurrence of the uninflected forms in the elementary and intermediate levels, whereas the correct tense form (i.e., '-s') is predominant in the lower advanced level.



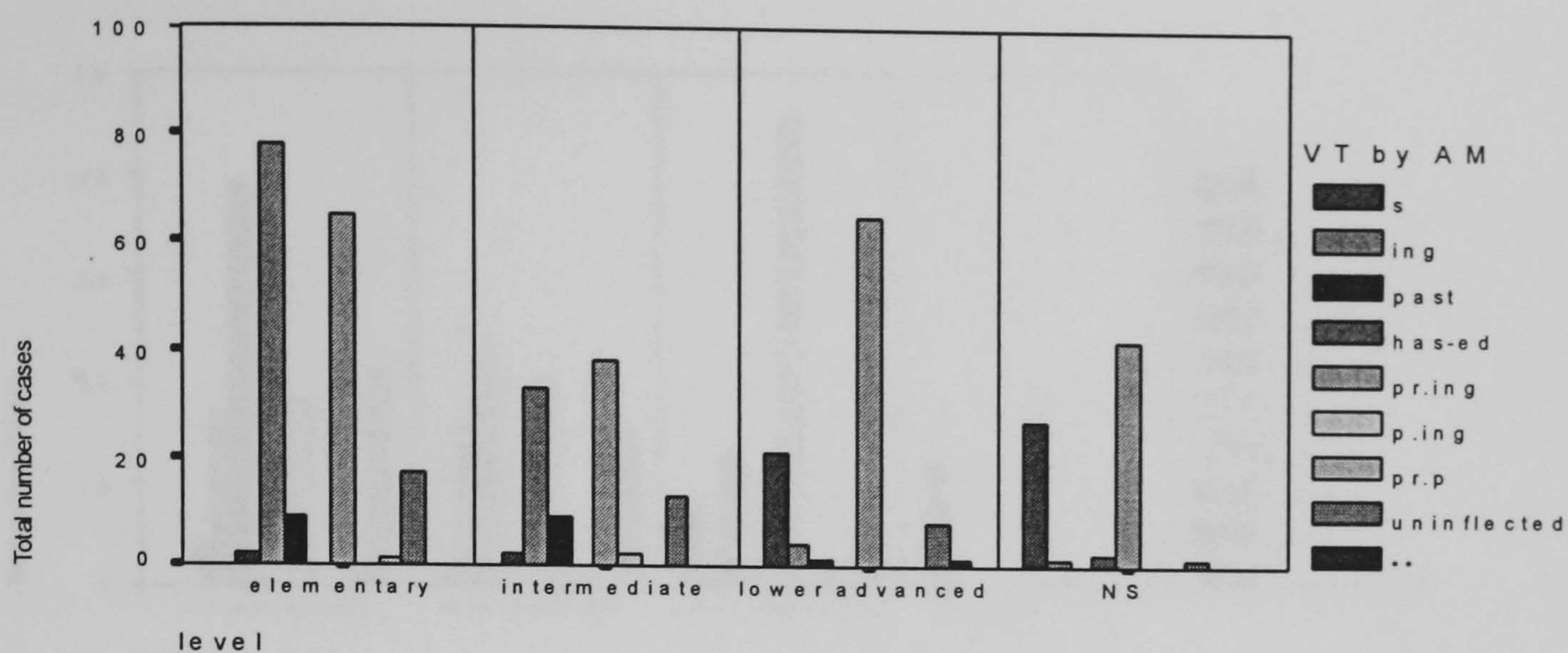


Figure 10. TNC - **Activities**. Progressive marking either with or without the auxiliary 'be' is significant in the elementary and intermediate levels, but the correct target tense form takes over in the lower advanced level.

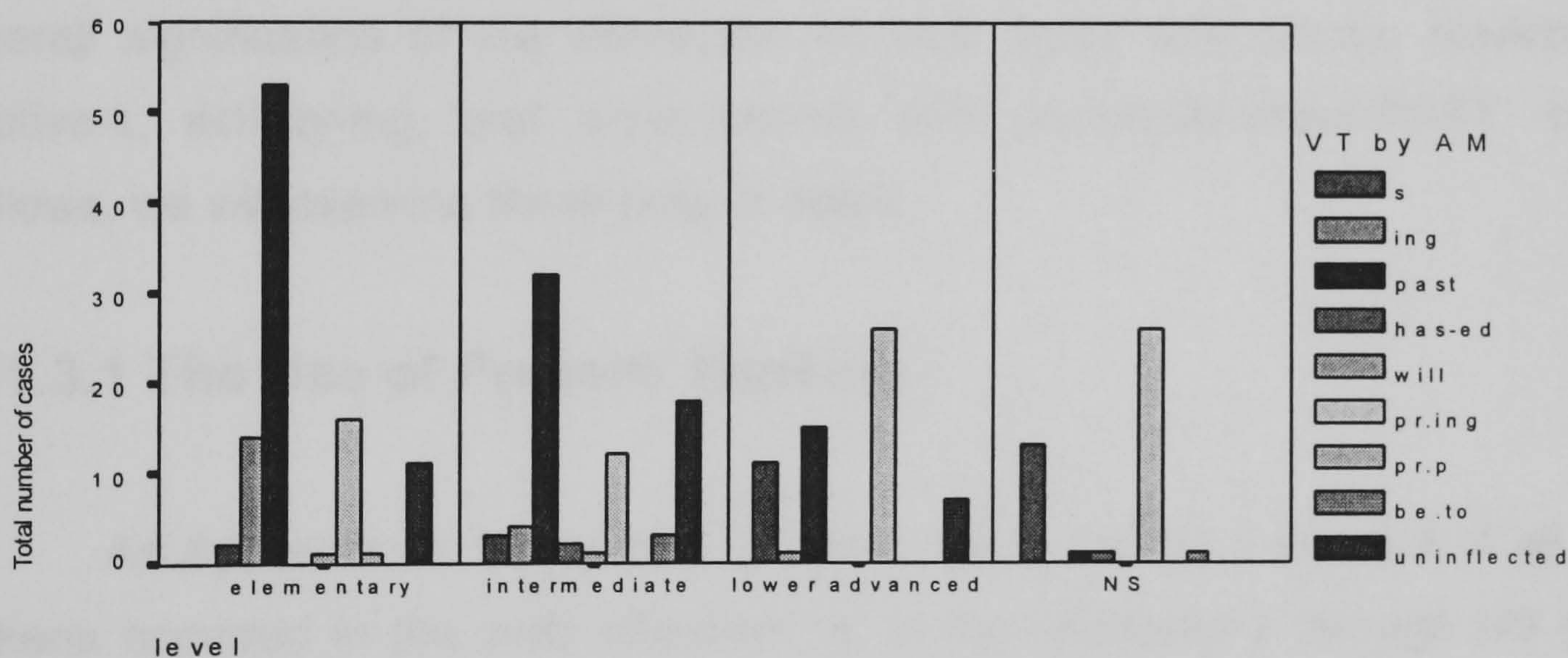


Figure 11. TNC - **Achievements**. Achievement verbs exhibit a quite distinct association with PAST marking in the elementary and intermediate levels. This is corrected in the lower advanced level.



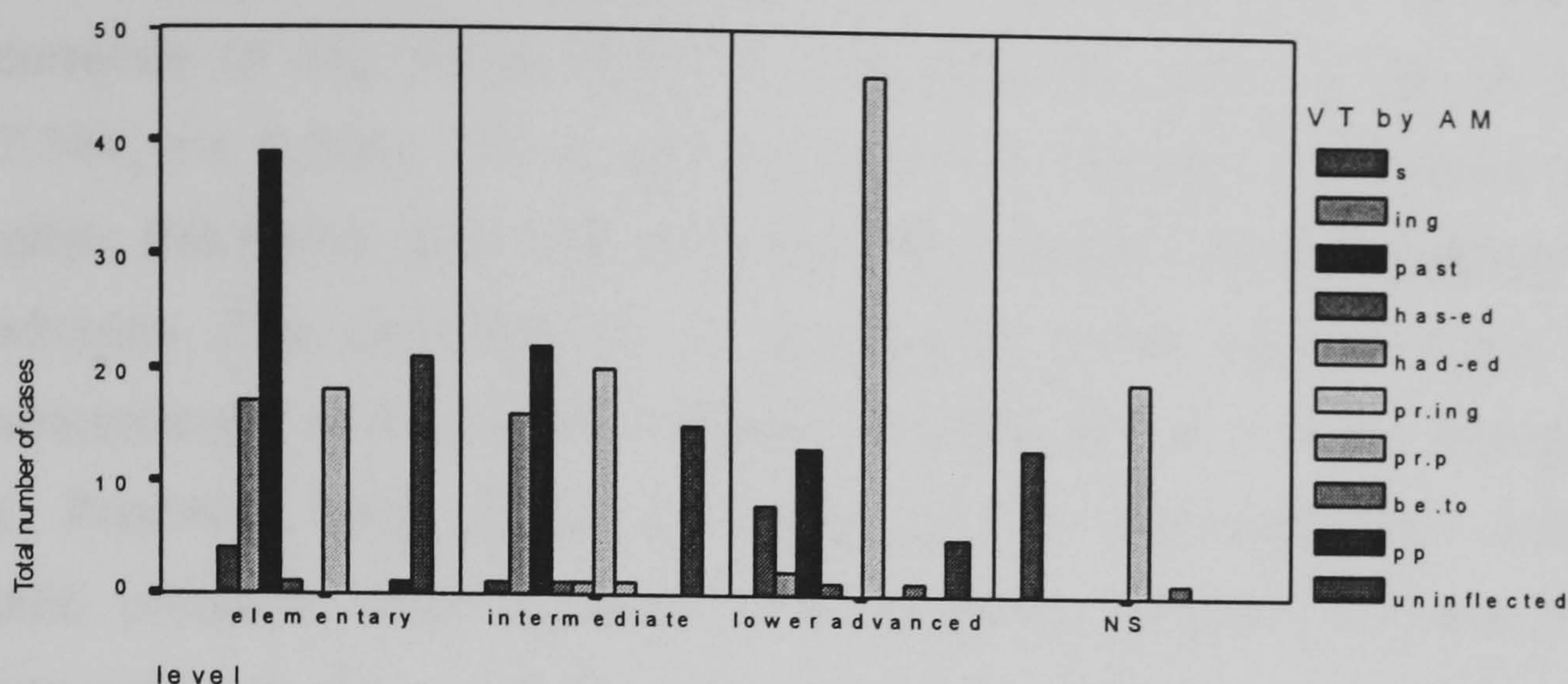


Figure 12. TNC – **Accomplishments**. Similar to punctual events, accomplishment verbs affiliate significantly with PAST marking in the elementary and intermediate levels, but are replaced with the correct target tense form in the lower advanced level.

As Figures 9 through 12 show, the major contributing elements to the overall significance of the interaction of verb types with aspect markings are stative-s, activity-ing, and achievement- and accomplishment-PAST. In what follows, we will examine these cells in detail.

### 6.1.3.1 The Use of Present Marking

As Appendix D-1 shows, 62.7, 54.9, 64.3, and 93.8 percent of all stative tokens occurred in the verb inflection ‘-s’ in the elementary through NS groups, respectively. The cell values of the chi square for this concentration were statistically significant: ( $X^2(1, N = 473) = 227.584, P < 0.000$ ), ( $X^2(1, N = 331) = 130.289, P < 0.000$ ), ( $X^2(1, N = 278) = 43.676, P < 0.000$ ) and ( $X^2(1, N = 196) = 48.669, P < 0.000$ ) for the elementary, intermediate, lower advanced and NS groups. The results confirm the prediction of Research Hypothesis 1a, that the elementary and intermediate levels associate the present marking morpheme ‘-s’ with stative aspect, while the lower advanced level and NS groups link it with temporal reference (see sections 6.1.1.1 and 6.1.2.1 above).



As with the GFT data (section 6.1.2.1), stative verbs also exhibited a significant occurrence of uninflected forms in the elementary level group ( $X^2(1, N = 473) = 7.744, p < 0.005$ ). Since uninflected forms function for present reference in English, this further supports the claim that present inflections affiliate with stative predicates. The omission of '-s', as already noted (section 6.1.2.1), could be developmental as has been observed elsewhere in L1 and L2 acquisition (see e.g., Bradford, 1992; Omar, 1973), or could be evidence of L1 influence since Arabic prohibits coda clusters. This tendency dropped to zero in the lower advanced level group, presumably due to increasing level of proficiency.

### 6.1.3.2 The Use of Progressive Marking

Examination of alternatives to the present simple tense form (i.e., '-s') used by the Arabic speakers of English revealed the influence of lexical aspect. Activities exhibited a significant association with progressive marking without auxiliary 'be' in the elementary and intermediate level groups: ( $X^2(1, N = 473) = 73.919, P < 0.000$ ) and ( $X^2(1, N = 331) = 33.088, P < 0.000$ ) respectively. Moreover, the present continuous was significant for all four groups – from lowest to highest level: ( $X^2(1, N = 473) = 46.428, P < 0.000$ ), ( $X^2(1, N = 331) = 23.396, P < 0.000$ ), ( $X^2(1, N = 278) = 15.440, P < 0.000$ ) and ( $X^2(1, N = 196) = 8.144, P < 0.004$ ). The link between progressive marking and activities is thus seen to be noticeably present even at higher levels of proficiency (see sections 6.1.1.2 and 6.1.2.2).

In the elementary and intermediate level groups, the '-ing' often seems to distinguish activities from PAST or from unmarked non-activities:

(3) *She is running...she is driving quickly and hit the man...she thought what he doing she hitted him and walking...and pushed him down...she go away...she killed him and stopped the car...she looked out and driving*

away...she *leave* the area and *is looking* for car wash...she the woman *kill* the man...she *stopped* again and *looking* in the mirror.

Consistent with Research Hypothesis 4b (i.e., the tendency to mark achievements and accomplishments with the '-ing' morpheme will be prominent among the elementary- and intermediate-level learners, but diminish with increasing level of proficiency), telic events affiliated significantly with progressive marking in the elementary and intermediate level groups. Achievements exhibited a significant affiliation with progressive marking without auxiliary 'be' in the elementary and intermediate level groups ( $X^2(1, N = 473) = 5.573, P < 0.018$ ) and ( $X^2(1, N = 331) = 8.223, P < 0.004$ ). These results accord with similar findings found in sections 6.1.1.2 and 6.1.2.2. Moreover, they exhibited no significant association with present continuous or past continuous in any of the groups. Contrary to Research Hypothesis 4b, accomplishments revealed a significant affiliation with progressive marking in the lower advanced level group ( $X^2(1, N = 278) = 5.293, P < 0.021$ ). Progressive marking without auxiliary 'be' and past continuous were not significant in any group (see Appendix D-1).

Here are examples of achievements and accomplishments with progressive marking for the elementary- and intermediate-level learners in the context of 'present time':

- (4) a. the man *reading* a paper. [accomplishment]
- b. she *stopping* the car. [achievement]

Statives exhibited the weakest affiliation with progressive marking. There was one case of progressive marking with a stative verb in the elementary level group, which is much less than its expected value of 23.7%. Thus, the weak correlation observed in the GJT (section 6.1.1.2) and GFT (section 6.1.2.2) is confirmed (see Appendix D-1).



### 6.1.3.3 The Use of PAST Marking

The RT data showed that PAST marking was the most significant feature of achievements in the elementary and intermediate level groups, and to a lesser extent in the lower advanced level group ( $X^2(1, N = 473) = 63.225, P < 0.000$ ), ( $X^2(1, N = 331) = 21.289, P < 0.000$ ) and ( $X^2(1, N = 278) = 9.856, P < 0.002$ ) respectively. The results confirm Research Hypothesis 1c regarding the biased use of PAST with achievement verbs. Very similarly, accomplishments were found to be significantly associated with PAST marking in the elementary level group ( $X^2(1, N = 473) = 15.851, P < 0.000$ ), but not for the intermediate level group (contrary to Hypothesis 1d: PAST aligns with accomplishment aspect). These results find support in Jabbari (1998). Moreover, a re-examination of his RT tables made it clear that achievement-PAST (20.3%) was high relative to achievement-s (32.5%) in the high level group, indicating a continued effect of lexical aspect even at higher levels of proficiency – a result supported by Collins (1998).

As with progressive marking on activities, PAST frequently distinguishes punctual and telic events from progressive or unmarked predicates that are not punctual or telic events, as in (5) for the elementary level:

- (5) a. ...the teacher *speaking* and he *took a picture*...she *stopped* and *take* him to the hospital.  
b. ... She *thinks* what he *doing* and *stopped* the woman. The woman *changed the gear* of the car and *turned back*...she *drove* the car very fast and *killed* the man.

With increasing level of proficiency, the high concentration of PAST marking on telic events, '-s' marking on statives and '-ing' marking on activities (i.e., distributionally dominated verb type–aspect marking pattern) gave way to a non-biased, uniform distribution of the correct target tense form (i.e., '-s' form) across verb types (see Appendix D-1).



To sum up, the three tasks show that there are two polarizing influences that control the use of tense-aspect morphology in these data: (i) lexical aspect in the elementary and intermediate levels, and (ii) tense in the lower advanced level. These two influences created a situation where aspectual markers outnumbered inflectional markers in the elementary and intermediate levels, with the situation being reversed in the lower advanced level. Figures 13 through 15 below illustrate these effects (see Appendices E-1, F-1, and G-1).

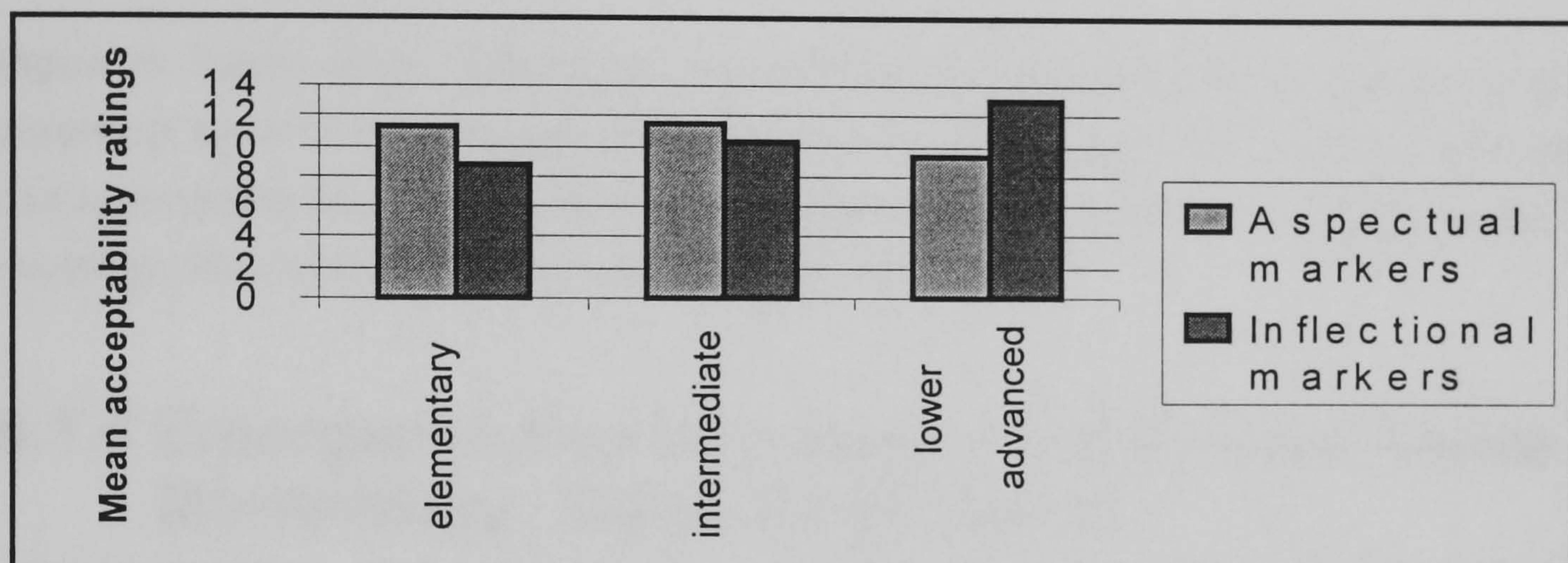


Figure 13. Mean acceptability ratings of aspectual vs inflectional markers across the groups for the target tense present in the GJT. Aspectual markers are more acceptable (11.2500, 11.5200) than inflectional markers (8.8000, 10.2400) for the elementary- and intermediate-level learners, whereas the reverse applies for the lower advanced-level learners (13.0000 versus 9.3600).

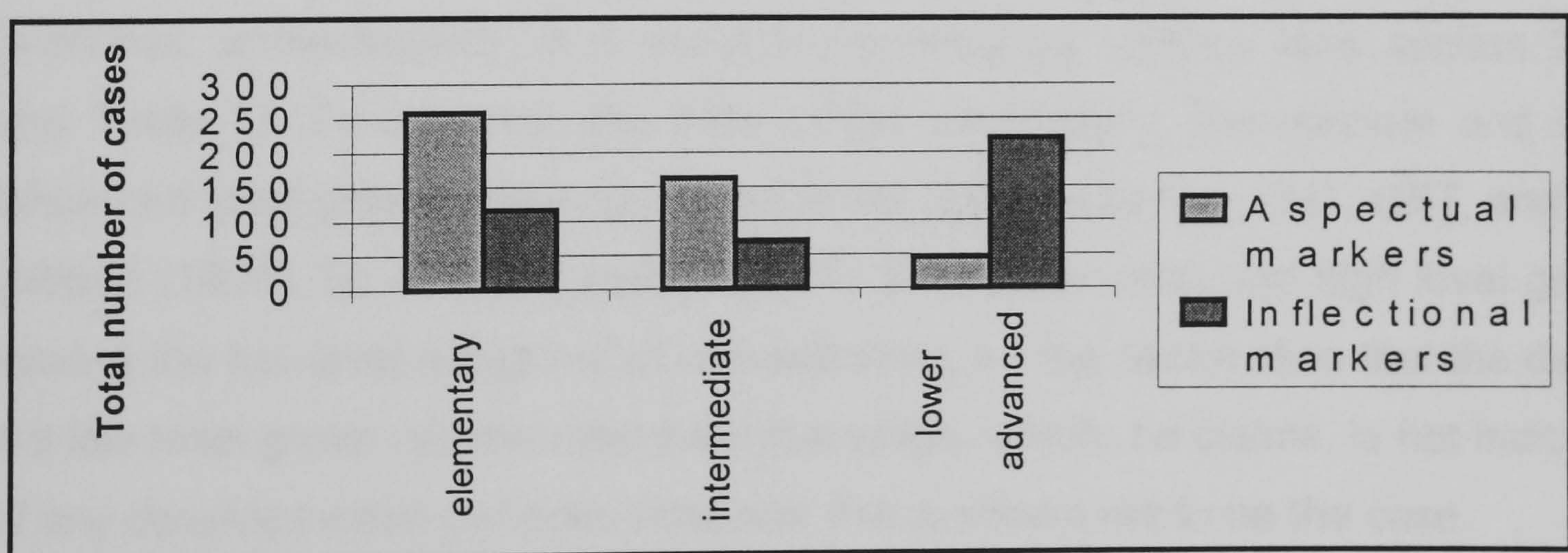


Figure 14. Total number of aspectual vs inflectional markers across the groups for the target tense present in the GFT. Like the GJT, aspectual markers are more frequent than inflectional markers (257 and 162 versus 117 and 69) in the GFT for the elementary and intermediate levels, respectively, but inflectional markers dominate in the lower advanced level (242 versus 34).



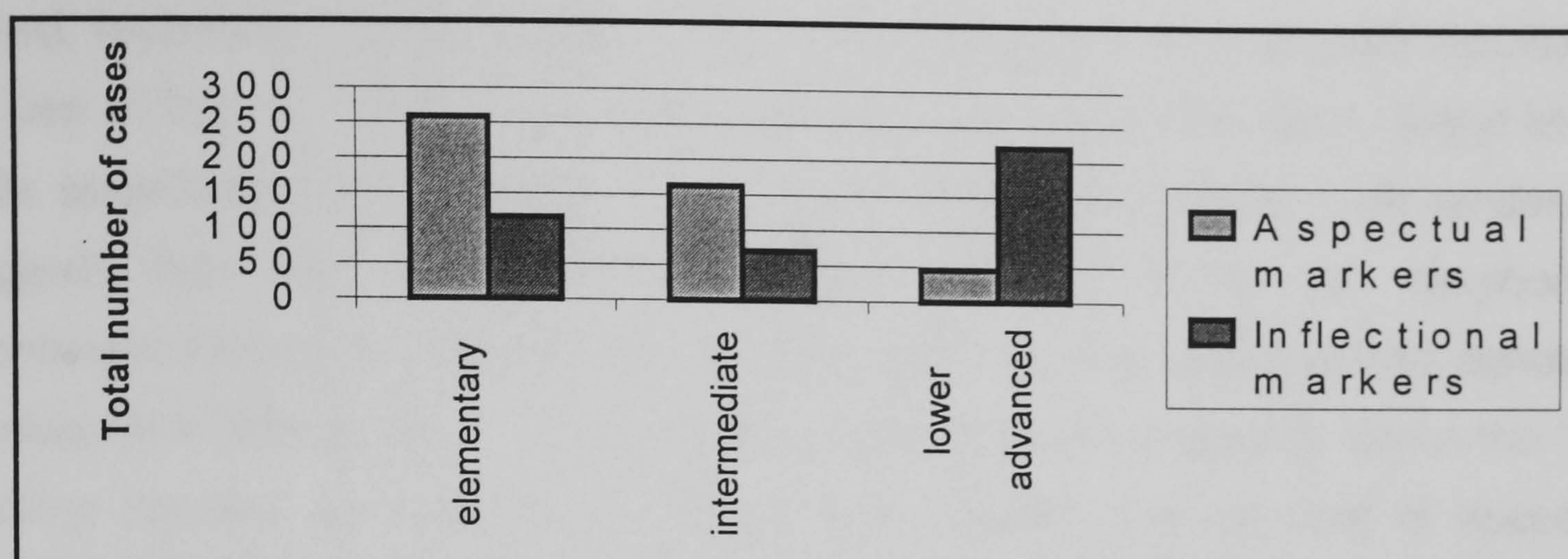


Figure 15. Total number of aspectual vs inflectional markers across the groups for the target time present in the RT. The influence of lexical aspect is greater than that of tense in the elementary and intermediate levels (259 and 142 versus 32 and 36), whereas tense controls the use of aspect markings (161 versus 57) in the lower advanced level.

#### 6.1.4 Emergence and Development of Present Tense Morphology: Semantic Evidence

To investigate the developmental pattern of aspectual verbs, three semantic features were examined: (1) punctual vs non-punctual, (2) telic vs non-telic (atelic), and (3) dynamic vs non-dynamic. Punctual vs non-punctual refers to achievements vs activities, telic vs non-telic to achievements or accomplishments vs activities and statives, and dynamic vs non-dynamic to dynamic verbs (activities, achievements, and accomplishments) vs statives (see section 2.3.4, and Table 7). To this end, the data of the elementary, intermediate and lower advanced level groups were compared in the three tasks (i.e., GJT, GFT, and RT). Jabbari (1998), by contrast, compared the data of the mid- and high level groups leaving the low level group out of consideration, on the assumption that the data of the low level group represented the initial stage, which, he claims, is not indicative of any developmental patterns. However this is shown not to be the case.

As the data on the three tasks in the context of the present indicate, the Arabic speakers of the elementary and intermediate level used verbal morphemes redundantly to encode inherent lexical aspect and not tense or grammatical



aspect, regardless of their function in the target language. They virtually restricted the use of the '-s' morpheme to stative verbs (e.g., *love, like, want, forget* etc.) while suppressing the application of other morphological forms. This tendency suggests that they linked the prototypical meaning of the '-s' morpheme ("continued existence") with that of the stative verb, i.e., the stative-s form denotes an extended unitary period of time including the moment of speech. Since the '-s' marking denotes an extended period of time including the moment of speech, there exists a match between the semantic feature of statives and that of the '-s' morpheme, i.e., a one-to-one correspondence (Pinker, 1984; Slobin, 1985). Moreover, the meaning of the '-s' morpheme is most congruent with that of stative verbs in that both connote a "continued existence" or a timeless situation that continues to exist. Therefore, the elementary- and intermediate-level learners interpreted the verb inflection '-s' as an aspectual marker, consequently making it more congruent with the meaning of stative verbs. Thus, the '-s' morpheme was significantly employed. In contrast, the lower advanced-level learners interpreted it as a tense marker. They relaxed this restriction (i.e., form-meaning relation) and expanded the use of the '-s' inflection to all other aspectual verbs uniformly according to temporal reference, regardless of lexical aspect (see section 6.7 for elaboration).

In the GJT, the mean acceptability ratings were better on statives (2.5250) than on achievements (2.1750), accomplishments (2.1500), or finally activities (1.9500) for the elementary level group, better on activities (3.2400) than on statives (3.0000), accomplishments (2.5200) or finally achievements (2.3600) for the intermediate level group, and better on activities (3.7200) than on statives (3.4000), achievements (3.2000) and finally accomplishments (3.1600) for the lower advanced level group. Therefore, the developmental pattern order of present tense morphology is: statives, achievements, accomplishments, and activities for the elementary level learners; activities, statives, accomplishments and achievements for the intermediate level group; and activities, statives, achievements and accomplishments for the lower advanced level group. This



pattern is also consistent with the one uncovered by Jabbari for mid and high level groups. Hence, telic aspect (i.e., achievements and accomplishments) was the weakest candidate for present marking and non-telic aspect the strongest. Figure 16 shows the developmental pattern for present tense morphology.

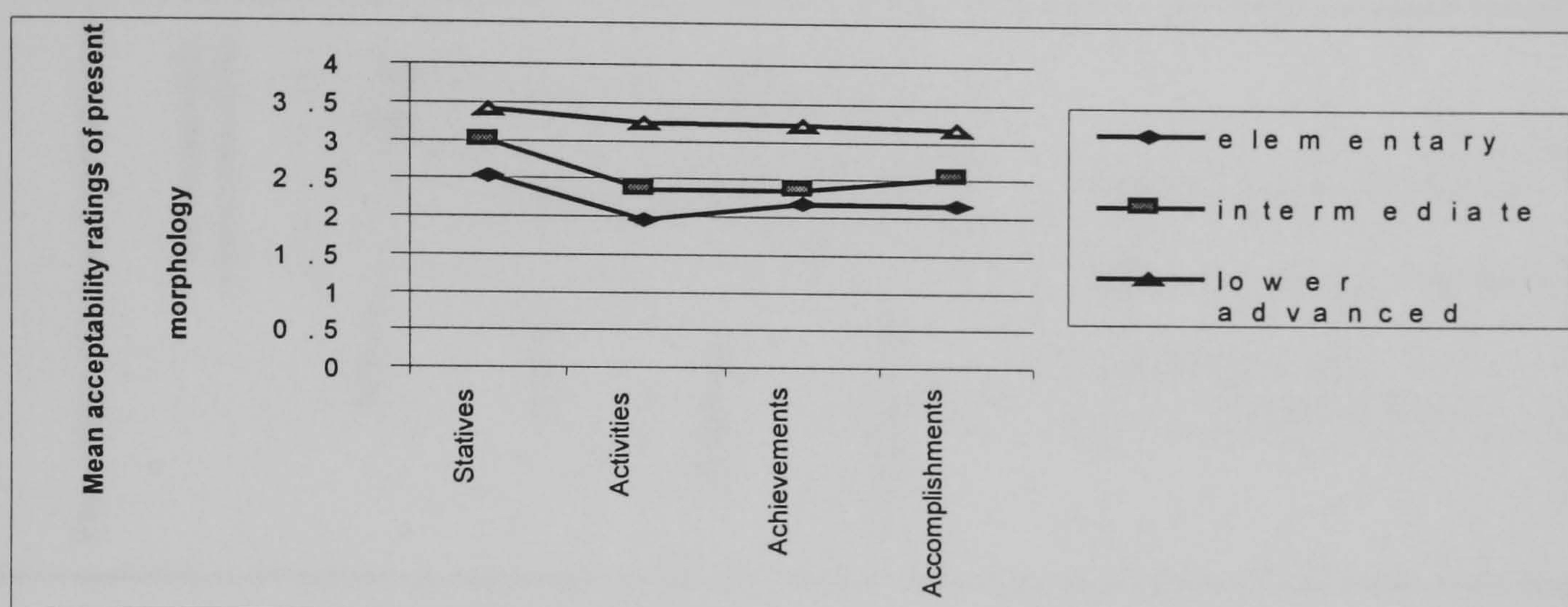


Figure 16. Development of present tense morphology across the groups in the GJT. The acceptability of correct present tense morphology is more marked in the lower advanced level (stative-s 3.4000, activity-s 3.2400, achievement-s 3.2000, and accomplishment-s 3.1600) than in the elementary and intermediate levels (stative-s 2.5250, 3.0000, activity-s 1.9500, 2.3600, achievement-s 2.1750, 2.3600, and accomplishment-s 2.1500, 2.5200, respectively).

In the GFT, the '-s' morpheme is associated more with statives (58.3%) than with achievements (35%), accomplishments (30%), or activities (30%) for the elementary level group, more with statives (60%) than with accomplishments (33.3%), achievements (28%) or activities (26.7%) for the intermediate level group, and more with statives (81.3 %) than with activities (72 %), achievements (68 %) or accomplishments (66.7 %) for the lower advanced level group. Thus, the order of aspectual verbs for the developmental pattern is statives, accomplishments, achievements, and finally activities for the intermediate level group, and statives, activities, achievements, and finally accomplishments for the lower advanced level group. Thus, the elementary and intermediate level groups started and ended with atelic aspect (i.e., statives were the first to receive present marking and activities were the last), while the lower advanced-level learners started with atelic and



ended with telic. This finding is at variance with that of Jabbari (1998) who found that high level groups started and ended with atelic aspect. Figure 17 shows the trend for present tense morphology in the GFT.

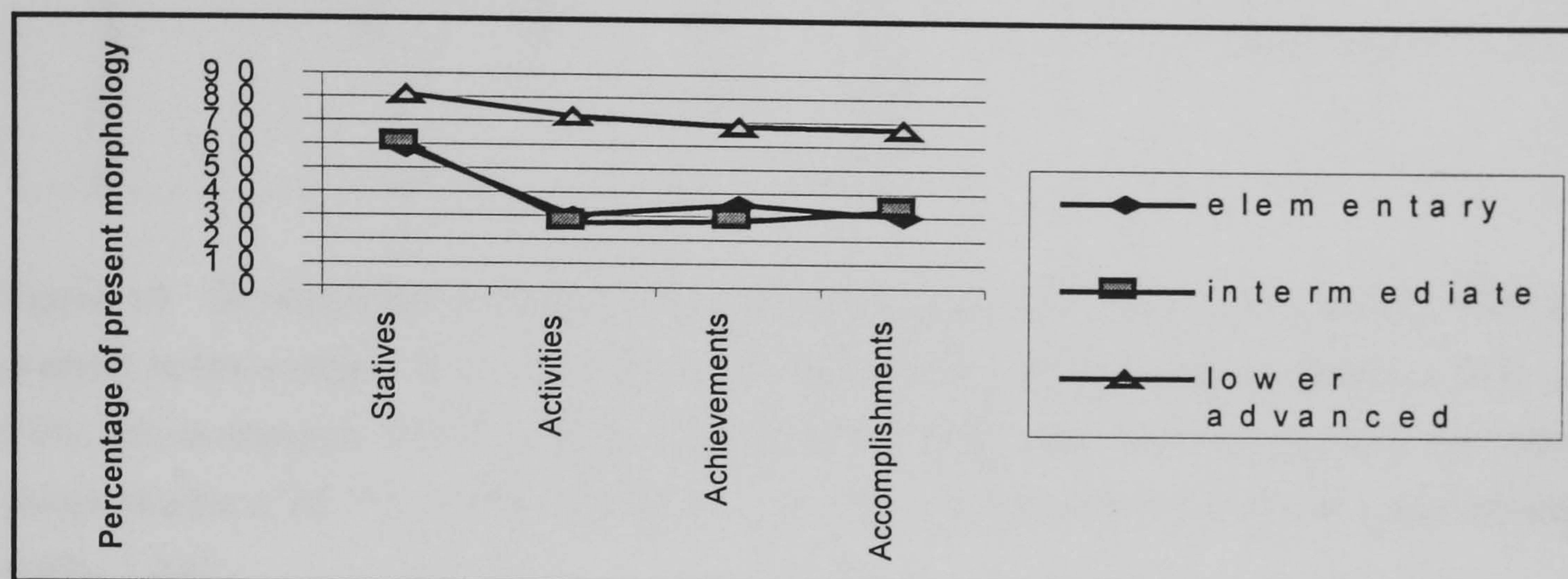


Figure 17. Development of present tense morphology across the groups in the GFT. The use of the correct present tense form is weaker in the elementary and intermediate levels (stative-s 58.3%, 60%, activity-s 30%, 26.7%, achievement-s 35%, 28%, and accomplishment-s 30%, 33.3%) than that in the lower advanced level (stative-s 81.3%, activity-s 72%, achievement-s 68%, and accomplishment-s 66.7%).

In the RT, the order of aspectual verbs for the developmental pattern is statives (62.7%), accomplishments (4%), achievements (2%), and activities (1.2) for the elementary level group, statives (54.9%), achievements (4%), activities (2.1%) and accomplishments (1.3%) for the intermediate level group, and statives (64.3%), activities (21%), achievements (18.3%) and accomplishments (10.5%) for the lower advanced level group. Therefore, the aspectual order for the RT is statives, accomplishments, achievements, and activities for the elementary level group, statives, achievements, activities and accomplishments for the intermediate level group, and statives, activities, achievements and accomplishments for the lower advanced level group. Atelic aspect (statives) was the first to receive present marking and telic events were the last. These results further support the Aspect Hypothesis. Figure 18 illustrates the development of present tense morphology in the RT.



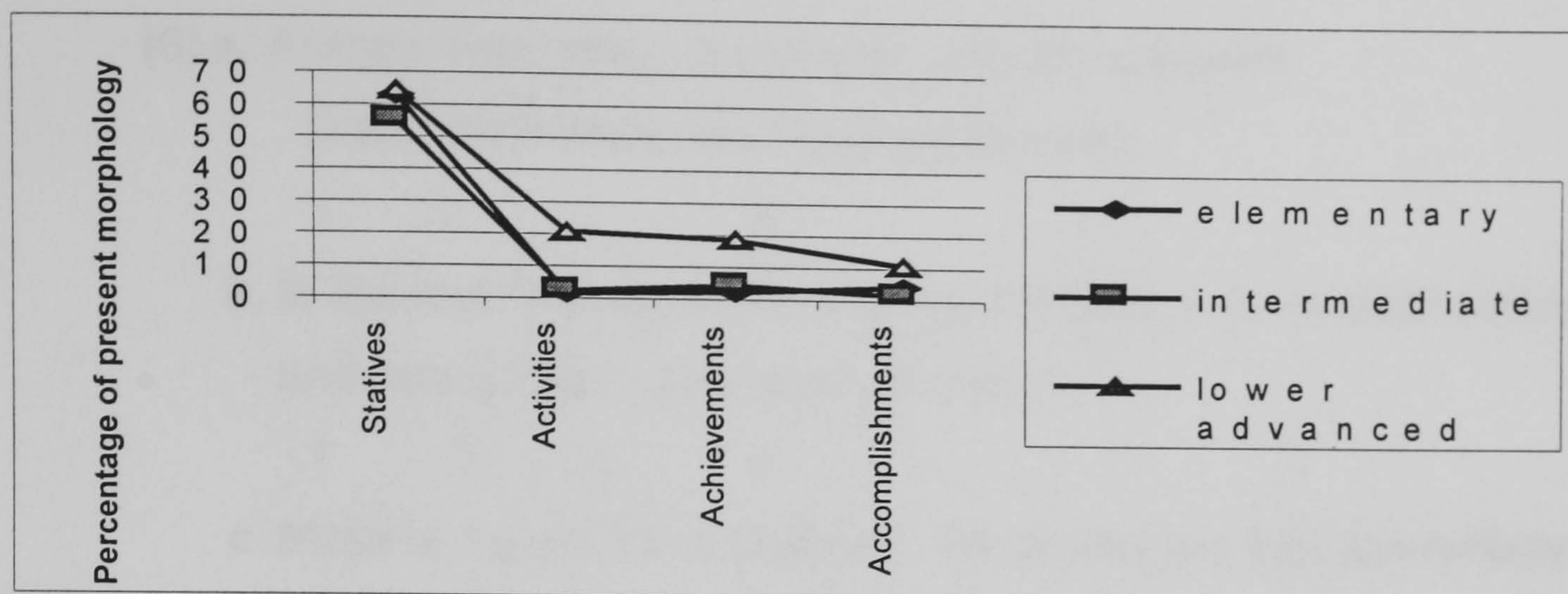


Figure 18. Development of present tense morphology across the groups in the RT. The use of the present tense marker '-s' is more developed in the lower advanced level (stative-s 64%, activity-s 21%, achievement-s 18.3%, and accomplishment-s 10.5) than in the elementary and intermediate levels (stative-s 62.7%, 54.9%, activity-s 1.2%, 2.1%, achievement-s 2.0%, 4%, accomplishment-s 4.0%, 1.3%).

## 6.2 Target Tense: Present Perfect

### 6.2.1 The Overall Association of Aspect Markings With Verb Types Across the Groups in the GJT

As with the target tense 'present', the role of lexical aspect in the development of tense-aspect morphology was investigated here in the context of the present perfect in order to confirm or disconfirm the results obtained in the previous experiment in the context of present. As Appendix A-3 shows, 16 test items out of 88 target sentences on the GJT, four items per aspectual category, were constructed with four morpho-syntactic variants: '-s', '-ing', PAST, and 'has + ed' for each lexical aspect of stative, activity, achievement, and accomplishment. The first three morphemes were correctly and incorrectly attached to lexical aspects, while the last aspect marking was the correct target tense form (see section 5.3.2.1). Typical examples of the biased association of verb types and aspect markings are illustrated in (6) below:



(6) a. Ahmad: How many languages does Saud know?

Omar: He **knows two languages now.**

1      2      3      ④

b. In the last three years Ali **playing football** in three tournaments and he's going to play again this year.

1      2      3      ④

c. Majid is a great football player. He **kicked the ball powerfully.**

1      2      3      ④

d. Dr. Al Shuhri **operated on five patients every Monday** but on Tuesdays he goes to Al Kharj.

1      2      3      ④

The subjects' choices were analyzed by means of a repeated measures MANOVA which showed that the overall interaction of aspect markings with each verb type was significant ( $F(27,301) = 2.04263, P < 0.002$ ). This effect is represented in the following figures.

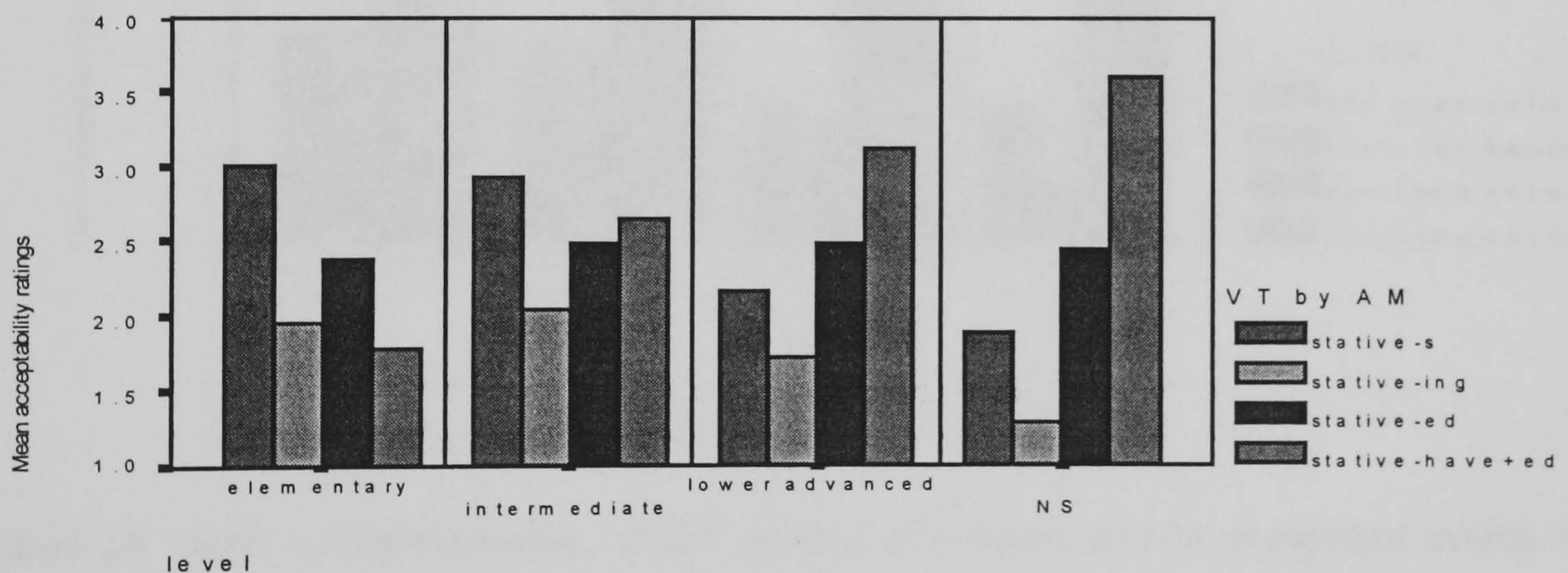


Figure 19. MAR – **Statives**. Stative verbs exhibit a strong link with the present tense marker '-s' and a significant association with PAST marking due to an L1 influence in the elementary and intermediate levels, but they align correctly in the lower advanced level.



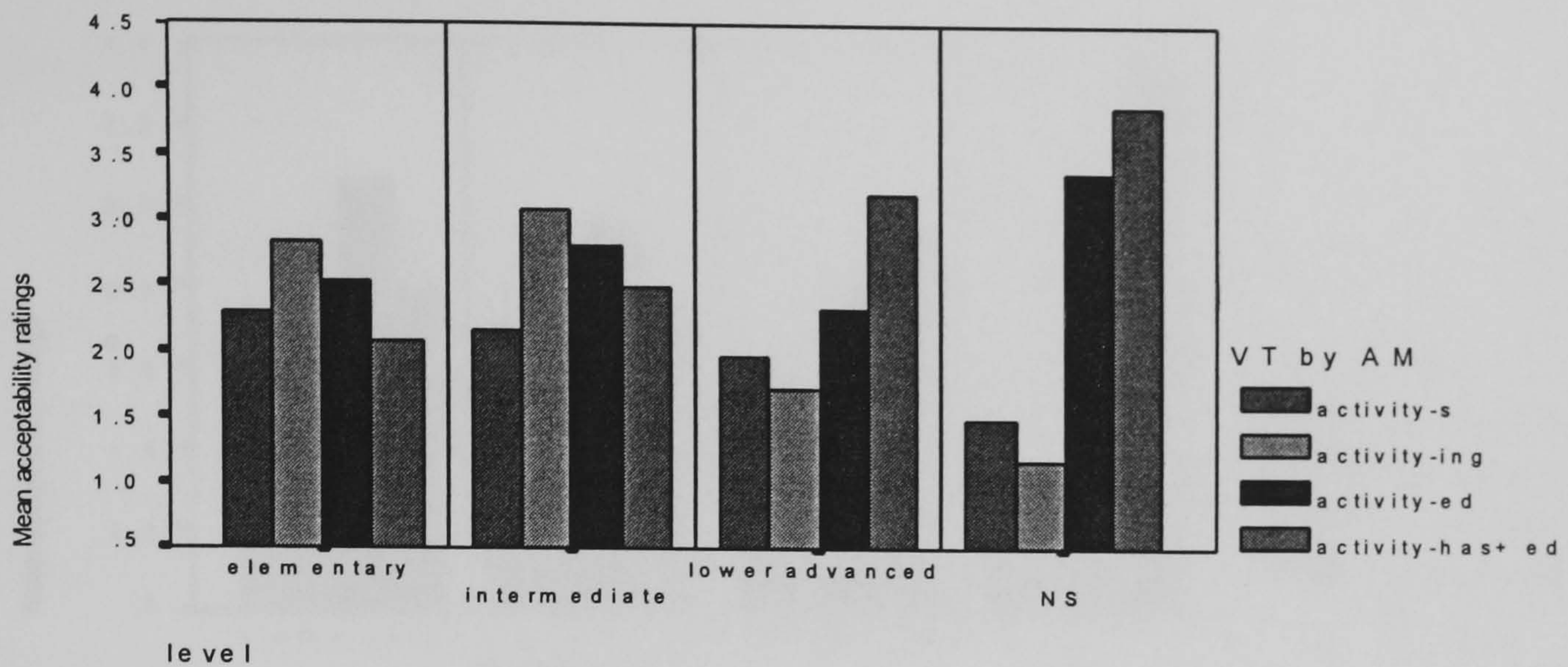


Figure 20. MAR – **Activities**. Activities link significantly with the ‘-ing’ and PAST morphemes in the elementary and intermediate levels, but give way to the correct target tense form in the lower advanced level.

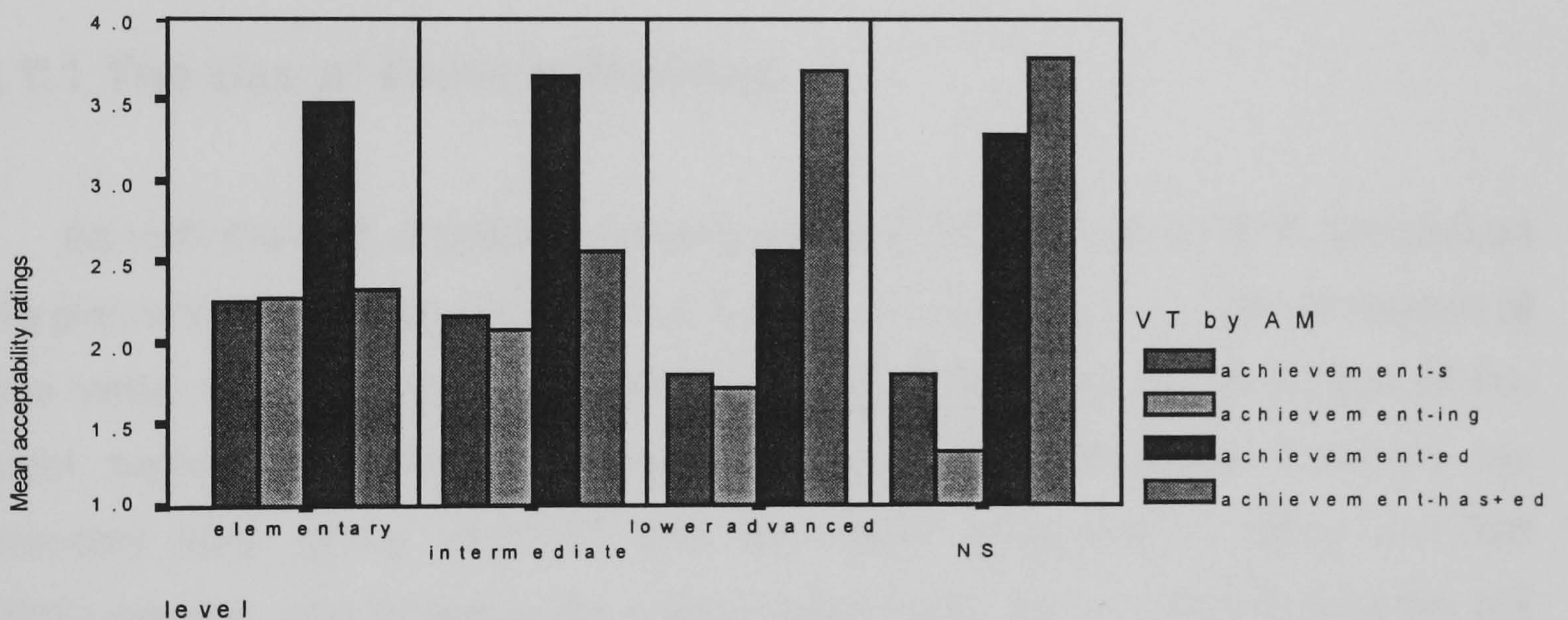


Figure 21. MAR – **Achievements**. PAST marking is a salient feature of punctual events in the elementary and intermediate levels, whereas the correct target tense form ‘has + ed’ is clearly apparent in the lower advanced level. The ‘-ing’ form is high across the three experimental groups.



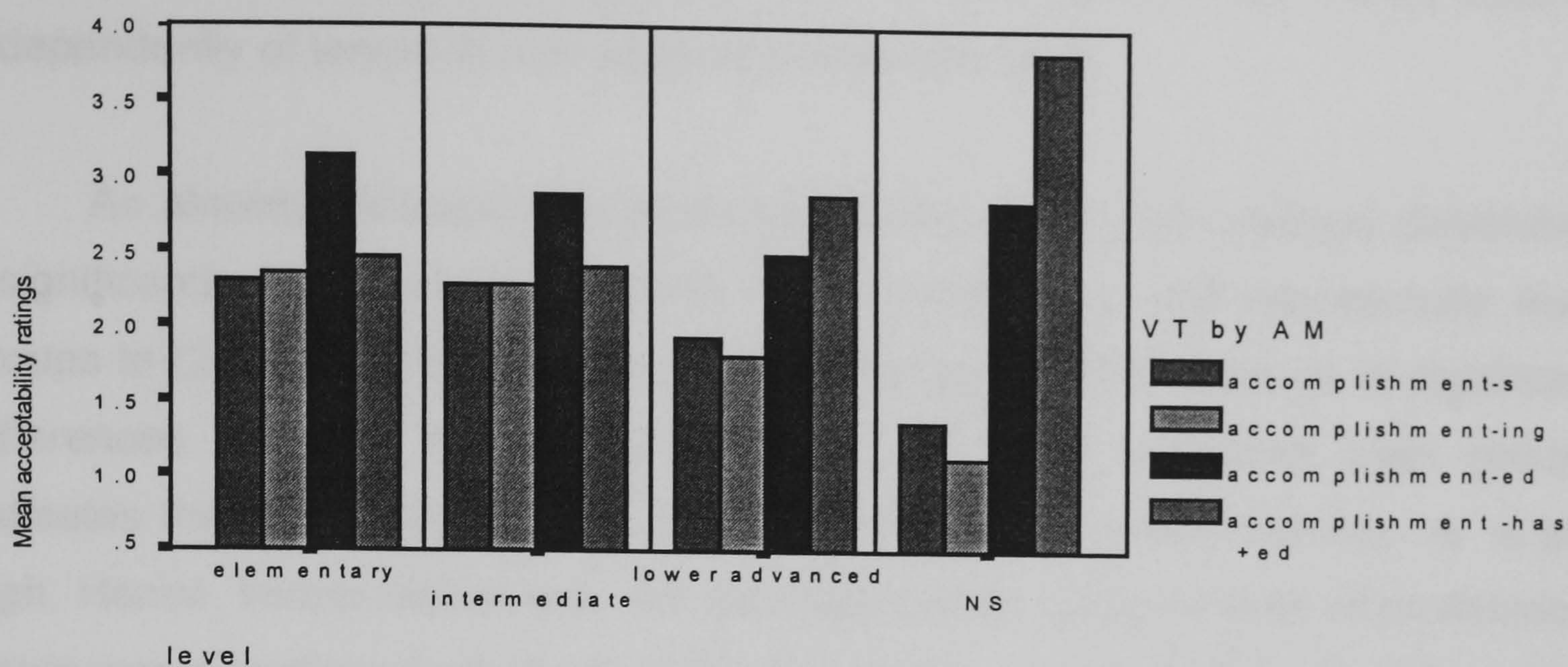


Figure 22. MAR – **Accomplishments**. Like achievements, accomplishments align with PAST marking in the elementary and intermediate levels, but with the correct target tense form ‘has + ed’ in the lower advanced level. The use of ‘-ing’ is again high across the experimental groups.

### 6.2.1.1 The Use of Present Marking

As with the use of present marking in the GJT, GFT, and RT in the context of the present simple (see sections 6.1.1.1, 6.1.2.1, and 6.1.3.1), the correlation of stative verbs with the ‘-s’ morpheme was highly significant in the context of the present perfect. A Tukey test revealed significant differences between the elementary level group (3.0000) and the lower advanced (2.1600) and NS (1.8800) groups, and between the intermediate level group (2.9200) and the NS group (1.8800). There were also significant differences between the intermediate level group and the NS group. The absence of significant differences between the intermediate level group and the lower advanced level group indicates that lexical aspect was not mediated at this level. The link between present marking and statives remains strong at higher levels of proficiency. For the elementary and intermediate level groups, present marking (i.e., ‘-s’ form) was more acceptable with statives (3.0000, 2.9200) than with activities (2.3000, 2.1600), achievements (2.3000, 2.2800) or accomplishments (2.3000, 2.2800). Thus, it is clear that lexical aspect does not simply affect learners’ inflectional choices within the confines of



target-like tense distinctions. Rather, the '-s' form redundantly marks statives independently of temporal reference (see Appendix B-2).

As already indicated, the predominant use of '-s' with statives diminished insignificantly from (3.0000, 2.9200) in the elementary and intermediate level groups to (2.1600) in the lower advanced level group. The absence of significant differences between the intermediate and the lower advanced level groups indicates that the association of stative verbs with the present marker '-s' is still high. Hence, lexical aspect was not yet mediated by rising of level of proficiency. There was a continued effect of lexical aspect even at higher levels of proficiency.

### **6.2.1.2 The Use of Progressive Marking**

Confirming previous results of progressive marking on activity verbs (see sections 6.1.1.2, 6.1.2.2, and 6.1.3.2), activities again exhibited a strong alliance with the progressive marking form '-ing'. In quantitative terms, a Tukey test showed significant differences between the elementary level group and the lower advanced and NS groups and between the intermediate level group and the lower advanced and NS groups. The elementary and intermediate level groups judged progressive marking as more acceptable with activities than with statives (1.9500, 2.0400), achievements (2.2750, 2.0800) or accomplishments (2.3500, 2.2800). The association of progressive marking with activities, however, weakened with increasing level of proficiency. Thus, the lower advanced group exhibited the weakest link with progressive marking (1.7200), and the strongest link with tense distinction, a pattern reinforced by the behaviour of the control group. This follows naturally from the Aspect Hypothesis (see Research Hypotheses 2 and 3, that the elementary and intermediate level learners will show the most significant association of the '-ing' form with activity aspect, while the lower advanced level learners and NSs will show the weakest, if any, of verb morphology upon lexical aspect; and that the dependence between verb inflection and tense is weakest

with the lowest level-learners and strongest with the most advanced-level learners).

Consistent with Research Hypothesis 4b (the tendency to mark achievement and accomplishment verbs with the '-ing' form will be prominent among elementary- and intermediate-level learners but diminish with increasing level of proficiency), a Tukey test revealed significant differences in the use of progressive marking with achievements and accomplishments between the elementary level group (2.2750, 2.3500) and the NS group (1.3200, 1.1200) and between the intermediate level group (2.0800, 2.2800) and the NS group. However, contrary to Research Hypothesis 4b, there were no significant differences between the elementary and intermediate level groups on the one hand and the lower advanced (1.7200) group on the other. It is apparent that the tendency to affiliate progressive marking with telic events did not drop significantly. It remained strong even at higher levels of proficiency (see Appendix B–2).

Statives showed the weakest link with progressive marking, indicating that stative verbs do not align with progressive marking. Rather, they strongly align with present reference (see sections 6.1.1.2, 6.1.2.2, and 6.1.3.2 for progressive marking on statives and sections 6.1.1.1, 6.1.2.1 and 6.1.3.1 for present marking on statives).

### **6.2.1.3 The Use of PAST Marking**

As Appendix B–2 shows, PAST marking stands out as the most significant feature of punctual events in these data. A Tukey test showed up significant differences between the elementary level and the lower advanced level groups, and between the intermediate and lower advanced level groups. However, it detected no significant differences between the elementary level and NS groups nor between the intermediate level group and the NS group – an absence which indicates an elevated use of PAST marking by the NS group, which is closer to



that of the elementary and intermediate level groups. The link between PAST and achievements remains strong even at higher levels of proficiency. The elementary and intermediate level groups judged PAST marking more acceptable with achievements (3.4750, 3.6400) and accomplishments (3.1250, 2.8800), than with activities (2.5250, 2.8000) or statives (2.3750, 2.4800).

A Tukey test, however, revealed no significant differences in the use of PAST marking on accomplishments between any two groups, though PAST marking seems elevated across the levels (3.1250, 2.8800, 2.4800, and 2.8400) in the four groups with rising order of level. How can we account for this observation? Three variables appear to be in operation here: (1) all Arabic-speaking learners, particularly the elementary and intermediate level groups, transferred the use of the past simple from Arabic into English present perfect contexts; (2) the lower advanced level group did not show any significant reduction in their use of the past simple tense; and (3) the NS group showed a high use of the past simple tense<sup>1</sup>. These three variables are active in all aspectual verbs, including statives and activities. As a result, a Tukey test could find no significant differences in the use of PAST marking with statives between any two groups. With activities, however, significant differences did exist between the NS group (3.3600) and the elementary (2.5250) and lower advanced (2.3200) groups, but not between the elementary and lower advanced groups or between the intermediate level group and the lower advanced and NS groups (see Research Hypothesis 4a).

The spread of PAST marking appears to move from telics to activities and then to statives – a finding consistent with the general prediction of the Aspect Hypothesis. This finding is consistent with the prototype hypothesis (see also Shirai, 1998).

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<sup>1</sup> The NS group's use of the past simple tense is high with all verb types, rather than a particular verb type, and approximates to their use of the present perfect tense form: statives (2.4400, 3.6000), activities (3.3600, 3.8800), achievements (3.2800, 3.7600), and accomplishments (2.8400, 3.8400), respectively.

## 6.2.2 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GFT

Similar to the GJT, 12 test items out of 72 GFT target sentences (three items per aspectual category) were constructed to provide obligatory contexts for the present perfect tense in order to test the association of verb types with aspect markings (see Appendix A-7). Examples of the biased association of verb types with aspect markings by the elementary and intermediate level learners are illustrated in (7):

- (7) a. In the last 3 hours Abdullah (paint)  **painted**  his bedroom white and he's now painting the other rooms.  
b. Saad (love)  **loves**  his wife for 20 years and he still loves her.  
c. When I saw Omar, he was playing tennis again. He (not play)  **playing**  for several years. So he wasn't doing well.  
d. Majid never saw his father. When he was born, his father (just/die)  **died**  .

The suppliance of subjects were analyzed by chi square tests which revealed significant overall values for the correlation between verb types and aspect markings for all four groups, in order of increasing level of proficiency ( $X^2(24, N = 480) = 143.812, P < 0.000$ ), ( $X^2(27, N = 300) = 144.700, P < 0.000$ ), ( $X^2(21, N = 300) = 78.122, P < 0.000$ ) and ( $X^2(18, N = 300) = 31.363, P < 0.026$ ). It appears that the cells which are contributing to the overall chi square values are the cells corresponding to the '-s' marking with stative verbs, the progressive marking with activities and telic events, and PAST marking with achievements and accomplishments for the elementary and intermediate level groups, and the correct target tense marking (i.e., 'has + ed') for the lower advanced and NS groups. The following bar graphs illustrate this effect.



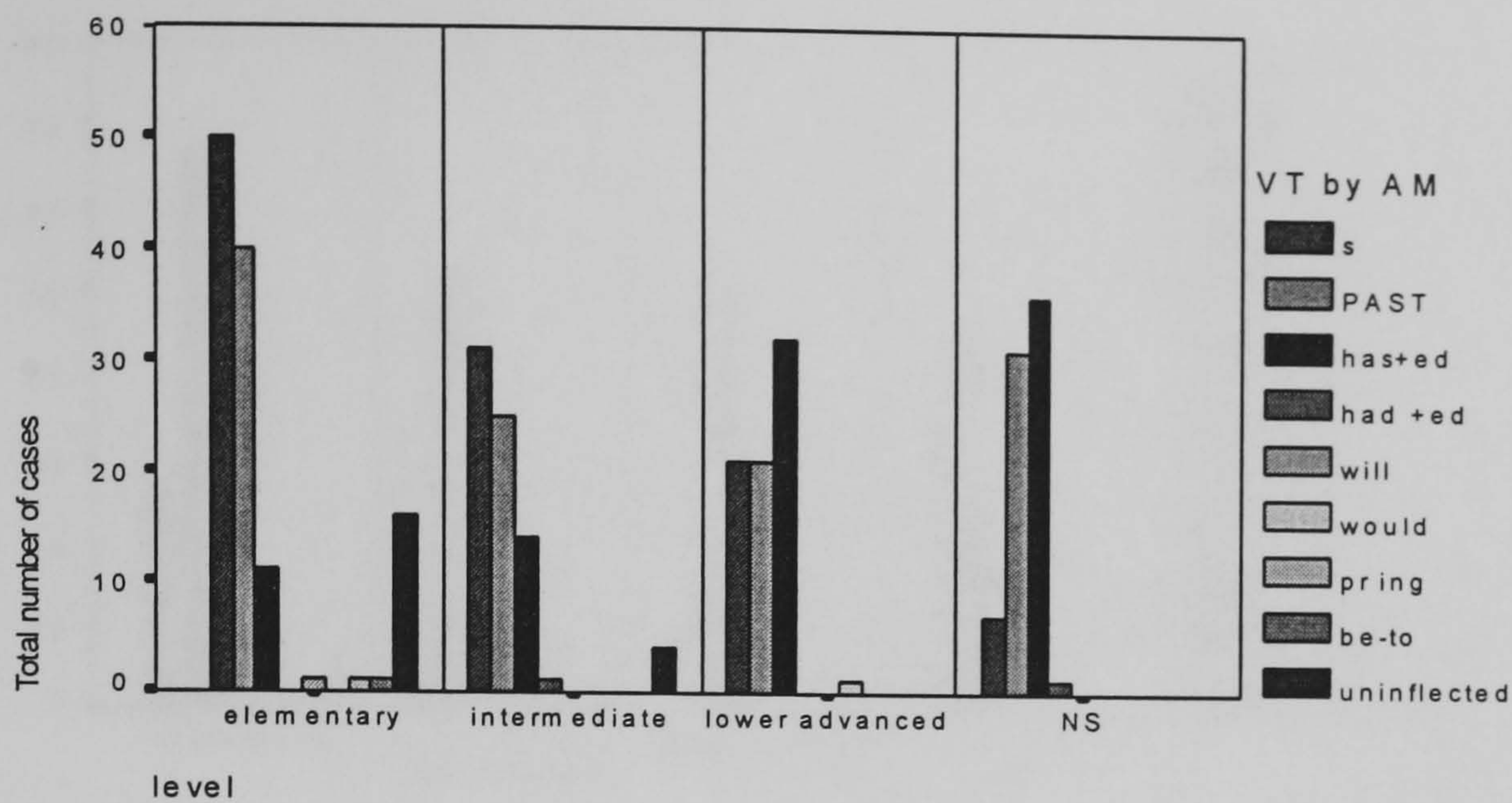


Figure 23. TNC – **Statives**. The stative aspect is realized by the '-s' form in the elementary and intermediate levels, but by the correct (has+ed) form in the lower advanced level. The use of PAST and uninflected forms are also significant in the elementary and intermediate levels.

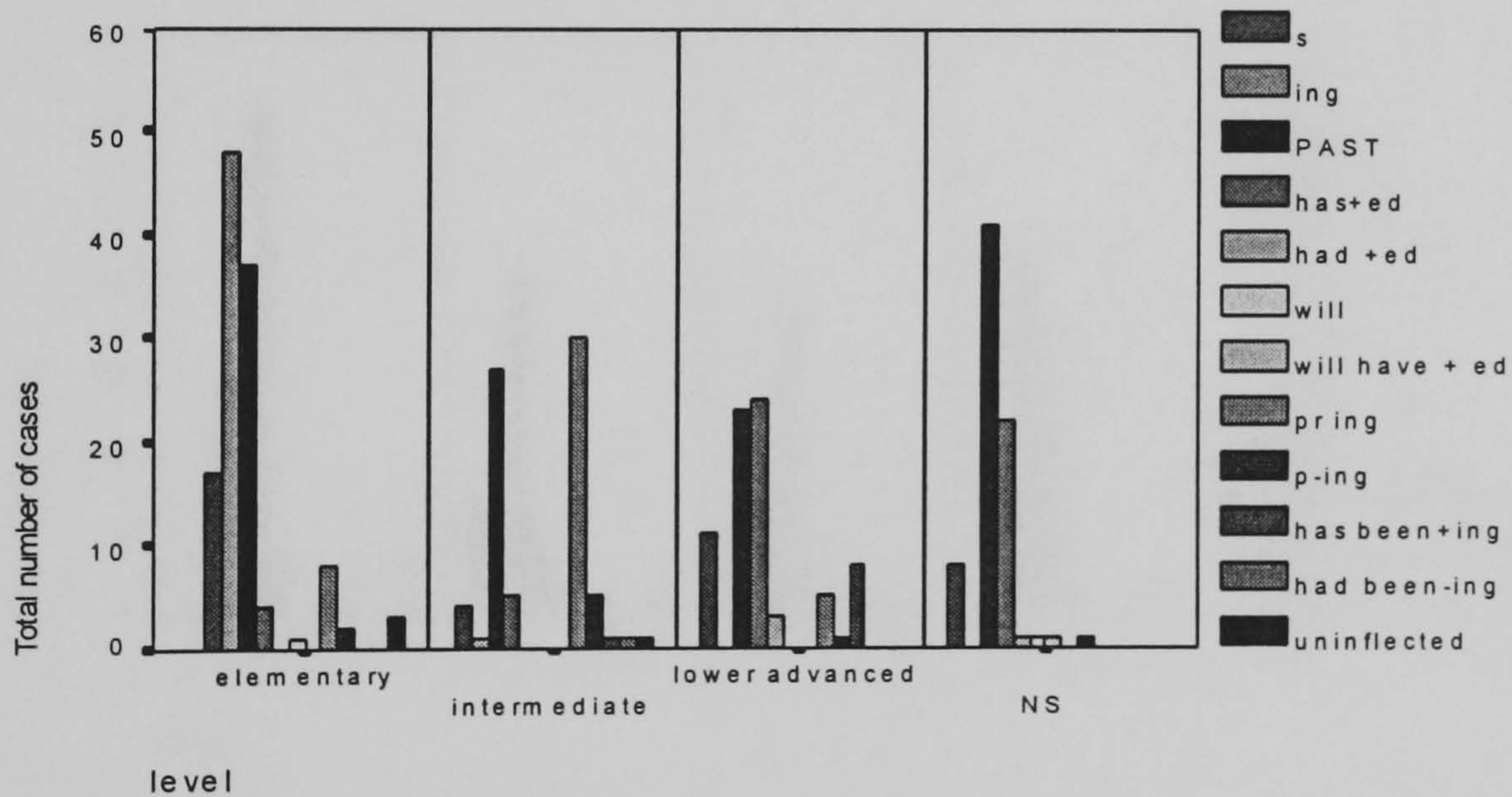


Figure 24. TNC – **Activities**. Progressive marking with or without auxiliary 'be' is significant in the elementary and intermediate levels, but not in the lower advanced level due to the frequent use of the correct target tense form 'has + ed'.



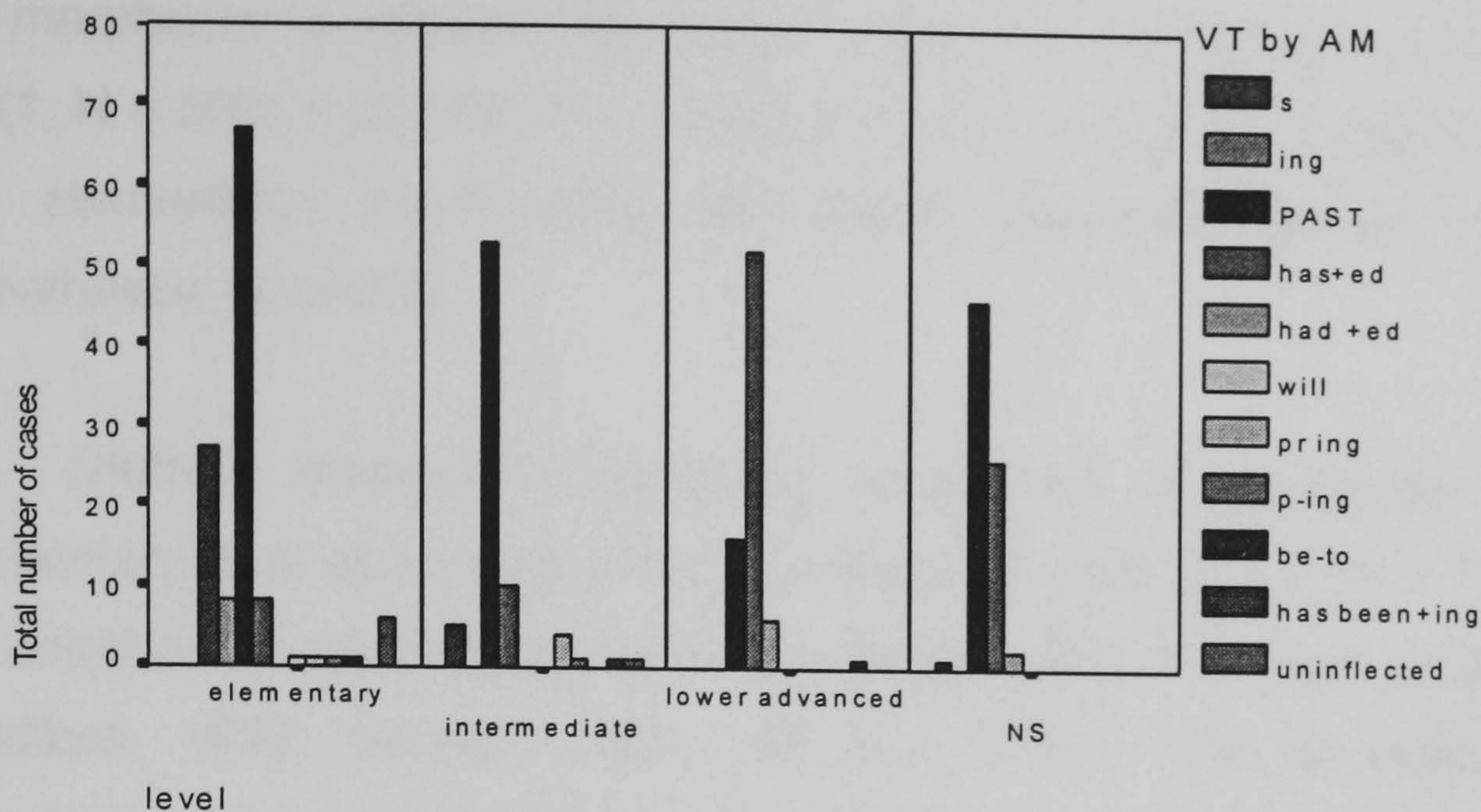


Figure 25. TNC – **Achievements**. PAST marking associates strongly with punctual events in the elementary and intermediate levels, whereas the correct target tense form ‘has + ed’ is predominant in the lower advanced level. The ‘-ing’ morpheme is significant for the elementary level, and the present continuous for the intermediate level.

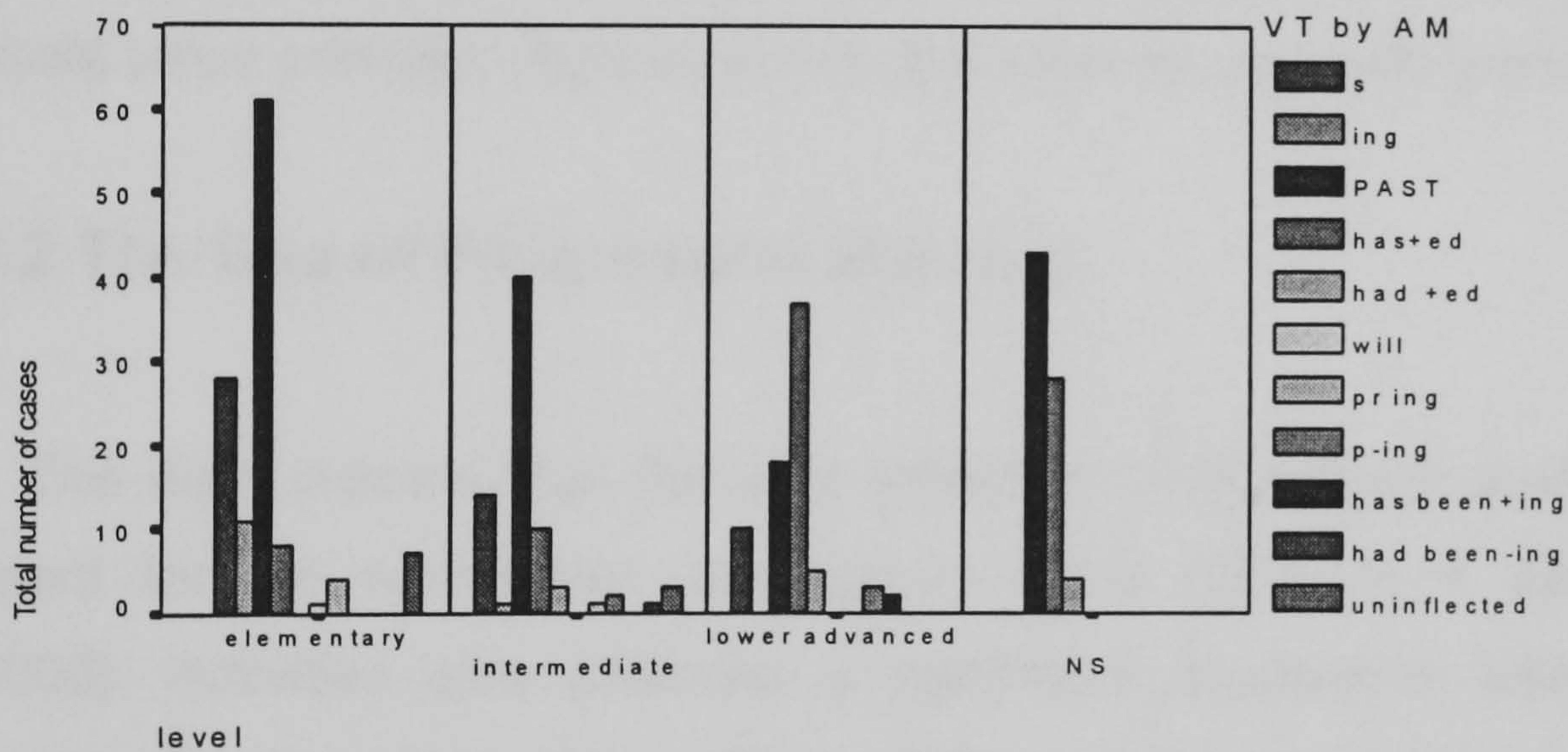


Figure 26. TNC – **Accomplishments**. Like achievements, accomplishments exhibited an elevated use of PAST marking in the elementary and intermediate levels, but use of this marker faded in the lower advanced level, giving way to an increased use of the correct target tense form ‘has + ed’. The use of the progressive is not significant for any of the groups.

### 6.2.2.1 The Use of Present Marking

Similar to the use of present marking ‘-s’ with stative verbs in the context of the present simple (sections 6.1.1.1, 6.1.2.1, and 6.1.3.1), and of the present



perfect on the GJT (section 6.2.1.1), the GFT data showed that the distribution of the morpheme '-s' skewed with stative verbs ( $X^2(1, N = 480) = 22.288, P < 0.000$ ), ( $X^2(1, N = 300) = 36.886, P < 0.000$ ) and ( $X^2(1, N = 300) = 16.279, P < 0.000$ ) for the elementary, intermediate and lower advanced groups (see Research Hypotheses 1a and 2).

Statives revealed a significant occurrence of uninflected forms for the elementary level group only ( $X^2(1, N = 480) = 11.429, P < 0.001$ ). The omission of '-s' could be developmental as has been observed in L1 and L2 acquisition (see Bradford, 1992; Housen, 1994; Robison, 1995). The acquisition of the '-s' morpheme takes some time. Brown (1973) in this regard reported that his child subjects took a long time to acquire the '-s' morpheme because children are concerned with here and now. The same tendency may be responsible for L1 influence since Arabic does not allow coda clusters (see sections 6.1.2.1 and 6.1.3.1). Since uninflected forms in English function for present reference, this significant value provides more evidence that statives align with present marking.

### **6.2.2.2 The Use of Progressive Marking**

The data indicate that the verb inflection '-ing' without auxiliary 'be' was significant for the elementary level group alone ( $X^2(1, N = 480) = 90.347, P < 0.000$ ). Activities also exhibited a significant association with the present continuous for the elementary, intermediate and lower advanced level groups ( $X^2(1, N = 480) = 7.946, P < 0.005$ ), ( $X^2(1, N = 300) = 77.898, P < 0.000$ ) and ( $X^2(1, N = 300) = 15.254, P < 0.000$ ). The past continuous was significantly associated with activities for the intermediate level group alone ( $X^2(1, N = 300) = 6.164, P < 0.013$ ). Hence, a strong link seems to exist between progressive marking and activities, and a continued effect of lexical aspect appears even at higher levels of proficiency.

Consistent with Research Hypothesis 4b and with earlier findings (see, for example, sections 6.1.1.2, 6.1.2.2, and 6.2.1.2), telic events showed significant affiliation with progressive marking. Achievements revealed a significant alliance with progressive marking without auxiliary 'be' for the elementary level group only ( $X^2(1, N = 480) = 7.083, P < 0.008$ ). The present continuous was marginally significant with punctual events for the intermediate level group alone ( $X^2(1, N = 300) = 3.892, P < 0.49$ ).

Accomplishments were significantly associated with the present continuous only for the intermediate level group ( $X^2(1, N = 300) = 10.361, P < 0.001$ ). The affiliation with progressive marking without auxiliary 'be' and with past continuous was not significant for any of the groups.

With increasing levels of proficiency, the tendency to affiliate progressive marking with telic events dropped significantly in the lower advanced level group (see Research Hypothesis 4b and Appendix C-2).

### **6.2.2.3 The Use of PAST Marking**

As with the target tense present simple (see sections 3.1.1.3, 6.1.2.3, and 6.1.3.3), PAST marking was strongly associated with achievements, and, to a lesser extent, with accomplishments. Achievements were significant for the elementary and intermediate level groups: ( $X^2(1, N = 480) = 11.265, P < 0.001$ ) and ( $X^2(1, N = 300) = 19.973, P < 0.000$ ). Accomplishments were significantly associated with PAST marking for the elementary level group alone ( $X^2(1, N = 480) = 4.317, P < 0.38$ ) (see Research Hypotheses 1c and 1d, that achievement and accomplishment verbs associate with PAST marking; and Appendix C-2).

Similar to the use of PAST marking on stative and activity verbs on the GJT (section 6.2.1.3 above), statives and activities exhibited varying degrees of association with PAST marking. Statives were significantly affiliated with PAST



marking for all groups except the lower advanced level ( $X^2(1, N = 480) = 5.747, P < 0.017$ ), ( $X^2(1, N = 300) = 9.010, P < 0.003$ ) and ( $X^2(1, N = 300) = 6.117, P < 0.013$ ) respectively. Similarly, activities exhibited a significant affiliation with PAST marking for the elementary and intermediate level groups ( $X^2(1, N = 480) = 9.221, P < 0.002$ ) and ( $X^2(1, N = 300) = 6.091, P < 0.014$ ).

The significant affiliation of PAST marking with statives and activities appears to indicate that Arabic L1 learners have transferred the use of the past simple tense from Arabic into present perfect contexts in English. Contrary to Hypothesis 4a, there was no significant drop in the use of PAST marking by the Arabic-speaking groups on statives (33.3%, 33.3%, 28%) or activities (30.8%, 36%, 30.7%). Hence there were no significant differences between the lower advanced level group on the one hand and the elementary and intermediate level groups on the other, showing Arabic L1 influence to be active even at higher levels of proficiency – a finding corroborated by El Badrin (1982). Though the results seem to indicate transfer, other factors such as input come into play which could be the three-month instruction by native speakers. This prediction seems to be empirically supported by the frequent use of the past simple tense by the NS group in the context of present perfect with all aspectual verbs: statives (41.3%), activities (54.7%), achievements (61.3%) and accomplishments (57.3%). The preference for the past simple implies that it is an acceptable alternative to the present perfect in the minds of NSs. The same argument can be made for the use of PAST marking on aspectual verbs on the GJT (see section 6.2.1.3).

To summarize, lexical aspect dominates the use of aspectual markers relative to inflectional markers in the elementary and intermediate levels, whereas in the lower advanced level, tense exerts an influence comparable to that of lexical aspect in the elementary and intermediate levels. Thus, aspectual markers predominate in the elementary and intermediate levels, while the reverse is true in the lower advanced level (see Appendices E-2, and F-2). Figures 27 and 28 illustrate these influences.



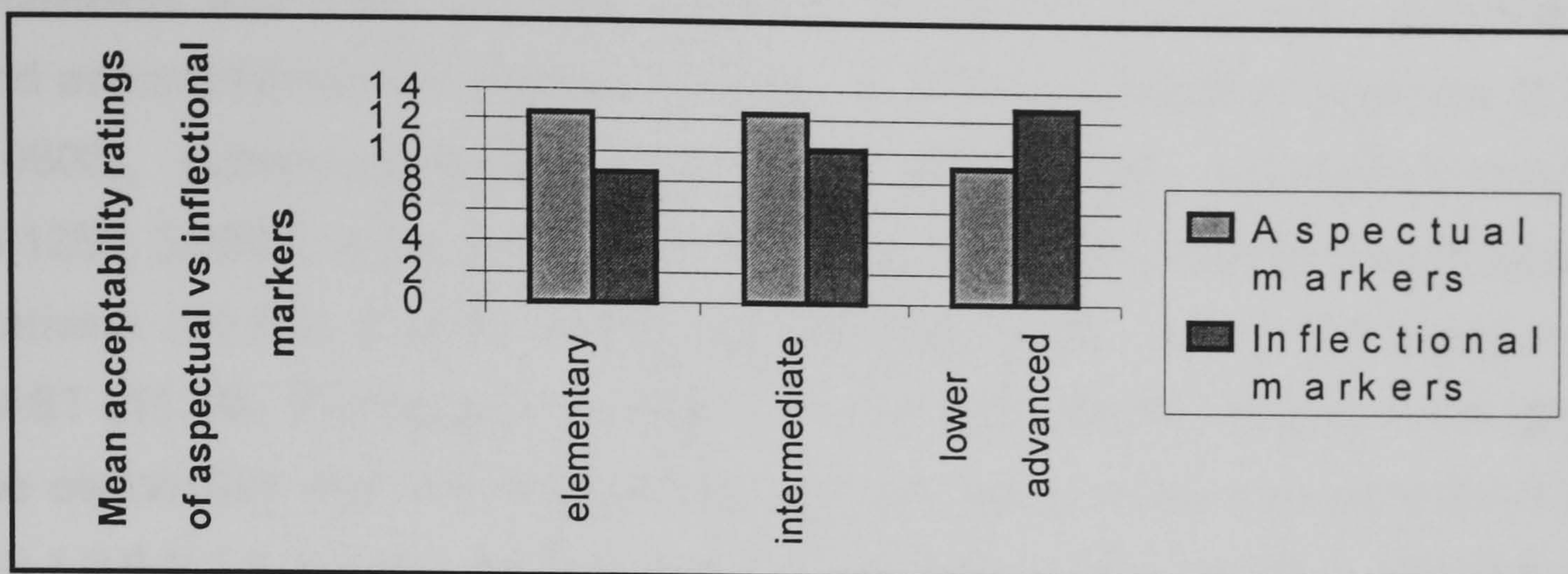


Figure 27. Mean acceptability ratings of aspectual vs. inflectional markers across the groups for the target tense **present perfect** in the GJT. Aspectual markers are more acceptable for the elementary and intermediate levels than inflectional markers (12.4250, 12.5200 versus 8.6250, 10.0800), whereas the reverse is true for the lower advanced level (12.8800 versus 8.9200).

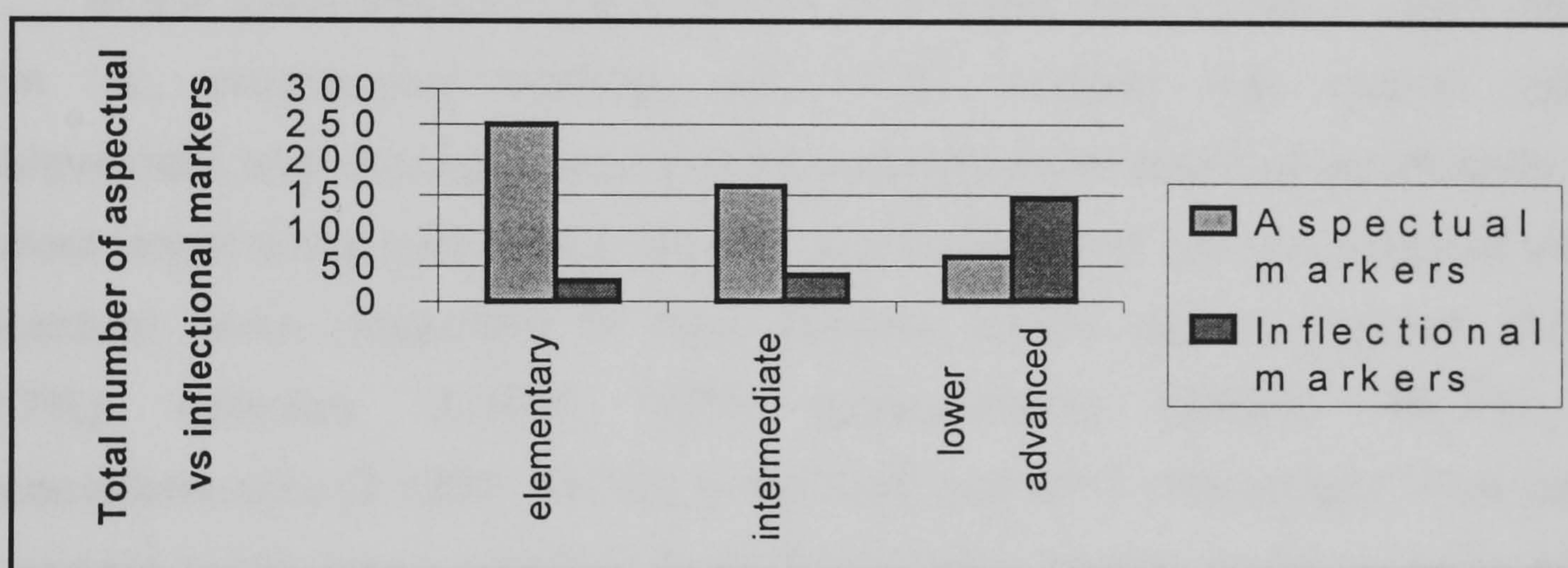


Figure 28. Total number of aspectual vs inflectional markers across the groups for the target tense **present perfect** in the GFT. There are 252 and 164 aspectual versus 31 and 39 inflectional markers in the elementary and intermediate levels, and 145 inflectional versus 61 aspectual markers in the lower advanced level.

### 6.2.3 Emergence and Development of Present Perfect Tense: Semantic Evidence

As data on GJT and GFT illustrate, the elementary and intermediate level learners significantly associated the present marking morpheme ‘-s’ with atelic, non-dynamic aspect (statives), progressive marking with dynamic, atelic aspect



(activities), and PAST with telic events both punctual and durative (achievements and accomplishments): stative-s (3.0000, 2.9200)<sup>2</sup>, activities-progressive (2.8250, 3.0800), achievements-PAST (3.4750, 3.6400) and accomplishment-PAST (3.1250, 2.8800) in the GJT for the elementary and intermediate level groups, and stative-s (41.7%, 41.3%), activities-progressive (40%, 40%), and achievement-PAST (55.8%, 70.7%) and accomplishment-PAST (50.8%, 53.3%) in the GFT for the elementary and intermediate level groups respectively (see sections 6.2.1.1, 6.2.1.2, 6.2.1.3, 6.2.2.1, 6.2.2.2 and 6.2.2.3, and Appendices B–2 and C-2). This means that they have acquired these three morphemes by reactivating their innate knowledge of universal aspectual values, i.e., punctuality, telicity, and dynamicity (see Figures 19–26 above).

In the lower advanced level group, the biased use of the present marking form ‘-s’, progressive marking, and PAST marking with stative, activity, achievement and accomplishment verbs respectively diminished significantly. The correct target tense form ‘has + ed’ was significantly and uniformly aligned with all aspectual verbs regardless of their inherent lexical aspect: statives (3.1200, 42.7%), activities (3.2000, 32%) achievements (3.6800, 69.3%) and accomplishments (2.8800, 49.3%) in the GJT and GFT respectively. This pattern of correct target tense marking is reinforced by a similar trend revealed by the control group (i.e., the NS group) (see Appendices B–2 and C-2). Figures 29 and 30 illustrate the use of the correct target tense form.

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<sup>2</sup> The ‘-s’ form with dynamic verbs patently cannot be interpreted as habituais because the context is present perfect.

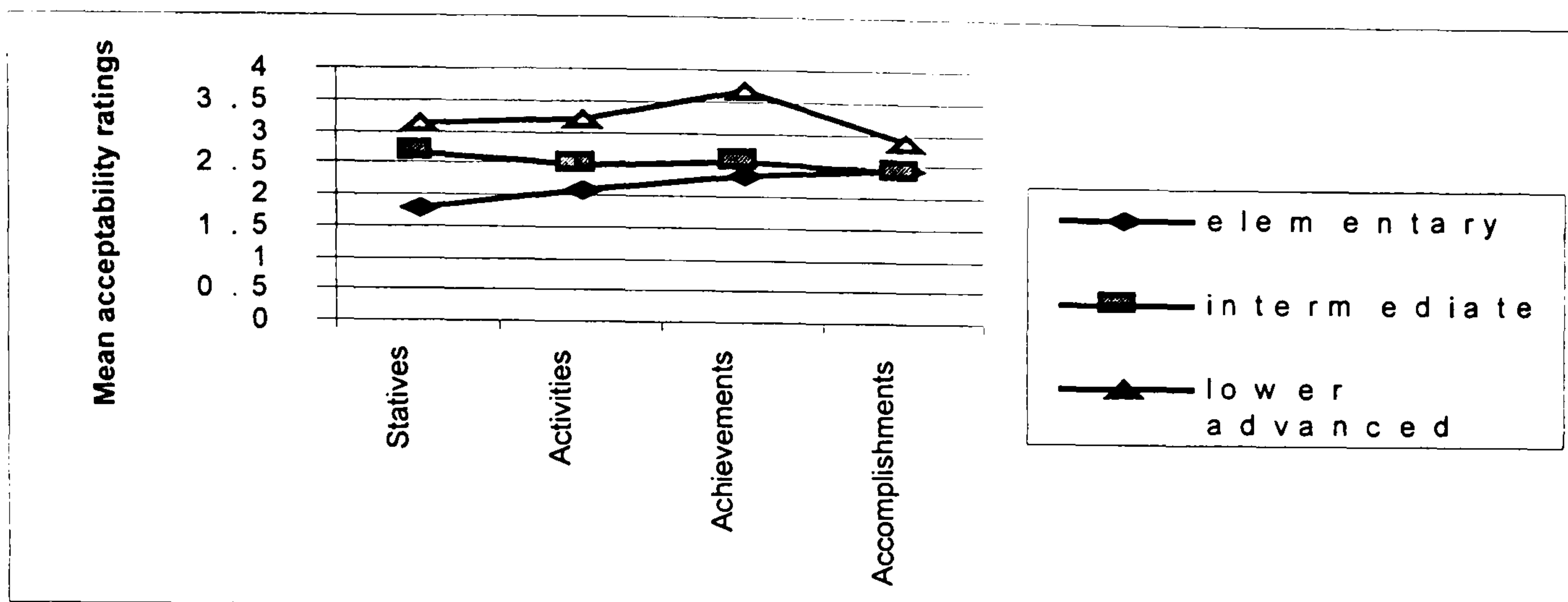


Figure 29. Development of present perfect morphology 'has + ed' across the groups in the GJT. The development of the present perfect form 'has + ed' is more marked in the lower advanced level (stative 3.1200, activity 3.2000, achievement 3.6800, and accomplishments 2.8800) than in the elementary and intermediate levels (statives 1.7750, 2.6400, activities 2.0750, 2.4800, achievements 2.3250, 2.5600, and accomplishments 2.4500, 2.4000).

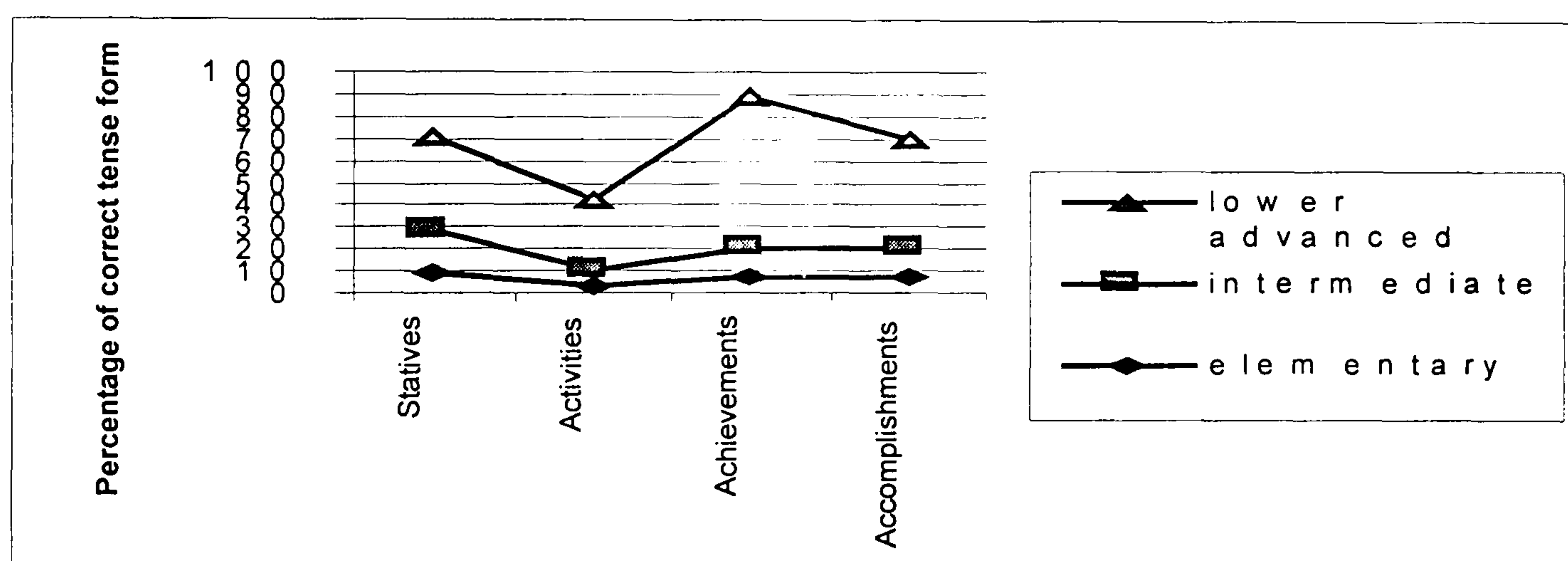


Figure 30. Development of present perfect morphology 'has +ed' across the groups in the GFT. Present perfect morphology is more developed in the lower advanced level (statives 42.7%, activities 32%, achievements 69.3%, and accomplishments 49.3%) than in the elementary and intermediate levels (statives 9.2%, 18.7%, activities 3.3%, 6.7%, achievements 6.7%, 13.3%, and accomplishments 6.7%, 13.3%).

In short, the elementary- and intermediate-level learners have acquired aspectual markers by correctly associating them with relevant verb types, and the lower advanced level learners have acquired the present perfect tense by significantly affiliating it with all verb types and by knowing how to arrange the



three temporal points involved in using the present perfect tense, namely, Reference, Event, and Speech time (see section 2.2).

## 6.3 Target Tense: Past

### 6.3.1 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GJT

As with the last two experiments, the Aspect Hypothesis was tested in this section in the context of the past simple by means of the GJT. 12 test items out of 88 target sentences on the GJT, three items per aspectual category, were constructed with the three morphemes '-s', '-ing', and PAST (see Appendix A-3). Examples of the biased association of verb types with aspect markings by the elementary- and intermediate-level learners are illustrated in (8):

(8) a. Last year Ahmad found a good job. He **likes it very much** but he lost it last week..

1            2            3            ④

b. Ahmad: How long did Ali study in the library yesterday?

Omar: He **studying there for twenty minutes**.

1            2            3            ④

c. It was 1990 when my brother **graduated from high school**. I'll never forget it.

1            2            3            ④

d. Omar **typed a letter** and posted it yesterday.

1            2            3            ④



The subjects' choices were analyzed by a repeated measures MANOVA which showed that the interaction of verb types with aspect markings across proficiency levels was highly significant ( $F(18, 324) = 2.45990, P < 0.000$ ). The following figures represent the association of aspect markings with each verb type across the groups.

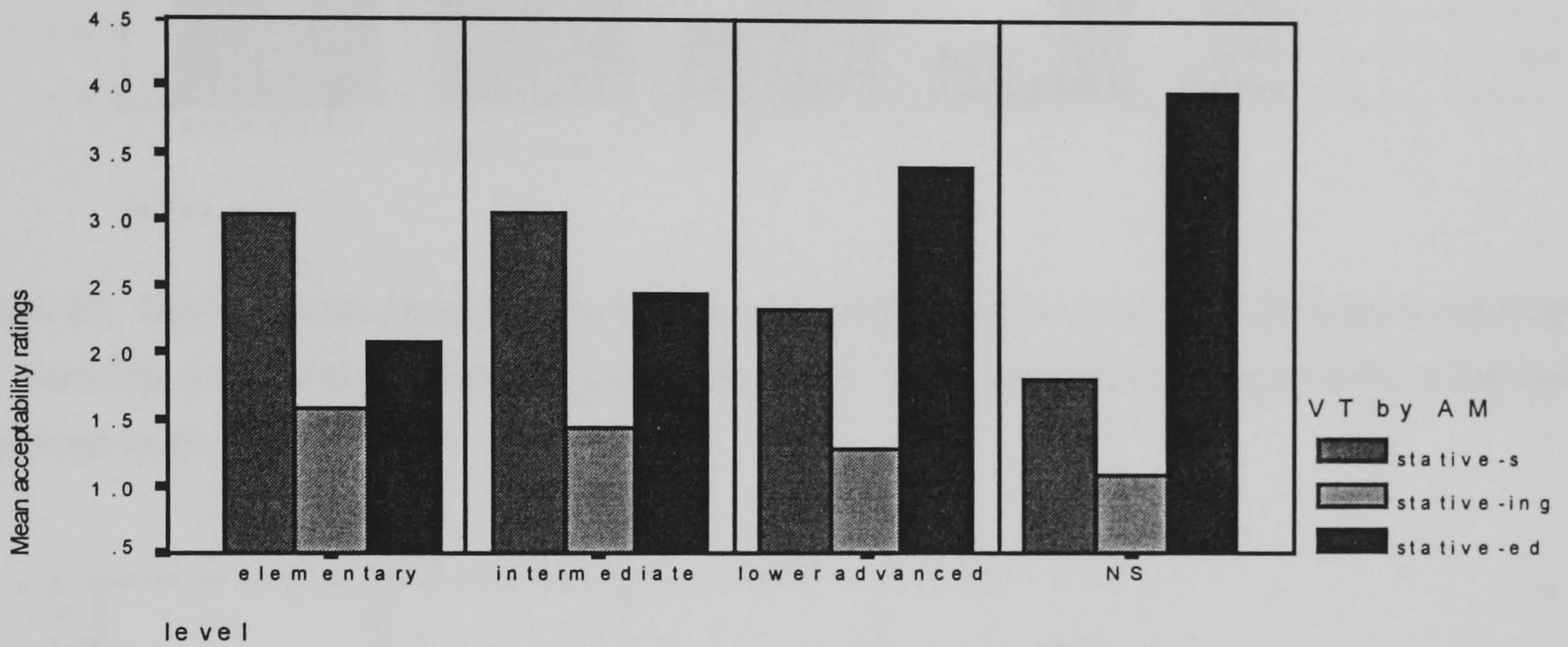


Figure 31. MAR – **Statives**. Stative verbs associate strongly with the present tense marker ‘-s’ regardless of tense in the elementary and intermediate levels, but with the correct past tense form independent of lexical aspect in the lower advanced level.

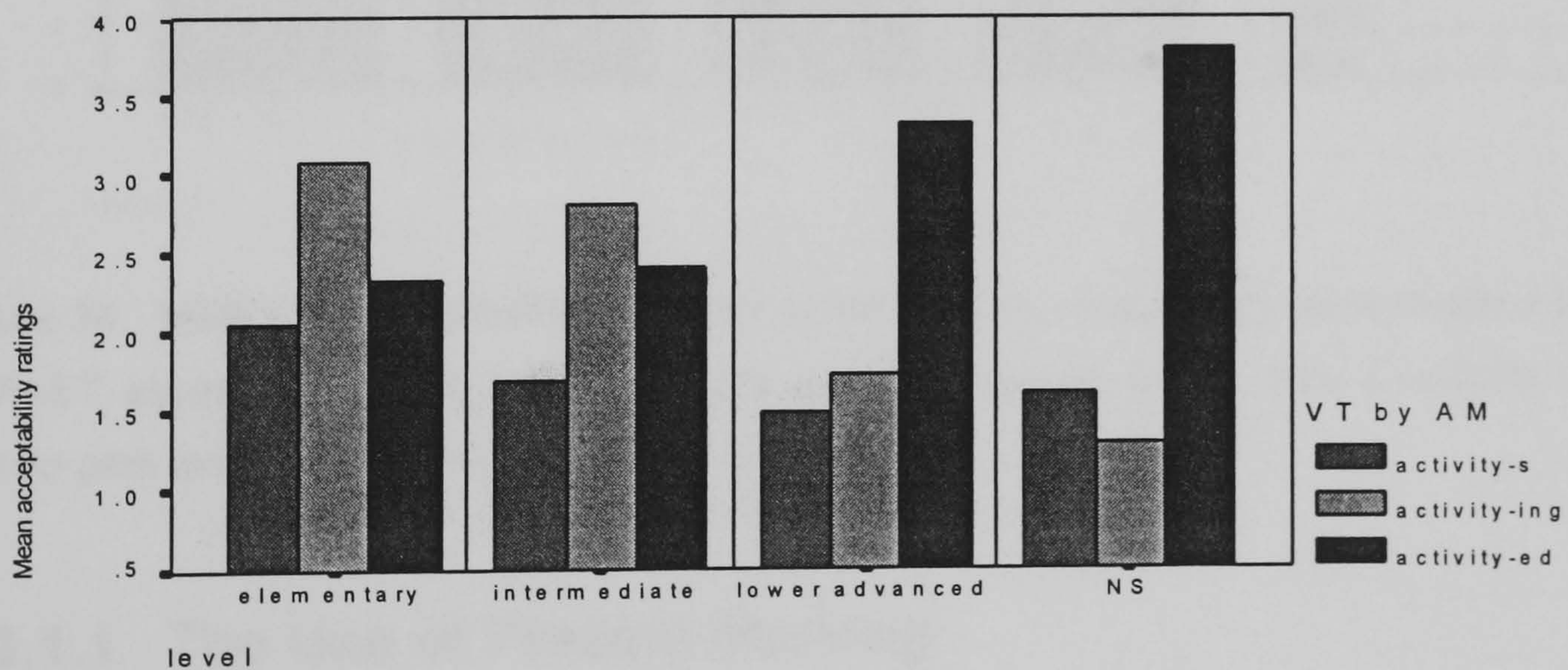


Figure 32. MAR – **Activities**. Activities exhibit a strong alliance with the ‘-ing’ form in the elementary and intermediate levels, with the correct past tense form predominating in the lower advanced level.



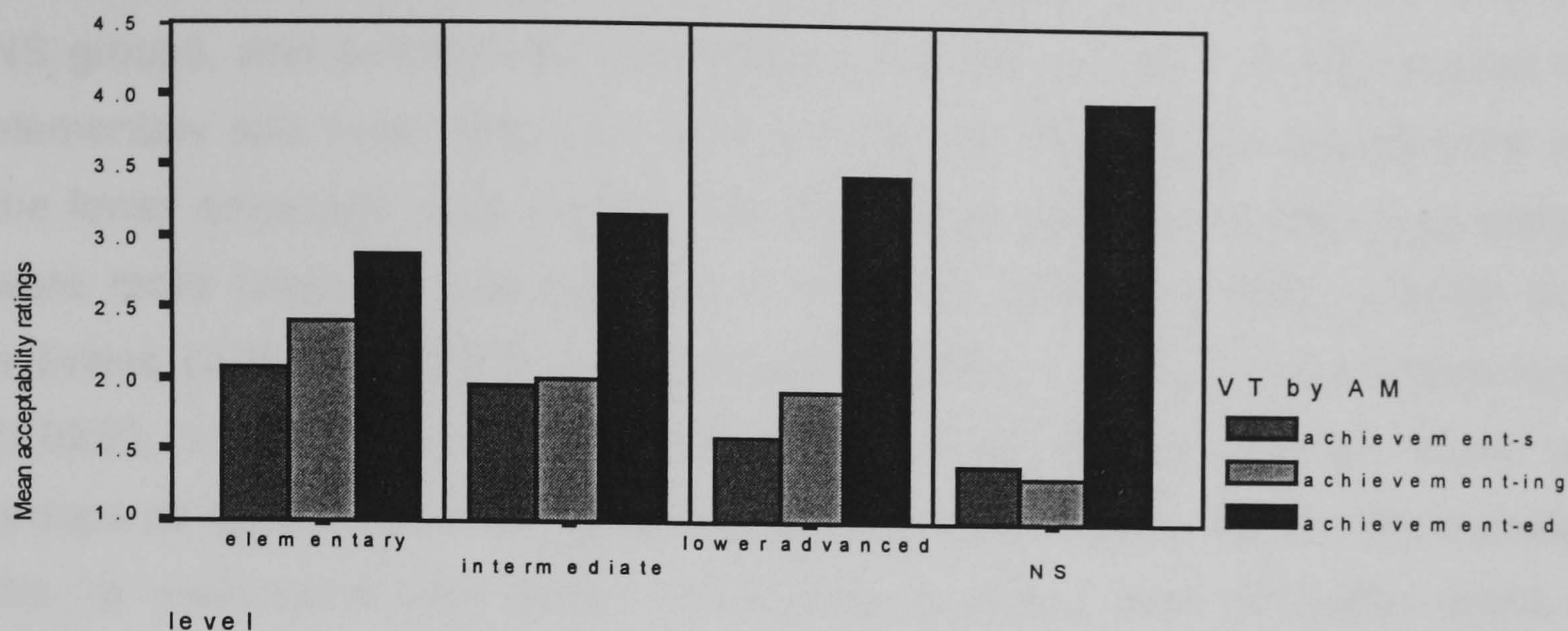


Figure 33. MAR – **Achievements**. Achievements exhibit a biased use of PAST aspect marking in the elementary and intermediate levels, but the correct past tense form is significant in the lower advanced level.

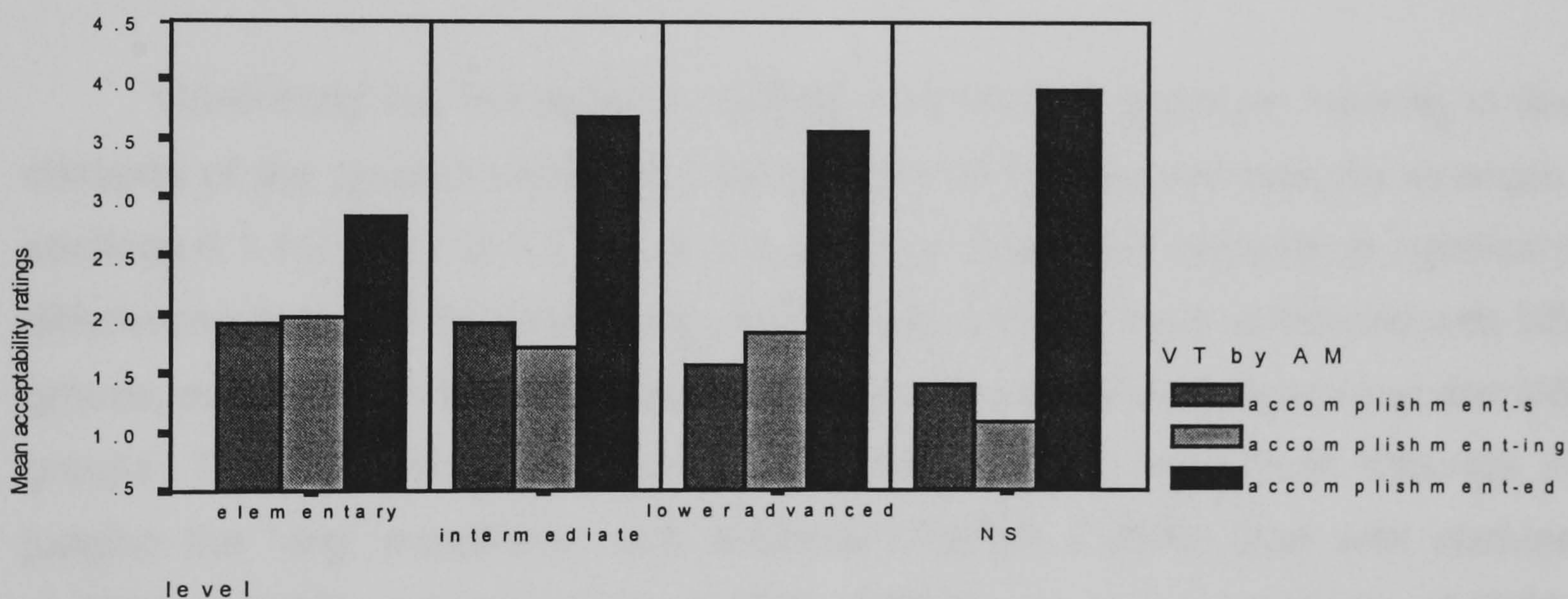


Figure 34. MAR – **Accomplishments**. Like achievements, accomplishments reveal a biased use of PAST aspect marking in the elementary and intermediate levels, with a uniform use of the correct past tense form in the lower advanced level.

### 6.3.1.1 The Use of Present Marking

As with the present simple and the present perfect experiments (see sections 6.1.1.1, 6.1.2.1, 6.1.3.1, 6.2.1.1, and 6.2.2.1), a biased use of verb inflection ‘-s’ stands out as the most significant feature of stative verbs. As a Tukey



test showed, there were significant differences between the elementary level and NS groups, and between the intermediate and NS groups, but not between the elementary and lower advanced level groups, nor between the intermediate and the lower advanced level groups. The elementary and intermediate level groups were more biased in judging the '-s' form with statives (3.0250, 3.0400) than activities (2.0500, 1.6800), achievements (2.0750, 1.9600) or accomplishments (1.9250, 1.9200). The absence of significant differences between these two groups as against the lower advanced level group indicates that the link between the '-s' morpheme and stative verbs remains strong even at higher levels of proficiency. Lexical aspect was not mediated by level of proficiency, continuing to exert an effect even at higher levels of proficiency (see Appendix B-3).

### **6.3.1.2 The Use of Progressive**

Confirming the link between activity verbs and progressive marking in the contexts of the present simple and the present perfect tenses (see, for example, sections 6.1.1.2, 6.1.2.2, 6.2.1.2, and 6.2.2.2), a Tukey test showed up significant differences between the elementary level group and the lower advanced and NS groups, and between the intermediate level group and the lower advanced and NS groups. The elementary and intermediate level groups were more accurate in judging the '-ing' morpheme with activities (3.0750, 2.8000) than with statives (1.5750, 1.4400), achievements (2.4000, 2.0000) or accomplishments (1.9750, 1.7200).

In accordance with preceding findings (see sections 6.1.1.2, 6.1.3.2, and 6.2.1.2) and contrary to Research Hypothesis 4b, a Tukey test did not find significant differences in the use of progressive marking on achievement and accomplishment verbs between the elementary (2.4000, 1.8400) and intermediate (2.0000, 1.7200) level groups on the one hand and the lower advanced level group (1.9200, 1.8400) on the other. The absence of such differences indicates that the



use of the '-ing' form was still high even in the lower advanced level due to an effect from L1.

Consistent with earlier findings on stative-ing (see, for example, sections 6.1.1.2, 6.1.2.2 and 6.2.2.2), stative verbs exhibited no significant association with progressive marking across the elementary (1.5750), intermediate (1.4400), and lower advanced level (1.2800) groups, but showed clear differences between the elementary level group and the NS group (1.0800). The absence of these differences between the elementary and intermediate level groups compared with the lower advanced group seems to suggest that statives do not align with progressive marking. This follows naturally from the Aspect Hypothesis (see Appendix B-3).

### **6.3.1.3 The Use of PAST Marking**

As already noted (sections 6.1.1.3, 6.1.2.3, 6.2.1.3 and 6.2.2.3, to name a few), there exists a strong link between achievement and accomplishment verbs and PAST marking. This link is further reinforced by GJT data on the past simple tense. For the elementary and intermediate level groups, the association of PAST marking was more acceptable with achievements (2.8750, 3.1600) and accomplishments (2.8250, 3.6800) than with statives (2.0750, 2.4400) or activities (2.3250, 2.4000) (see Research Hypotheses 1c and 1d, that PAST marking aligns with achievements and accomplishments). Hence lexical aspect dominates the distribution of verbal inflection. The influence of lexical aspect is in fact comparable to that of tense in the lower advanced level, where the correct target tense form is distributed uniformly across all aspectual verbs independent of inherent lexical aspect: statives (3.4000), activities (3.3200), achievements (3.4400), and accomplishments (3.4000). This pattern is reinforced by a similar pattern revealed by the NS group: statives (3.9600), activities (3.8000), achievements (3.9600), and accomplishments (3.9200). Hence, there is a change from the prototypical past marking of achievements and accomplishments, typical of the elementary and

intermediate level groups, to include more and more non-prototypical past reference verbs. This change follows naturally from the Aspect Hypothesis (see Research Hypothesis 3, that the dependence between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced). Robison (1995) provides strong support for this finding.

### 6.3.2 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GFT

We have seen that the past simple tense data as well as those of the present simple and present perfect tenses have confirmed the influence of lexical aspect in the development of tense-aspect morphology. In this section, lexical aspect was further investigated by 12 test items out of 72 target sentences on the GFT, three sentences per aspectual categories, constructed to provide obligatory contexts for past reference. The suppliance of subjects were analyzed by chi square tests which showed that the association between the '-s', '-ing', and PAST aspect markings with statives, activities and telic predicates (i.e., achievements and accomplishments) was highly significant for the elementary and intermediate level groups, while a non-biased association of the correct target tense form (i.e., past) with all aspectual verbs was the salient feature in the lower advanced level group – a pattern endorsed by the NS group. Typical examples of the biased association of aspect markings with verb types in the elementary and intermediate levels are given in (9):

- (9) a. Last month Majid went running everyday but now it is hot. He (prefer) **prefers** to go swimming.
- b. Omar put on his shoes and (play) **playing** football for forty five minutes.
- c. Ali (meet) **met** Ahmad very early this morning because he had to



leave for Jeddah.

d. The cleaner was very slow today. It was about 12 o'clock when he  
(clean) **cleaned this room.**

The overall chi square values for the correlation of each verb type with aspect markings were significant for all four groups, the figures from lowest to highest level being ( $X^2(27, N = 480) = 195.498, P < 0.000$ ), ( $X^2(24, N = 300) = 210.824, P < 0.000$ ), ( $X^2(18, N = 300) = 39.725, P < 0.002$ ) and ( $X^2(18, N = 300) = 34.629, P < 0.011$ ) (see Appendix C - 3). Figures 35 – 38 represent this effect.

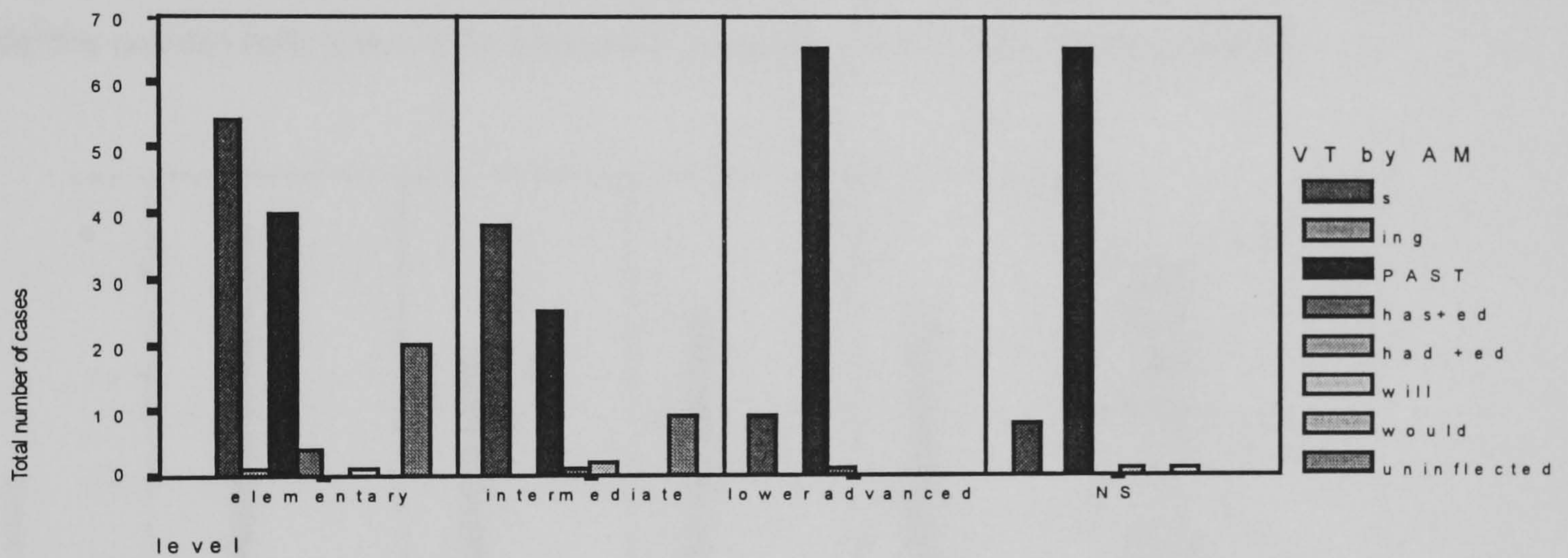


Figure 35. TNC – **Statives**. The correlation of the '-s' morpheme with stative aspect is significant in the elementary and intermediate levels, but not in the lower advanced level due to the strong use of the correct past tense form.



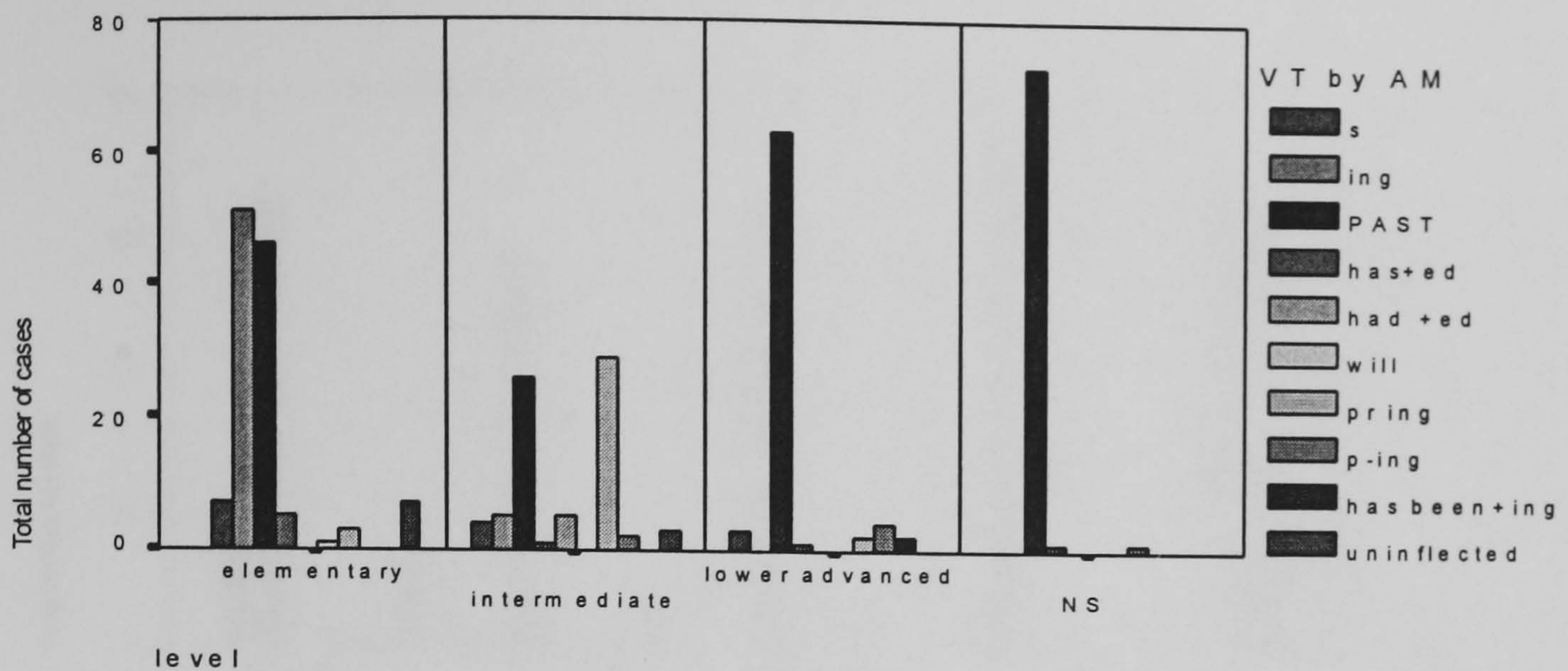


Figure 36: TNC – **Activities**. The use of the ‘-ing’ without the auxiliary ‘be’ is significant in the elementary level and intermediate levels as is the present continuous in the intermediate level, while the correct past tense form becomes apparent in the lower advanced level.

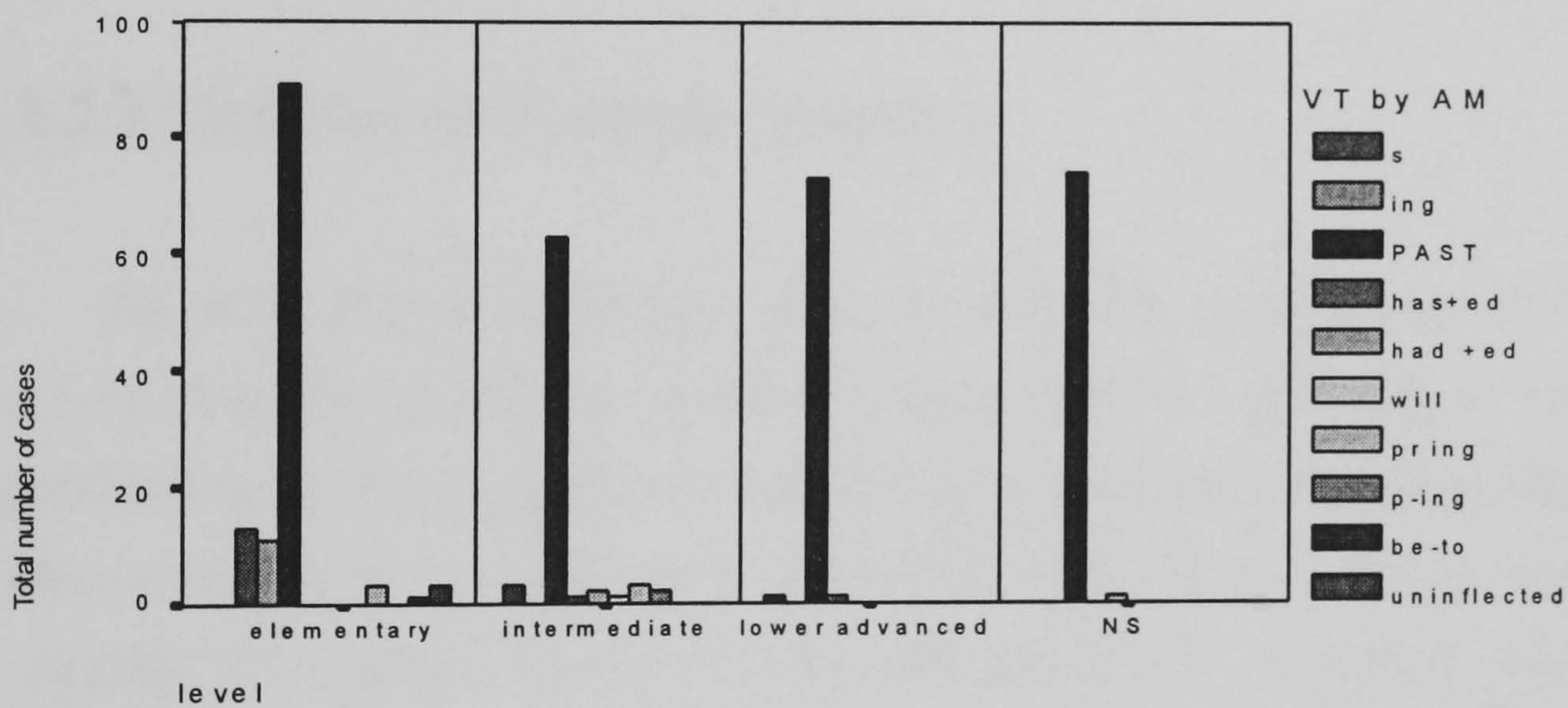


Figure 37. TNC – **Achievements**. Achievements exhibit a biased use of PAST aspect marking in the elementary and intermediate levels, but a uniform use of the correct past tense form comparable to NS behaviour appears in the lower advanced level.



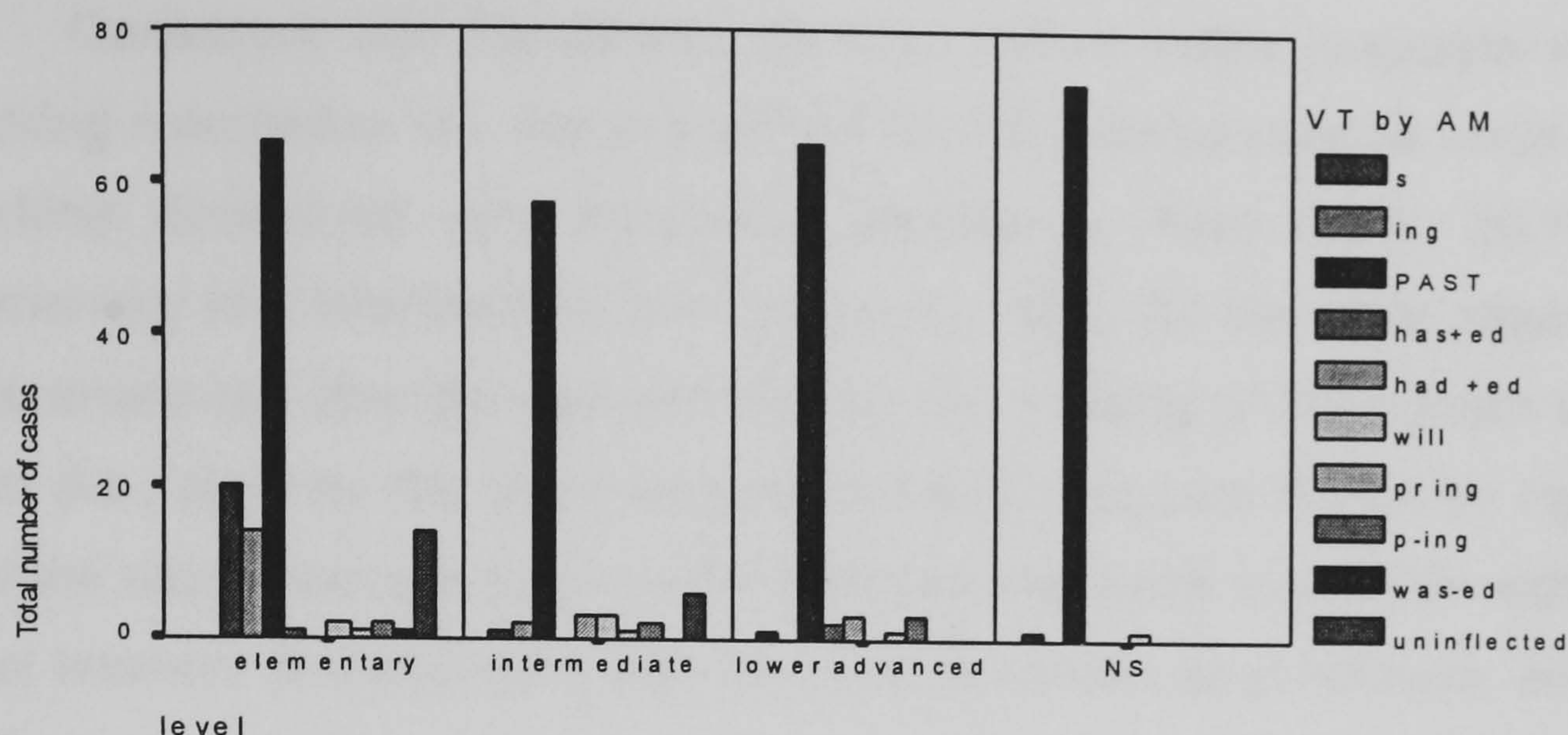


Figure 38. TNC – **Accomplishments**. The elementary- and intermediate-level learners were biased in their use of PAST marking, while the lower advanced level learners used the correct past tense form uniformly.

### 6.3.2.1 The Use of Present Marking

As with other target tenses (see, for example, sections 6.1.1.1, 6.2.2.1, and 6.3.1.1), the link of present marking morpheme ‘-s’ with stative verbs is again significant in the GFT past tense data for all groups from lowest to highest ( $X^2(1, N = 480) = 65.633, P < 0.000$ ), ( $X^2(1, N = 300) = 96.166, P < 0.000$ ), ( $X^2(1, N = 300) = 12.088, P < 0.001$ ) and ( $X^2(1, N = 300) = 20.199, P < 0.000$ ). Hence, the null hypothesis that the morphological marking is independent of stative aspect is rejected. Moreover, the significant values of present marking for the lower advanced and NS groups indicate that lexical aspect was not mediated at higher levels of proficiency (cf. Research Hypothesis 2, that the elementary- and intermediate-level learners will show the narrowest and most significant association of ‘-s’ with stative verbs, while the lower advanced-level learners will show the weakest dependence, if any, of verb morphology upon lexical aspect). Interesting in this regard is the finding that by re-examining Jabbari’s (1998) GFT tables, it was obvious that the effect of lexical aspect continued in the NS group (stative-s 12.2% versus stative-have 61%).



Consistent with Hypothesis 1a (i.e., stative verbs associate with present marking morpheme '-s'), the strength of the link between stative verbs and the '-s' marking diminished with increasing proficiency, from (45%, 50.7%) for the elementary and intermediate level groups to (12%) for the lower advanced group. This enormous change was effected by the marking of the correct target tense form (i.e., past) by the lower advanced level group (see Research Hypothesis 3, that the dependence between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced level learners, and Appendix C-3).

Similar to the tendency revealed in the contexts of present and present perfect (see, for example, sections 6.1.2.1, 6.1.3.1, and 6.2.2.1), stative verbs exhibited a significant occurrence of uninflected forms for the elementary level group and the intermediate level group ( $X^2(1, N = 480) = 10.809, P < 0.001$  and  $X^2(1, N = 300) = 6.383, P < 0.012$ ). Since uninflected forms function for present reference in English, this result provides further evidence of statives aligning with present reference. As was argued earlier (see sections 6.1.2.1, 6.1.3.1, and 6.2.2.1), the omission of '-s' could be developmental since the morpheme is acquired over time by both L1 and L2 learners. In addition, since Arabic phonology forbids final consonant clusters with '-s', there is the possibility of L1 influence (see Appendix C-3).

### **6.3.2.2 The Use of Progressive marking**

Congruent with earlier findings for the elementary and intermediate level groups regarding progressive marking on activities (see, for example, sections 6.1.2.2, 6.1.3.2, 6.2.2.2, 6.2.3.2, and 6.3.1.2), and consistent with Research Hypothesis 1b (i.e., progressive marking aligns with activities at elementary and intermediate level), activity verbs correlate strongly with the '-ing' morphology without auxiliary 'be' for the two groups, ( $X^2(1, N = 480) = 83.163, P < 0.000$ ) and



( $X^2(1, N = 300) = 8.240, P < 0.004$ ) but with the 'is +Ving' form ( $X^2(1, N = 300) = 78.186, P < 0.000$ ) for the intermediate level group only.

With rising level of proficiency the influence of inherent lexical aspect in the lower level groups dropped from (42.5%, 38.7%) in the elementary and intermediate level groups to (5.3%) in the lower advanced level group. The high occurrence of progressive marking was thus replaced by a virtually even distribution of the correct target tense form (i.e., past) among all aspectual verbs regardless of inherent lexical aspect. Thus Research Hypothesis 2, that elementary- and intermediate-level learners will show the most significant association of '-ing' with activity predicates, while lower advanced-level learners and NS will show the weakest dependence, if any, of verb morphology upon lexical aspect, is confirmed (see sections 6.1.1.2, 6.2.1.2, and 6.3.1.2, and Appendix C-3).

Consistent with Research Hypothesis 4b, achievements were significantly affiliated with the '-ing' form without auxiliary 'be' ( $X^2(1, N = 480) = 5.615, P < 0.018$ ) in the elementary level and with the present continuous ( $X^2(1, N = 300) = 5.005, P < 0.025$ ) in the intermediate level group. Moreover, the link between the present continuous and accomplishments was statistically significant ( $X^2(1, N = 300) = 9.545, P < 0.002$ ) for the intermediate level group only. However, the effect of progressive marking on telic events dropped dramatically in the lower advanced level (see sections 6.1.2.2 and 6.2.2.2).

Statives, as we saw before (sections 6.1.1.2, 6.1.2.2, 6.2.1.2, and 6.3.1.2), again exhibited the weakest link with progressive marking. There was just one case of stative-ing - much less than its expected value of 19.3%. This follows naturally from the Aspect Hypothesis.

### 6.3.2.3 The Use of PAST Marking

In keeping with earlier findings (sections 6.1.1.3, 6.1.2.3, 6.2.2.3, and 6.3.1.3, to name a few), the GFT data on the past simple tense revealed that the simultaneous recurrence of aspect marking and telic events was mainly the result of a skewing in the distribution of PAST marking. The biased application of PAST marking was the most significant feature of punctual events for the elementary, intermediate and lower advanced level groups: ( $X^2(1, N = 480) = 37.378$ ,  $P < 0.000$ ), ( $X^2(1, N = 300) = 29.743$ ,  $P < 0.000$ ) and ( $X^2(1, N = 300) = 7.475$ ,  $P < 0.006$ ). PAST marking was predominantly associated with achievements in the elementary and intermediate level groups (74.2%, 84%). However, with increasing level of proficiency in the lower advanced group, PAST marking was extended uniformly to all other aspectual verbs independent of their inherent semantics: statives (86.7%), activities (84.0%), achievements (97.3%) and accomplishments (86.7%). Hence, the bias toward past reference increases steadily with proficiency level. Interestingly however, the link between PAST marking and punctual events remains strong even in the lower advanced level group.

Contrary to Research Hypothesis 1d (i.e., PAST marking aligns with accomplishment verbs), accomplishments were highly significant for the intermediate level group ( $X^2(1, N = 300) = 14.729$ ,  $P < 0.000$ ), but exhibited no significant association with PAST marking either for the elementary or for the lower advanced-level learners. This latter group used high percentages or tokens with all verb types, resulting in a non-biased distribution of the correct target tense form among verb types, as shown above (see Appendix C-3).

Thus, there is a change from the prototypical PAST marking of achievements and accomplishments, typical of the elementary level (except for accomplishments in this target tense) and intermediate level groups, to increasingly non-prototypical past-reference verbs. In other words, the elementary- and intermediate-level learners used PAST morphology predominantly and



redundantly to mark lexical aspectual distinctions which are determined by the lexical meanings of predicates, while the lower advanced level learners marked temporal distinctions independently of the lexical semantics of predicates. These results follow naturally from the Aspect Hypothesis (see Hypotheses 1c, 1d, and 2).

### 6.3.3 The Overall Association of Verb Types with Aspect Markings Across the Groups in the RT

A story re-telling task (RT) was performed using a silent excerpt for the elicitation of three target times: present, past, and future (see section 5.3.2.3). The spontaneous speech of the subjects was coded and analyzed by chi square tests to examine the association of verb type and aspect markings. Chi square tests revealed that the interaction of verb types with aspect markings was significant for all groups. The results, starting with the lowest, were ( $X^2(36, N = 335) = 281.632, P < 0.000$ ), ( $X^2(36, N = 221) = 179.777, P < 0.000$ ), ( $X^2(30, N = 162) = 116.723, P < 0.000$ ) and ( $X^2(21, N = 173) = 69.303, P < 0.000$ ). Figures 39–42 illustrate this effect.

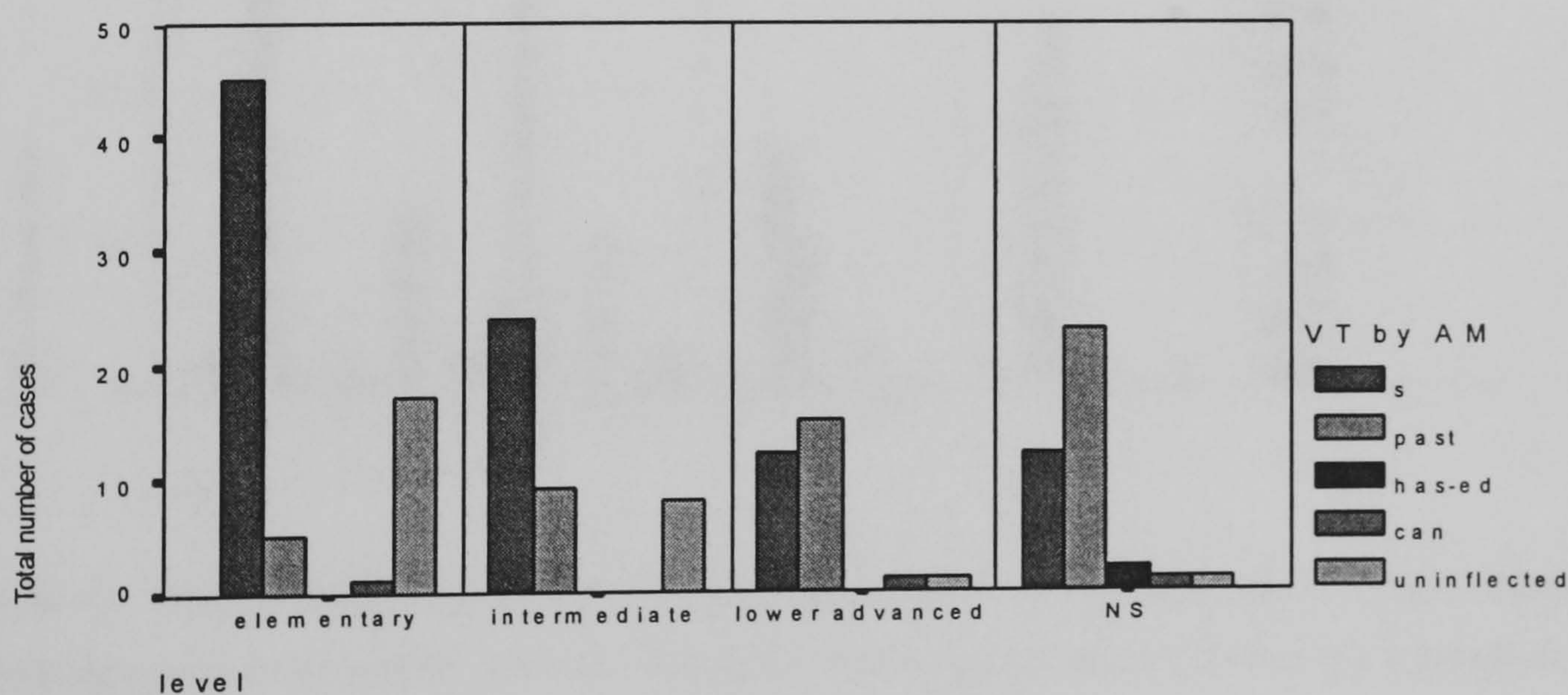


Figure 39. TNC – **Statives**. The present marking morpheme '-s' affiliates significantly with stative verbs which also exhibit a significant occurrence of uninflected forms in the elementary and intermediate levels. The correct past tense form is predominant in the lower advanced level.



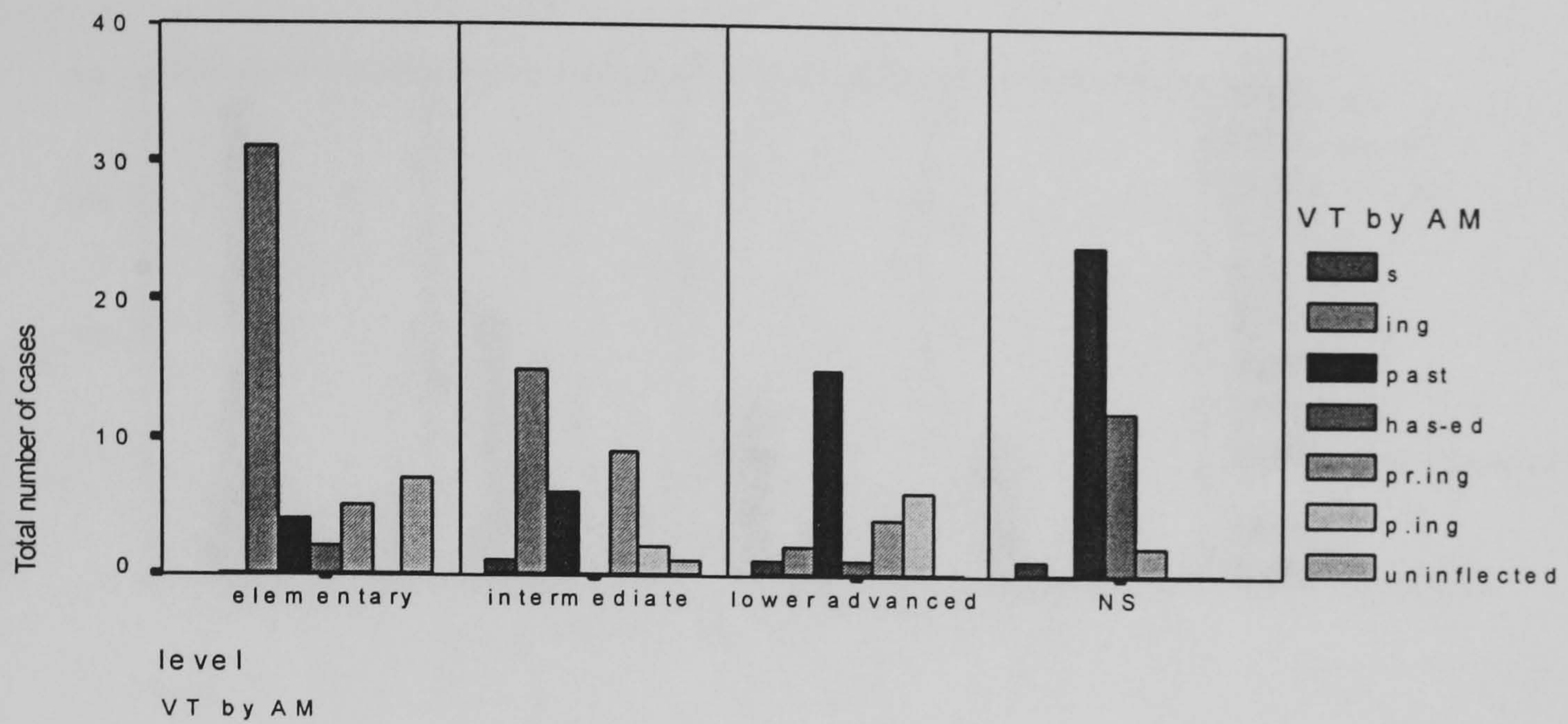


Figure 40. TNC – **Activities**. Progressive marking either with or without auxiliary 'be' is significant in the elementary and intermediate levels, whereas the correct past tense form is significant in the lower advanced level.

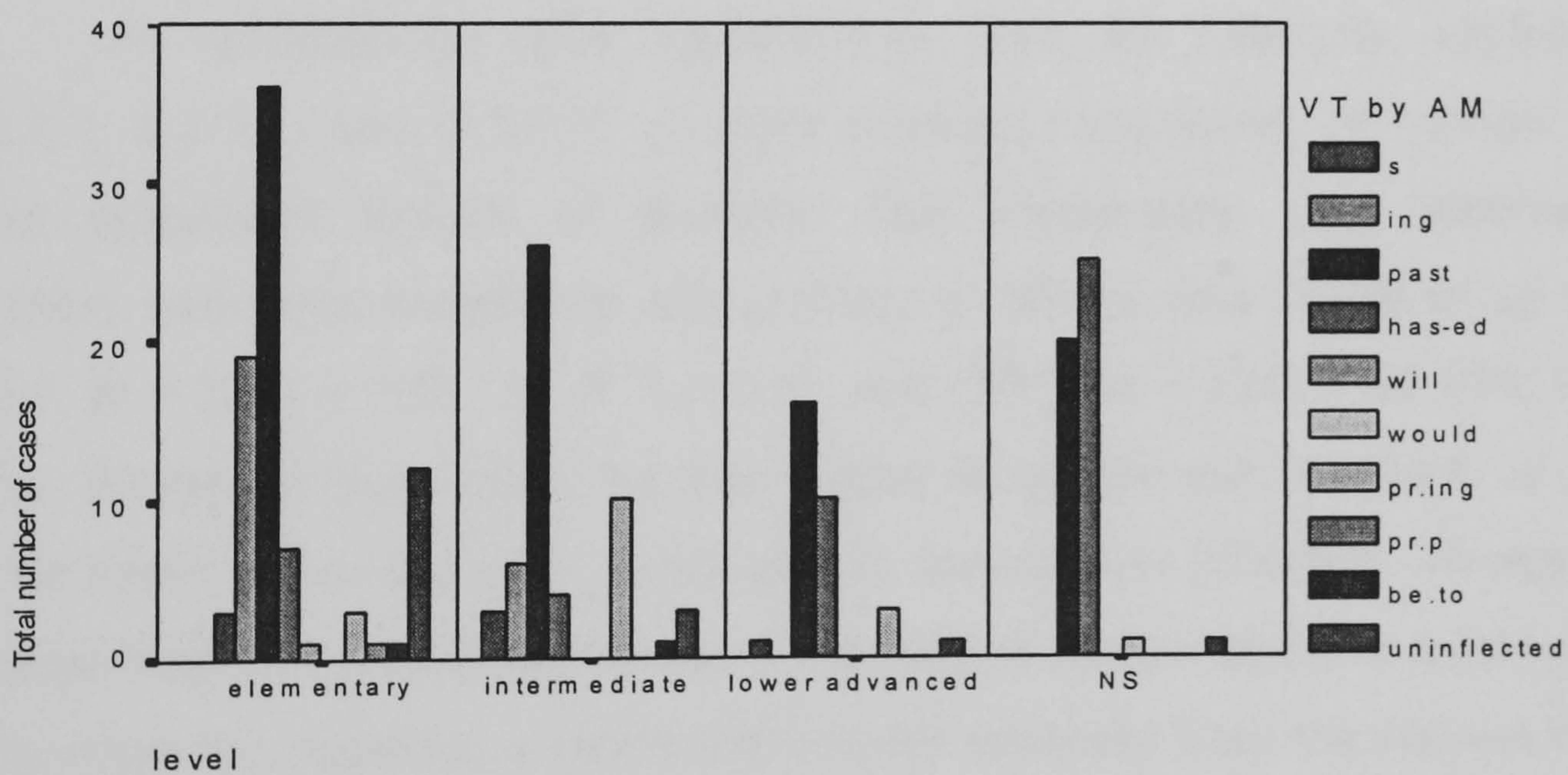


Figure 41. TNC – **Achievements**. Achievements exhibit a biased use of PAST marking in the elementary and intermediate levels. The correct past tense form is uniformly applied in the lower advanced level.



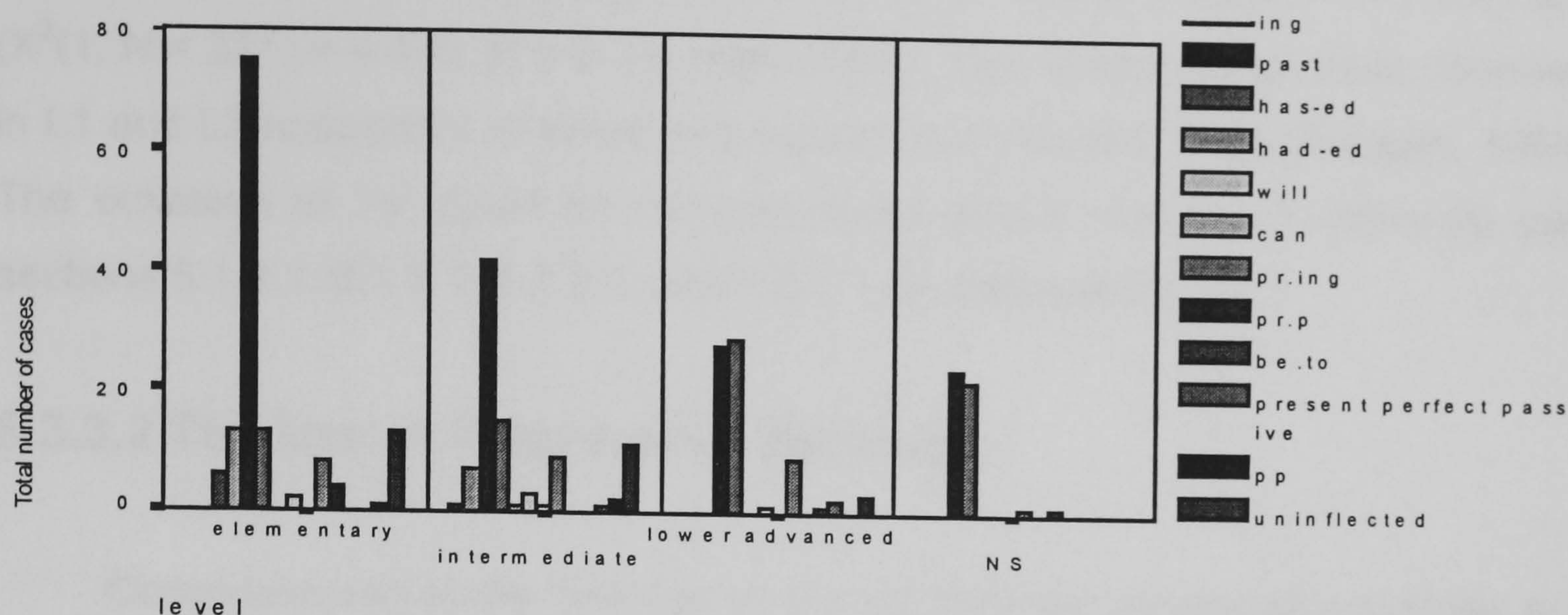


Figure 42. TNC – **Accomplishments**. The elementary and intermediate level learners are biased in their use of PAST marking, whereas the lower advanced level learners correctly use the past tense form.

### 6.3.3.1 The Use of Present Marking

As revealed by other experiments (see, for example, sections 6.1.1.1, 6.2.2.1, 6.3.1.1, and 6.3.2.1), present marking morpheme ‘-s’ stands out as the most significant feature of statives. The elementary- and intermediate-level learners used this morpheme with statives in 66.2% and 58.5% of all verb types: ( $X^2(1, N = 335) = 158.111, P < 0.000$ ) and ( $X^2(1, N = 221) = 91.070, P < 0.000$ ). Thus, Research Hypothesis 1a, that stative verbs link with the form ‘-s’, is verified. In the lower advanced level, tense exerts control over inflection. Hence, there is a change from the prototypical present marking of stative verbs to a non-prototypical past reference marking, a result that follows naturally from the Aspect Hypothesis. However, the link between ‘-s’ and statives was again significant ( $X^2(1, N = 162) = 47.950, P < 0.000$ ) and ( $X^2(1, N = 173) = 39.180, P < 0.000$ ) in the lower advanced and NS groups. Thus lexical aspect was not mediated by level of proficiency (see Research Hypotheses 2 and Appendix D-2).



Statives exhibited a significant occurrence of uninflected forms for the elementary and intermediate level groups ( $X^2(1, N = 335) = 7.352, P < 0.007$ ) and ( $X^2(1, N = 221) = 4.476, P < 0.34$ ) respectively. This tendency has been observed in L1 and L2 acquisition of tense and aspect (see Housen, 1994; Robison, 1995). The omission of '-s' could be developmental and/or due to L1 influence (see sections 6.1.2.1, 6.1.3.1, 6.2.2.1, and 6.3.2.1 for elaboration).

### **6.3.3.2 The Use of Progressive Marking**

Congruent with earlier findings on the link between progressive marking and activities (see sections 6.1.1.2, 6.1.2.2, 6.2.1.2, 6.2.2.2, 6.3.1.2, and 6.3.2.2), activities exhibited a strong association with progressive marking without auxiliary 'be' in the three experimental groups ( $X^2(1, N = 335) = 74.299, P < 0.000$ ), ( $X^2(1, N = 221) = 35.916, P < 0.000$ ) and ( $X^2(1, N = 162) = 9.287, P < 0.002$ ). Significant data were obtained for the past continuous for the intermediate and lower advanced level groups ( $X^2(1, N = 221) = 11.100, P < 0.001$ ) and ( $X^2(1, N = 162) = 18.576, P < 0.000$ ), but the present continuous for the intermediate level group ( $X^2(1, N = 221) = 6.917, P < 0.009$ ). All these results concur with Research Hypothesis 1b, showing that lexical aspect was not mediated by level of proficiency.

The predominant association of progressive marking with activities in the two lower levels decreased with increasing proficiency in the higher levels, from (63.3%, 44.1%) to (13.8%, 5.1%). That is to say, there is a dramatic change from a prototypical progressive marking of activities to a non-prototypical tense distinction at higher levels of proficiency, presumably due to linguistic development (see Research Hypotheses 1b and 3, and sections 6.1.1.2, 6.1.2.2, 6.2.1.2, and 6.3.2.2).

The affiliation of progressive marking with telic events showed varying degrees of significance. Punctual events were significantly affiliated with



progressive marking without auxiliary 'be' in the elementary level group only ( $X^2(1, N = 335) = 12.470, P < 0.000$ ). Contrary to Hypothesis (4b), past continuous was significant in the lower advanced level alone ( $X^2(1, N = 162) = 5.111, P < 0.024$ ).

Contrary, too, to Hypothesis 4b, accomplishments exhibited no significant affiliation with any form of progressive marking (i.e. without auxiliary 'be', present continuous, and past continuous) for any group.

With increasing level of proficiency, the affiliation of progressive marking with punctual events diminished significantly (see sections 6.1.2.2, 6.2.2.2, 6.3.2.2, and Appendix D-2).

Statives exhibited no affiliation with progressive marking in any group. This means that Arabic learners could distinguish between dynamic/non-dynamic aspect or, in Bickerton's (1981) terms, State-Process Distinction (SPD).

### **6.3.3.3 The Use of PAST Marking**

PAST marking bears a distinct association with achievements in these data. In the elementary and intermediate level groups, achievements exhibited an amplified use of PAST marking and a depressed application of other forms of morphological marking. The biased application of PAST to punctual events was the most salient feature. The cell values of chi square were highly significant in the elementary and intermediate level groups ( $X^2 (1, N = 335) = 39.622, P < 0.000$ ) and ( $X^2 (1, N = 221) = 3.960, P < 0.047$ ), a result reinforced by earlier findings (sections 6.1.1.3, 6.2.2.3, and 6.3.1.3 are representative, among others).

Conversely, the use of PAST morphology with accomplishments was not as dominant as it was with punctual events. In fact, accomplishments exhibited a marginal significance of PAST association in the intermediate level group ( $X^2 (1, N = 221) = 3.932, P < 0.047$ ) but not in the other groups. Of interest here is Jabbari's



(1998) inability to spot any significant correlation between accomplishments and PAST marking.

Consistent with Research Hypothesis 2, the biased association of PAST marking seen in the two lower level groups weakened significantly by increasing the bias toward past-reference marking which was uniformly distributed among all aspectual verbs (independent of their inherent lexical aspect) by the lower advanced level group: statives (51.7%), activities (51.7%), achievements (38.4%) and accomplishments (51.6%) (see Appendix D-2).

To summarize, two influences are operating in the data: (i) lexical aspect in the elementary and intermediate levels, and (ii) tense in the lower advanced level. Consequently, aspectual markers were predominantly used in the elementary and intermediate levels, whereas inflectional markers (correct target tense forms) were predominant in the lower advanced level. Figures 43-45 illustrate this correlation.

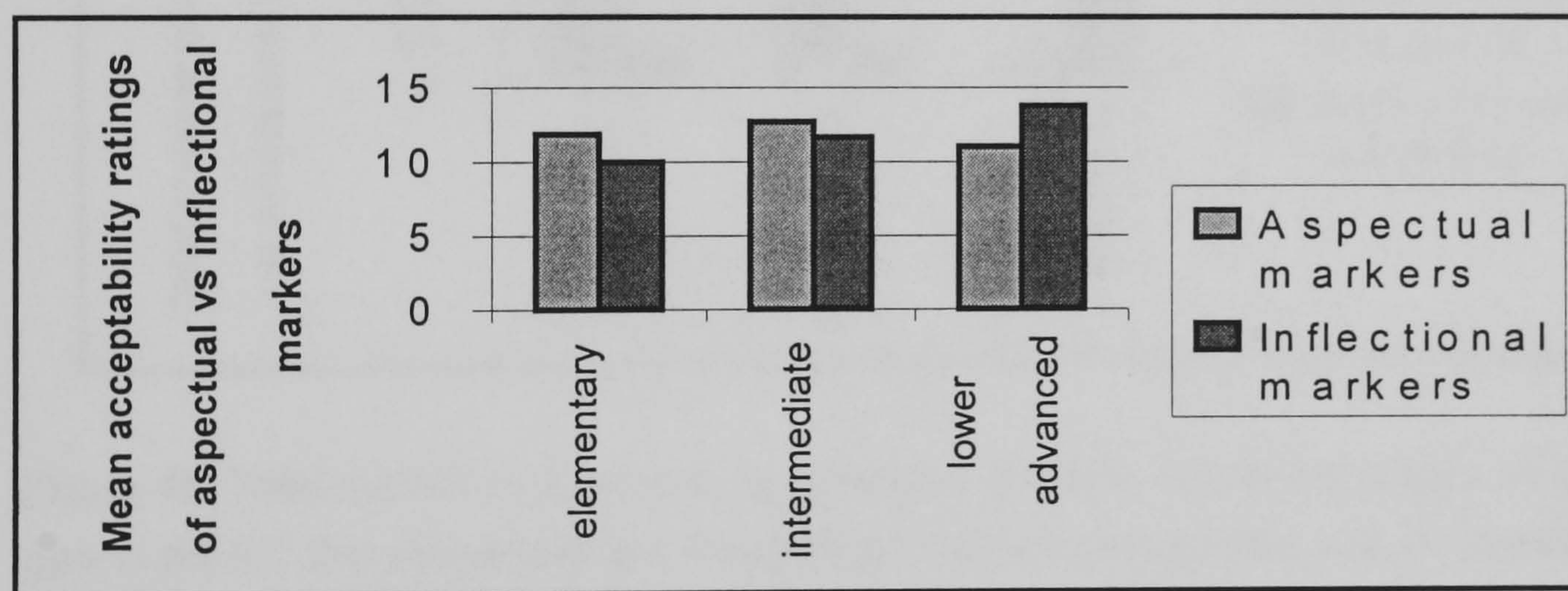


Figure 43. Mean acceptability ratings of aspectual vs inflectional markers across the groups for the target tense past in the GJT. The preference for aspectual markers is greater than that for inflectional markers in the elementary and intermediate levels (11.8000, 12.6800 versus 10.1000, 11.6800), whereas the reverse holds true for the lower advanced level (13.7200 versus 11.0400).



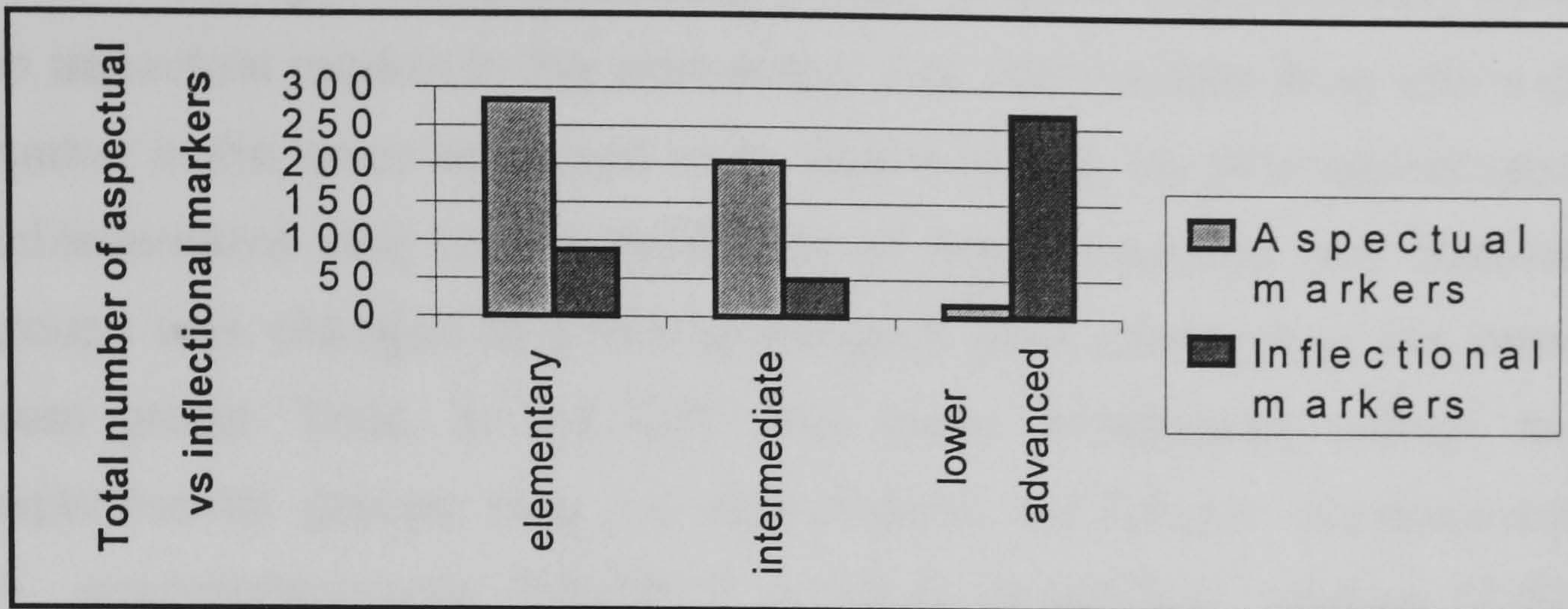


Figure 44. Total number of aspectual vs inflectional markers across the groups for the target tense past in the GFT. The frequency of aspectual markers is greater than that of inflectional markers (282 and 203 versus 86 and 51) for the elementary and intermediate levels, with the reverse applying to the lower advanced level (266 versus 15).

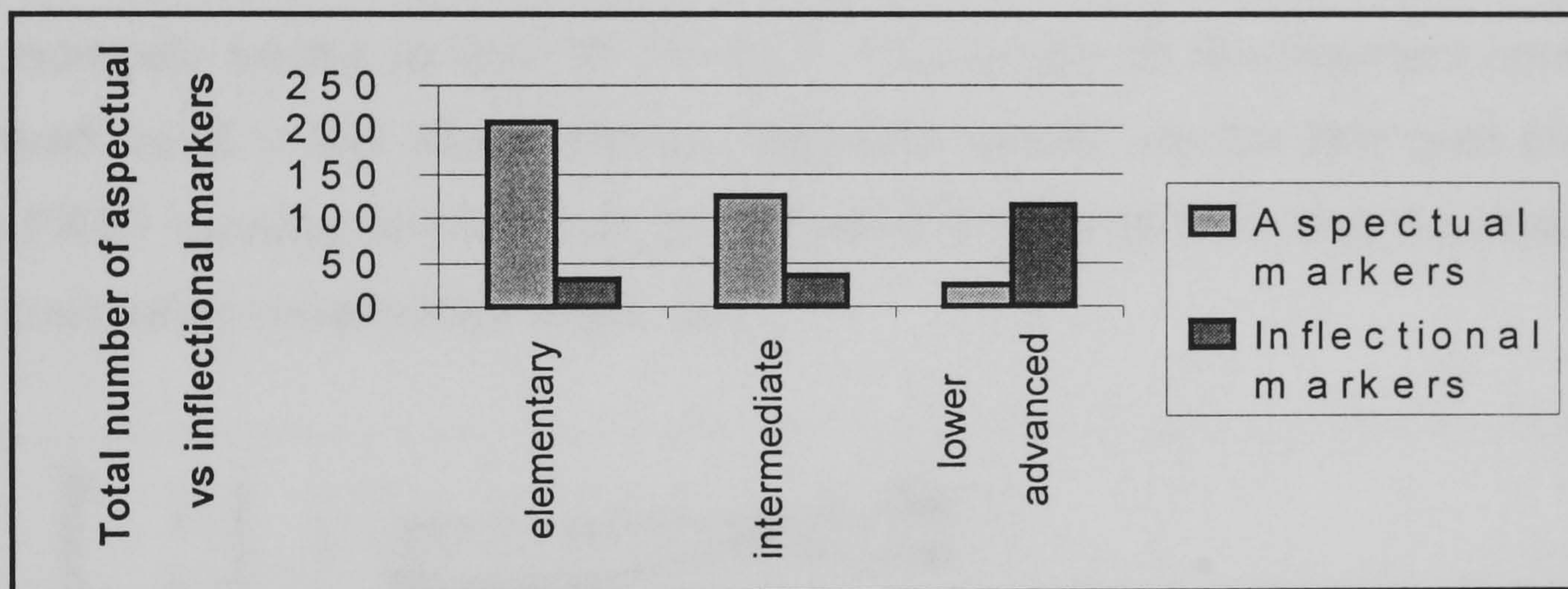


Figure 45. Total number of aspectual vs inflectional markers across the groups for the target time past in the RT. The elementary and intermediate levels show a greater use of aspectual rather than inflectional markers (209 and 126 versus 31 and 34), whereas the position reverses for the lower advanced level (114 versus 25).

### 6.3.4 Emergence and Development of Past Tense: Semantic Evidence

As the data on the three tasks demonstrate, PAST marking was predominantly restricted to telic events (achievements and accomplishments) by the elementary and intermediate level groups. Interestingly, the concentration of



PAST marking is virtually identical in both groups. PAST marking developed from an aspectual marker in the elementary and intermediate level into a deictic tense marker in the lower advanced level. That is to say, the prototypical past marking of achievements and accomplishments of the elementary and intermediate level groups was changed to a non-prototypical past reference in the lower advanced level group. Thus, in the GJT, the mean acceptability ratings for the three experimental groups may be rank-ordered as follows: achievements (2.8750) → accomplishments (2.8250) → activities (2.3250) → statives (2.0750) for the elementary level group, accomplishments (3.6800) → achievements (3.1600) → statives (2.4400) → activities (2.4000) for the intermediate level group, and accomplishments (3.5600) → achievements (3.4400) → statives (3.4000) → activities (3.3200) for the lower advanced group. Hence, telic events were the first to receive past tense morphology and atelic aspects were the last. Thus, telic vs non-telic seems to hold for the GJT. This pattern of development confirms the overall trend in this study, namely, that telic events are the strongest candidates for PAST marking and non-telic the weakest. Figure 46 illustrates the development of past tense morphology in the GJT.

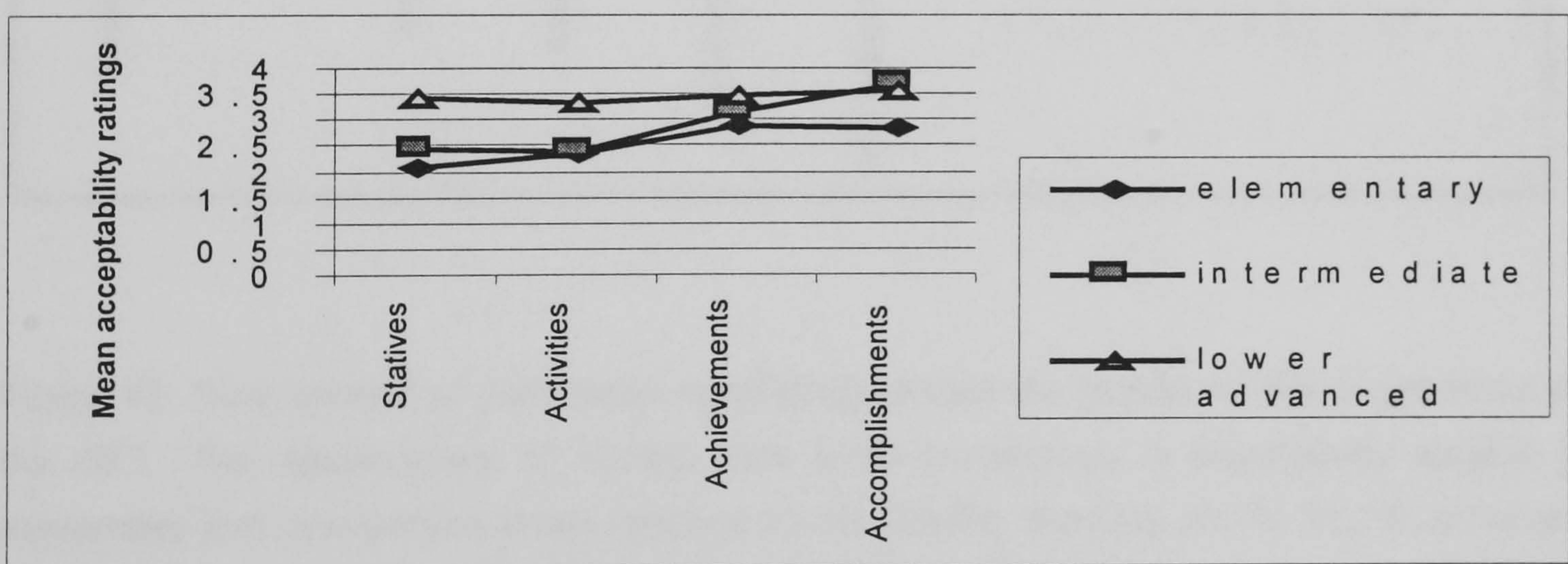


Figure 46. Development of past tense morphology across the groups for the target tense past in the GJT. Past tense morphology is considerably more developed in the lower advanced level (statives 3.4000, activities 3.3200, achievements 3.4400, and accomplishments 3.5600) than in the elementary and intermediate levels (statives 2.0750, 2.4400, activities 2.3250, 2.4000, achievements 2.8750, 3.1600, accomplishments 2.8250, 3.6800).



In the GFT, the developmental patterns for the three experimental groups are: achievements (74.2%)→ accomplishments (38.3%)→ activities (38.3%)→ statives (33.3%) for the elementary level group, achievements (84%) → accomplishments (76%)→ activities (34.7%)→ statives (33.3%) for the intermediate level group, and achievements (97.3%)→ accomplishments (86.7%)→ statives (86.7%)→ activities (84%) for the lower advanced group.

The developmental pattern for the three experimental groups is again consistent with the Aspect Hypothesis. Telic events were the strongest candidate for PAST marking and atelic aspects were the weakest. Hence, telic vs atelic appears to hold also for the development of PAST marking in the GFT. Figure 47 illustrates this trend of past morphology development.

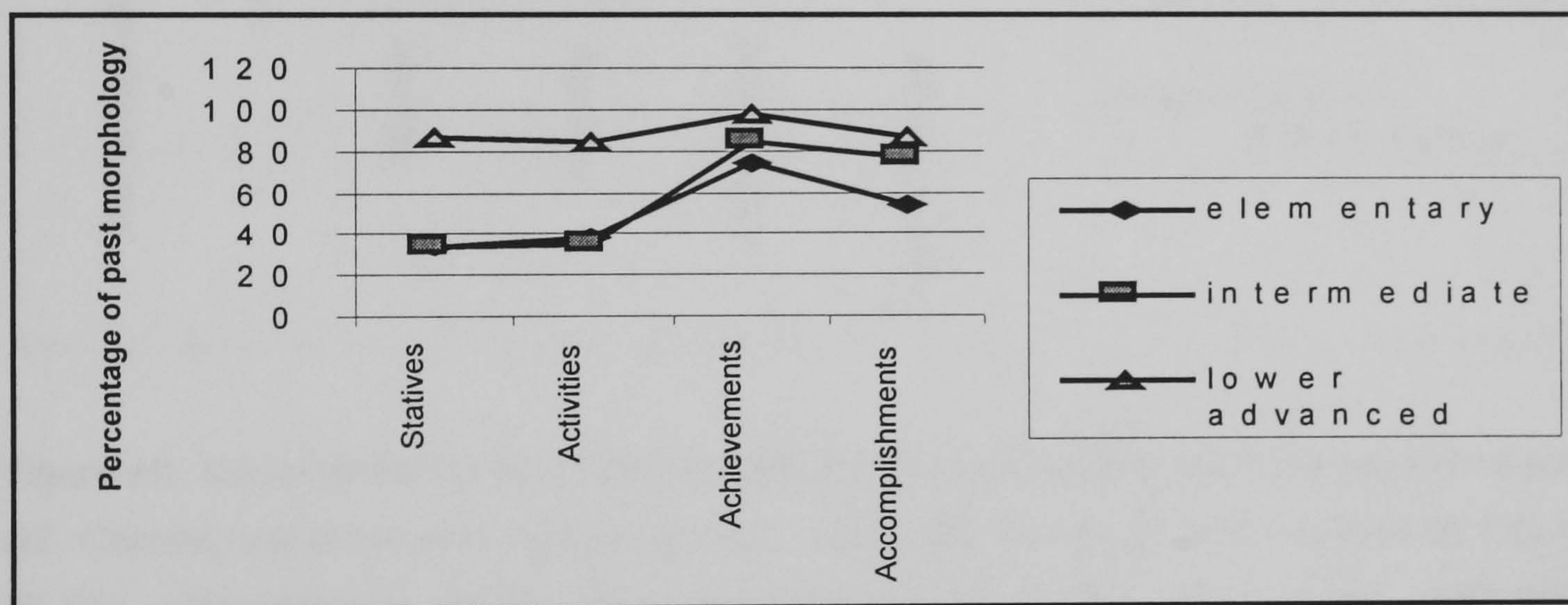


Figure 47. Development of past tense morphology across the groups for the target tense past in the GFT. The development of correct past tense morphology is significantly weaker in the elementary and intermediate levels (statives 33.3%, 33.3%, activities 38.3%, 34.7%, achievements 74.2%, 84%, and accomplishments 54.2%, 76%) compared with that in the lower advanced level (statives 86.7%, activities 84%, achievements 97.3%, and accomplishments 86.7%).

Similarly, in the RT, telic events were the strongest candidate for PAST marking in the elementary and intermediate level groups:



achievements (55.6%)→ accomplishments (43.4%)→ activities (8.2%)→ statives (7.4%) for the elementary level group, and accomplishments (49.1%) →achievements (45.2%)→ statives (22%) → activities (17.6%) for the intermediate level group. However, atelic events were the most favoured for PAST marking in the lower advanced level group: statives (51.7%)→ activities (51.7%) → accomplishments (51.6%) → achievements (38.4%). These patterns were also detected for mid and high level groups by Jabbari (1998). Figure 48 shows the trend of past tense morphology in the RT.

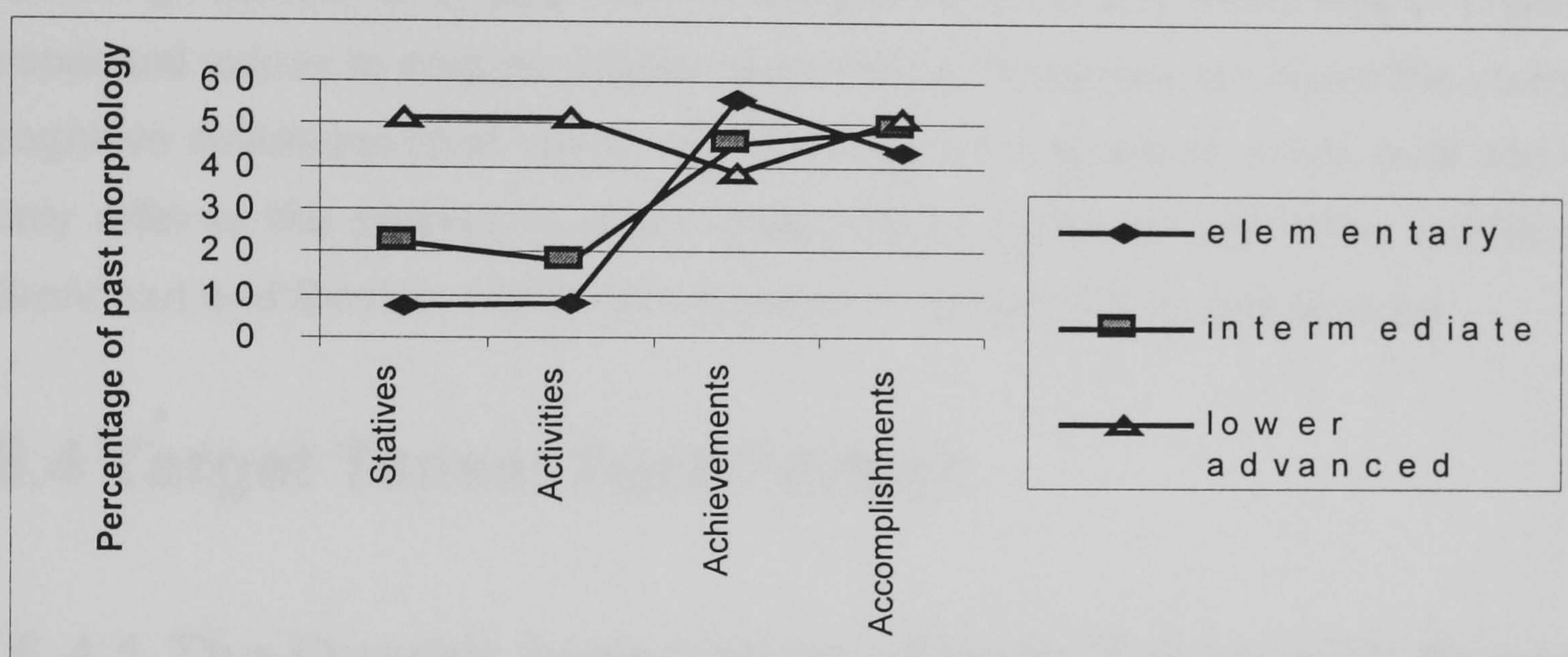


Figure 48. Development of past tense morphology across the groups for the target time past in the RT. Correct past tense form is more marked in the lower advanced level (statives 51.7%, activities 51.7%, achievements 38.4%, and accomplishments 51.6%) than in the elementary and intermediate levels (statives 7.4%, 22%, activities 8.2%, 17.6%, achievements 55.6%, 45.2%, and accomplishments 43.4%, 49.1%).

In all tasks, the elementary-, intermediate- and lower advanced-level learners started by marking telic verbs (accomplishments first or achievements first) and ended with atelic verbs (statives first or activities first) – except for the lower advanced level group in the RT. Whether events are punctual or telic seems to make little difference. Essentially, the Arabic L1 learners appear to distinguish between telic and atelic situations. Generally speaking, the data in this study support the general prediction of Aspect Hypothesis in that PAST marking is first affiliated with telic and then atelic verbs.



What do these results mean? PAST marking on punctual or telic situations with tense distinction being neglected is innate (see also Bickerton, 1981; Jabbari, 1998; Robison, 1995). This conclusion is further reinforced by the significant association of PAST marking with punctual and telic situations in a wide array of target tenses such as the present, present perfect, future, future perfect, etc., and confirms that adult Arabic-speaking learners who approached the task of English language learning with a well-developed conceptualization of PAST tense transported from their first language did not make use of it initially. Arabic-speaking learners of English have reactivated their innate knowledge of universal aspectual values to acquire English morphemes. Therefore, we reject the claim for cognitive limitations (that young children have no concept of deictic past and can only refer to the present moment) proposed by Antinucci and Miller (1976) and Bronchart and Sinclair (1973) (see Chapter 7, section 7.5 for elaboration).

## **6.4 Target Tense: Past Perfect**

### **6.4.1 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GJT**

In the previous experiments, the influence of lexical aspect was examined in the contexts of three target tenses: present simple, present perfect, and past simple by means of three data-elicitation tasks: the GJT, GFT, and RT. In this section, lexical aspect was investigated in the context of past perfect by the GJT. 16 test items out of 88 GJT target sentences, four sentences per aspectual category, were constructed with four morphemes: '-s', '-ing', PAST, and 'had + ed'. The first three aspect markings were attached to verbs in such a way that adherence to or violations of innate universal values were created (see Appendix A-3). Examples of the biased association of verb type with aspect markings for the elementary- and intermediate-level learners are given in (11) below:

(11) a. Yesterday Saad met one of his old friends. He **not sees him for**



**several years.**

1 2 3 ④

b. Ahmad: Was Khalid eating at the party when you arrived?

Omar : No, he **already eating before he came.**

1 2 3 ④

c. There was shooting at Al Akaryah last night. The gunman just

**killed three people** when the police got there.

1 2 3 ④

d. He **already sang a beautiful song** by the time I got there.

1 2 3 ④

The choices of subjects were analyzed by a repeated measures MANOVA which revealed a significant correlation between aspect markings and verb types across levels of proficiency ( $F(27, 301) = 2.51220, P < 0.000$ ). Figures 49-52 illustrate this effect.

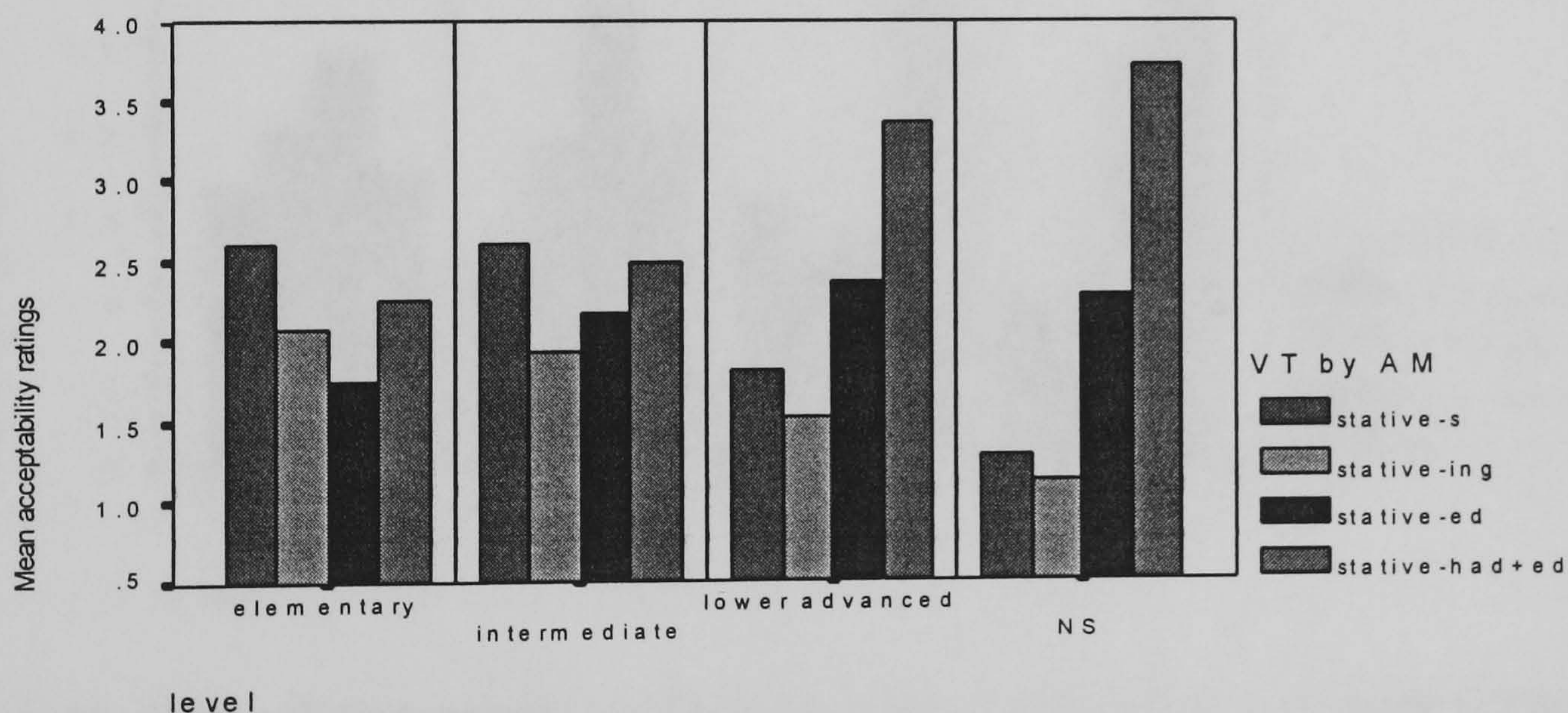


Figure 49. MAR – **Statives**. The present marking morpheme ‘-s’ is elevated in the elementary and intermediate levels regardless of the target tense, with the correct (had + ed) past perfect tense form predominating in the lower advanced level.



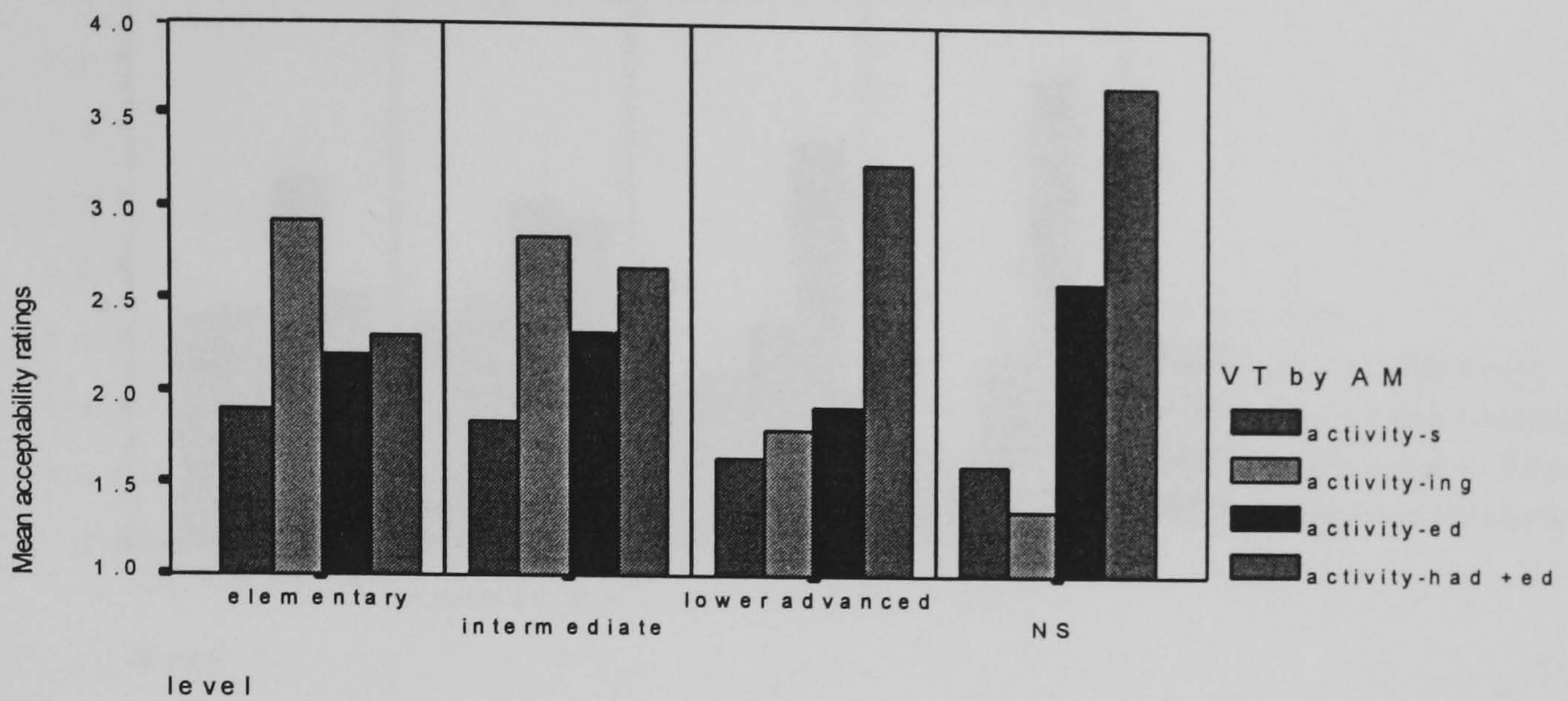


Figure 50. MAR – **Activities**. Activities associate significantly with the progressive marker ‘-ing’ in the elementary and intermediate levels, but with the correct past perfect tense form ‘had + ed’ in the lower advanced level.

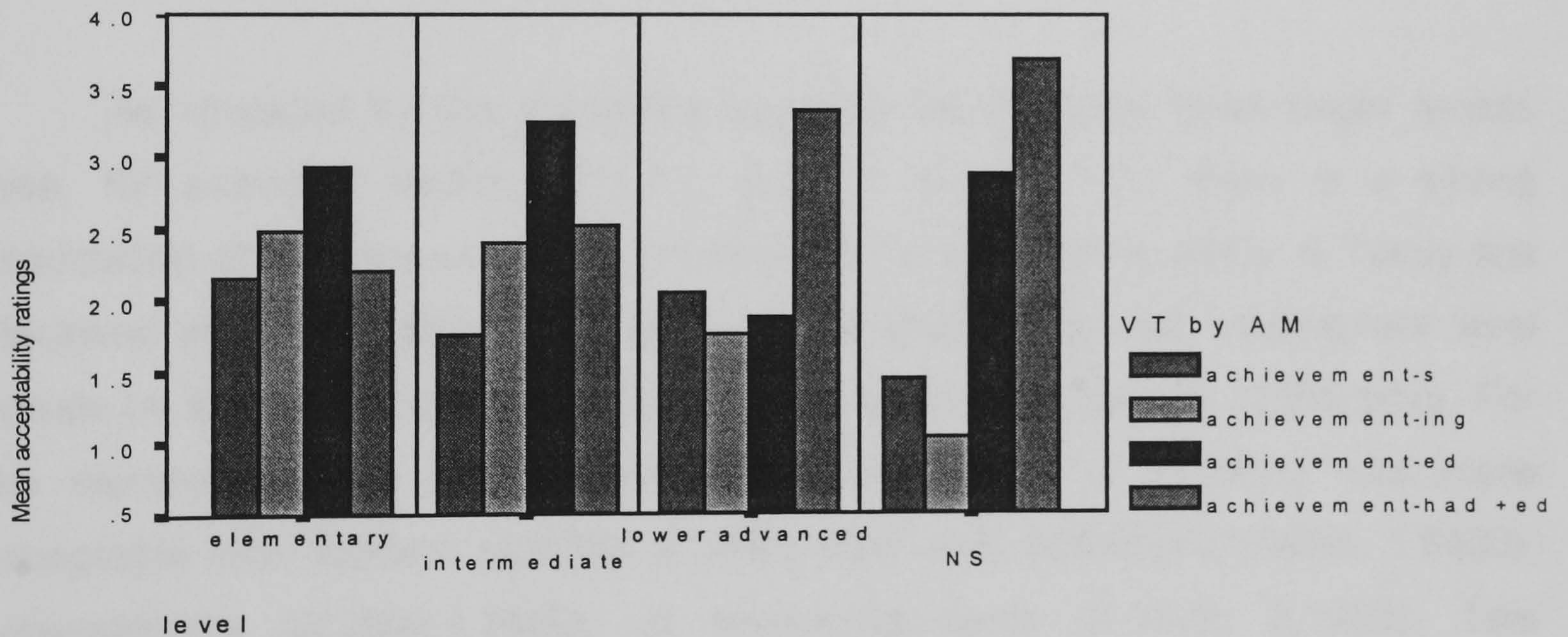


Figure 51. MAR – **Achievements**. PAST marking aligns with achievement verbs in the elementary and intermediate levels, but with the correct (had + ed) past perfect tense form in the lower advanced level.



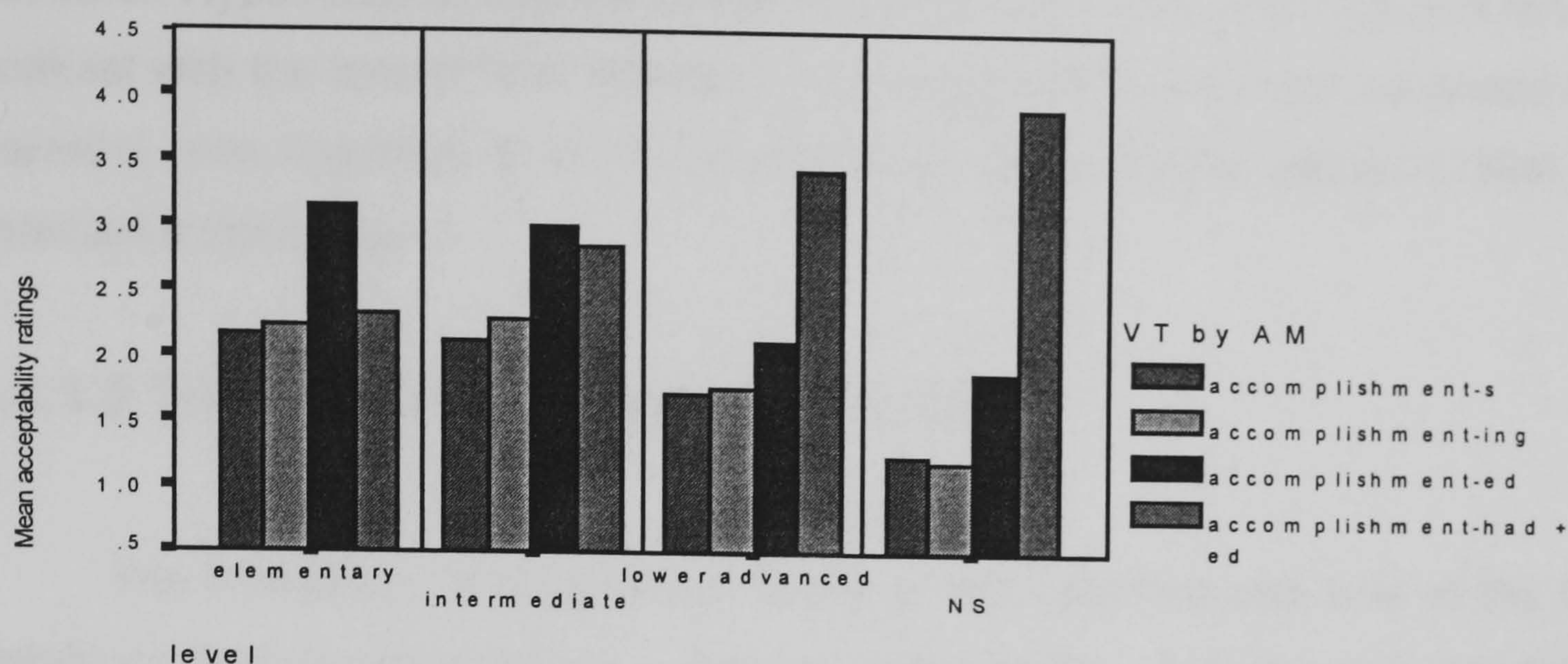


Figure 52. MAR – **Accomplishments**. Accomplishment verbs exhibit significant association with PAST marking in the elementary and intermediate levels regardless of tense, but with the correct past perfect tense form 'had + ed' in the lower advanced level.

#### 6.4.1.1 The Use of Present Marking

As revealed by the preceding experiments involving three target tenses (see, for example, sections 6.1.2.1, 6.2.1.1, and 6.3.1.1), there is a strong association of the present marking morpheme '-s' with stative verbs. A Tukey test disclosed significant differences between the elementary and intermediate level groups on the one hand and the lower advanced and NS groups on the other. For the elementary and intermediate level groups, the '-s' marking was more acceptable with statives (2.6000, 2.6000) than with activities (1.9000, 1.8400), achievements (2.1500, 1.7600), or accomplishments (2.1500, 2.1200). This confirms Research Hypothesis 1a, that stative verbs align with present aspect marking.

With increasing level of proficiency, the predominant use of '-s' marking diminished significantly from (2.6000, 2.6000) in the two lower level groups to (1.8000) in the next group up. This implies that the bias towards lexical aspect was replaced by a bias towards the correct target tense form ('had + ed') which was not restricted to stative verbs but extended to all other aspectual verbs (see



Research Hypothesis 3, that the dependence between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced level learners) (see Appendix B–4). This finding is corroborated by Jabbari (1998) who detected a similar trend.

#### **6.4.1.2 The Use of Progressive Marking**

The interaction of progressive marking with activities was one of the most significant features of activities in the two lower levels. A Tukey test highlighted significant differences between them compared with the lower advanced and NS groups. The lower level groups were more selective in affiliating the ‘-ing’ form with activities (2.9250, 2.8400) than with statives (2.0750, 1.9200), achievements (2.4750, 2.4000), or accomplishments (2.2250, 2.2800). Thus Research Hypothesis 1b, that the ‘-ing’ form aligns with activity verbs, is confirmed. This result is further reinforced by earlier findings obtained in other experiments (see, for example, sections 6.1.1.2, 6.1.2.2, 6.2.2.2, 6.3.1.2, 6.3.2.2, and 6.3.3.2).

With rising levels of proficiency, the affiliation of ‘-ing’ with activities decreased significantly, from (2.9250, 2.8400) in the elementary and intermediate level groups to (1.8000) in the lower advanced group due to the influence of tense (cf. Research Hypothesis 3, that the dependence between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced level learners and NS).

Consistent with Hypothesis 4b (the tendency to mark achievement and accomplishment verbs with the ‘-ing’ will be prominent among elementary- and intermediate-level learners but diminish with increasing level of proficiency), telic events yielded significant affiliation with progressive marking. A Tukey test indicated significant differences between the elementary (2.4750) and lower advanced (1.7600) and NS groups (1.0400), between the intermediate (2.4000) and NS groups (1.0400), and between lower advanced level group and NS group.

The affiliation of progressive marking with punctual events dropped from its concentration in the two lower level groups, from (2.4750, 2.4000) to (1.7600) in the lower advanced level group. However, there were no significant differences in the use of the '-ing' form on achievement verbs between the intermediate (2.4000) and lower advanced level groups (1.7600), or regarding accomplishment-ing between the elementary (2.2250) and intermediate level (2.2800) groups on the one hand and the lower advanced level group (1.7600) on the other. The absence of significant differences indicates that the L1 effect is still high in the lower advanced level group, a result consistent with earlier findings (see sections 6.2.1.2 and 6.3.1.2, and Appendix B-4).

### **6.4.1.3 The Use of PAST Marking**

In keeping with preceding findings (see sections 6.1.1.3, 6.1.2.3, 6.2.1.3, 6.2.2.3, 6.3.2.3, and 6.3.3.3), a biased use of PAST marking was the most significant feature of achievements and accomplishments in the elementary and intermediate level groups. As shown by a Tukey test, there were significant differences in the use of PAST marking with achievements between the elementary and intermediate compared with the lower advanced level group. The elementary and intermediate level groups used PAST marking more selectively to mark achievements (2.9250, 3.2400) and accomplishments (3.1500, 3.000) than activities (2.2000, 2.3200) or statives (1.7500, 2.1600) (see Appendix B-4).

Statives exhibited the weakest association with PAST marking for all four groups: 1.7500, 2.1600, 2.3600, and 2.2800. The weak correlation between statives and PAST marking enhances the strong association of stative aspect with present marking morpheme '-s', as we have seen in the previous experiments (see, for example, sections 6.1.1.1, 6.1.2.1, 6.1.3.1, 6.2.1.1, 6.2.2.1, 6.3.1.1, and 6.3.2.1). This finding follows naturally from the prototype hypothesis (Shirai, 1998).



The spread of PAST marking appears to move from telics to activities and then onto statives, providing strong evidence for the operation of lexical aspect in the early stages of language acquisition (see also Shirai and Kurono, 1998).

#### 6.4.2 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GFT

As Appendix A-7 shows, 12 test items out of 72 target sentences on the GFT, three items per verb type, were constructed to provide obligatory contexts for the past perfect tense, to test for the biased interaction of verb type with aspect marking. Typical examples of this association by the elementary- and intermediate-level learners are illustrated in (12):

- (12) a. Last week Khalid met one of his old friends. He (not see) not **sees** him for several years.
- b. When I saw Omar, he was playing tennis again. He (not play) **not playing** for several years. So he wasn't doing very well.
- c. Majid never saw his father. When he was born, his father (just/die) **just died**.
- d. Abdullah (just/post) **posted** a letter to his brother when his brother arrived to see him.

The subjects' responses were analyzed by chi square tests, which revealed an overall significant association of verb types with aspectual markers as follows: ( $X^2(33, N = 480) = 218.929, P < 0.000$ ), ( $X^2(33, N = 300) = 184.607, P < 0.000$ ), ( $X^2(24, N = 300) = 74.690, P < 0.000$ ) and ( $X^2(12, N = 300) = 50.029, P < 0.000$ ). The precise sources contributing to this overall significance are identified below. Figures 53-56 display the overall correlation between verb type and aspect marking across levels of proficiency.



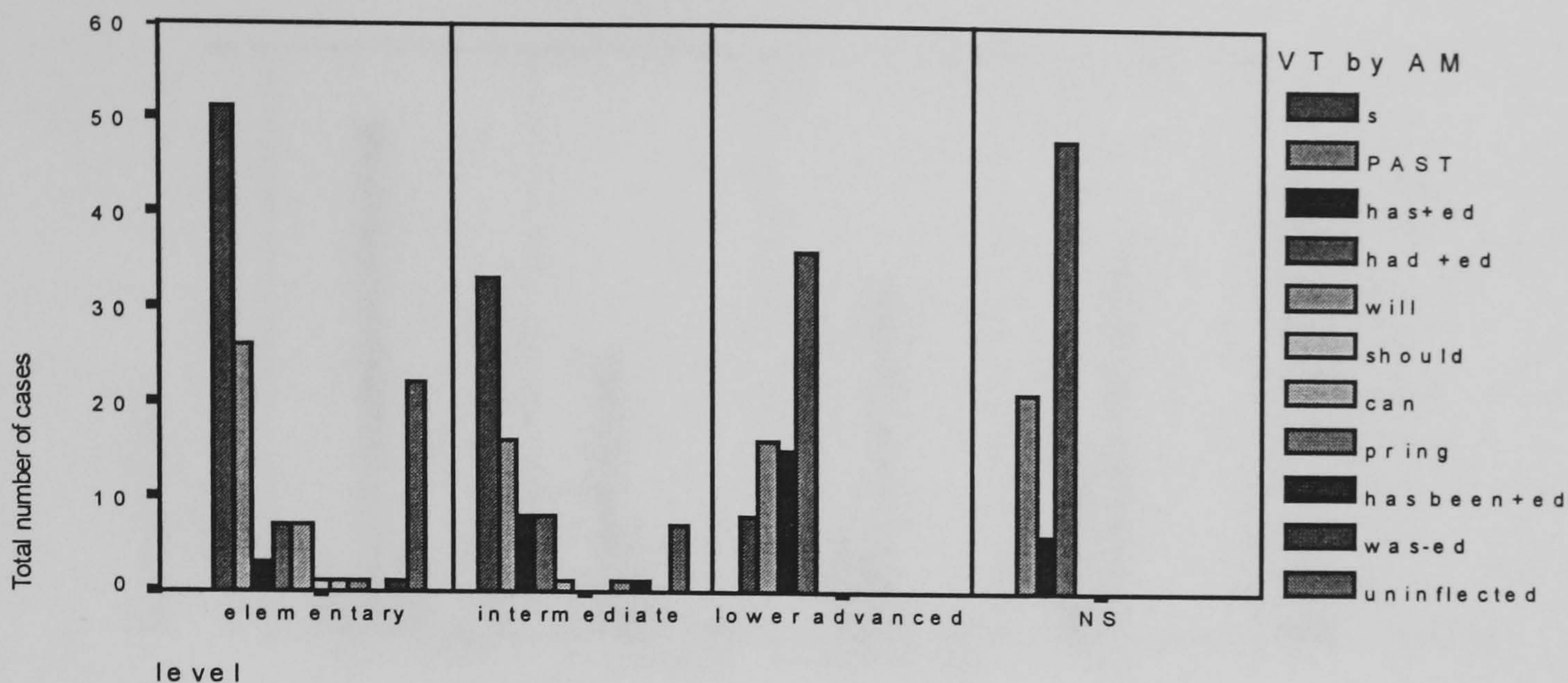


Figure 53. TNC – Statives. The influence of lexical aspect (strong affiliation of the ‘-s’ morpheme with stative verbs) in the elementary and intermediate levels is comparable to that of tense (strong use of the correct target tense form) in the lower advanced level. Stative verbs also exhibit a significant occurrence of uninflected forms in the elementary and intermediate levels.

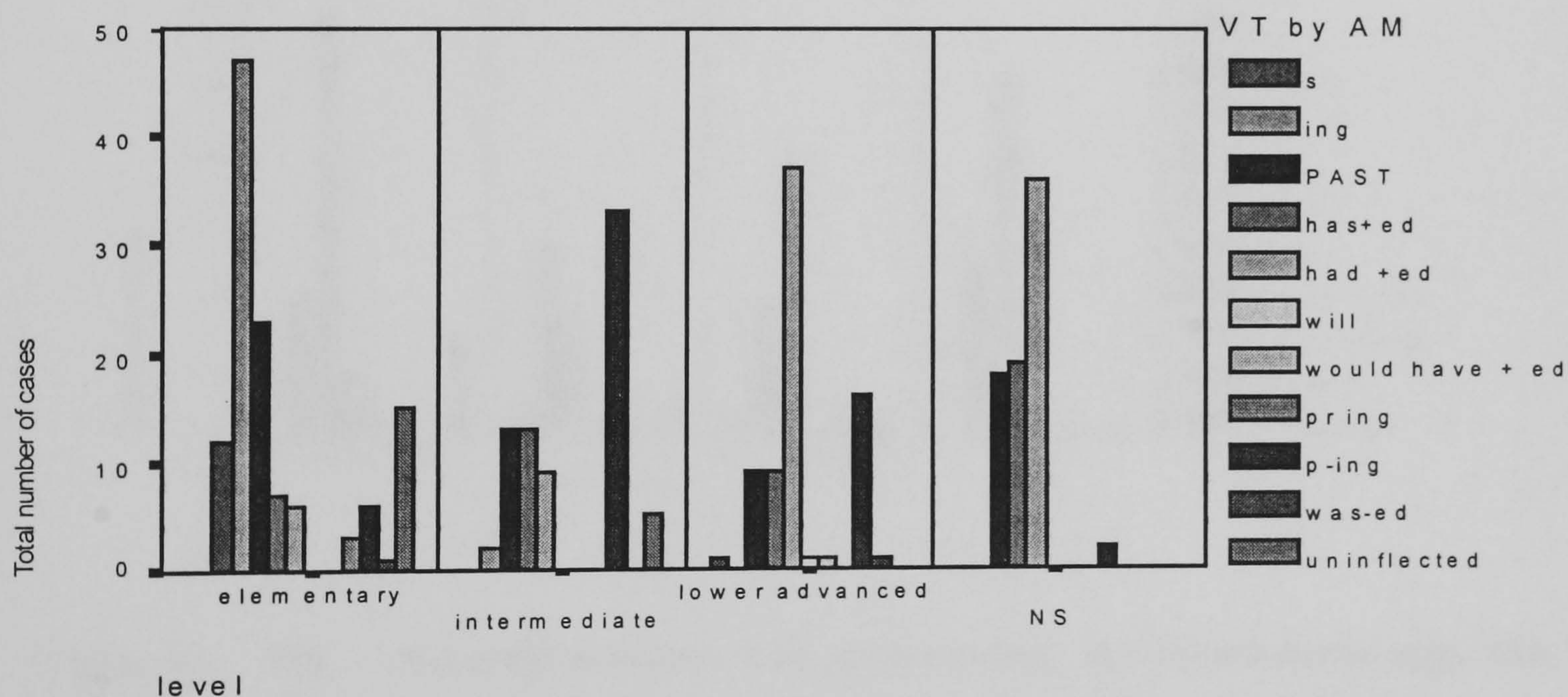


Figure 54. TNC – **Activities**. The ‘-ing’ form and past continuous are concentrated on activity aspect in the elementary and intermediate levels respectively, while the correct past perfect form ‘had + ed’ is highly significant in the lower advanced level.



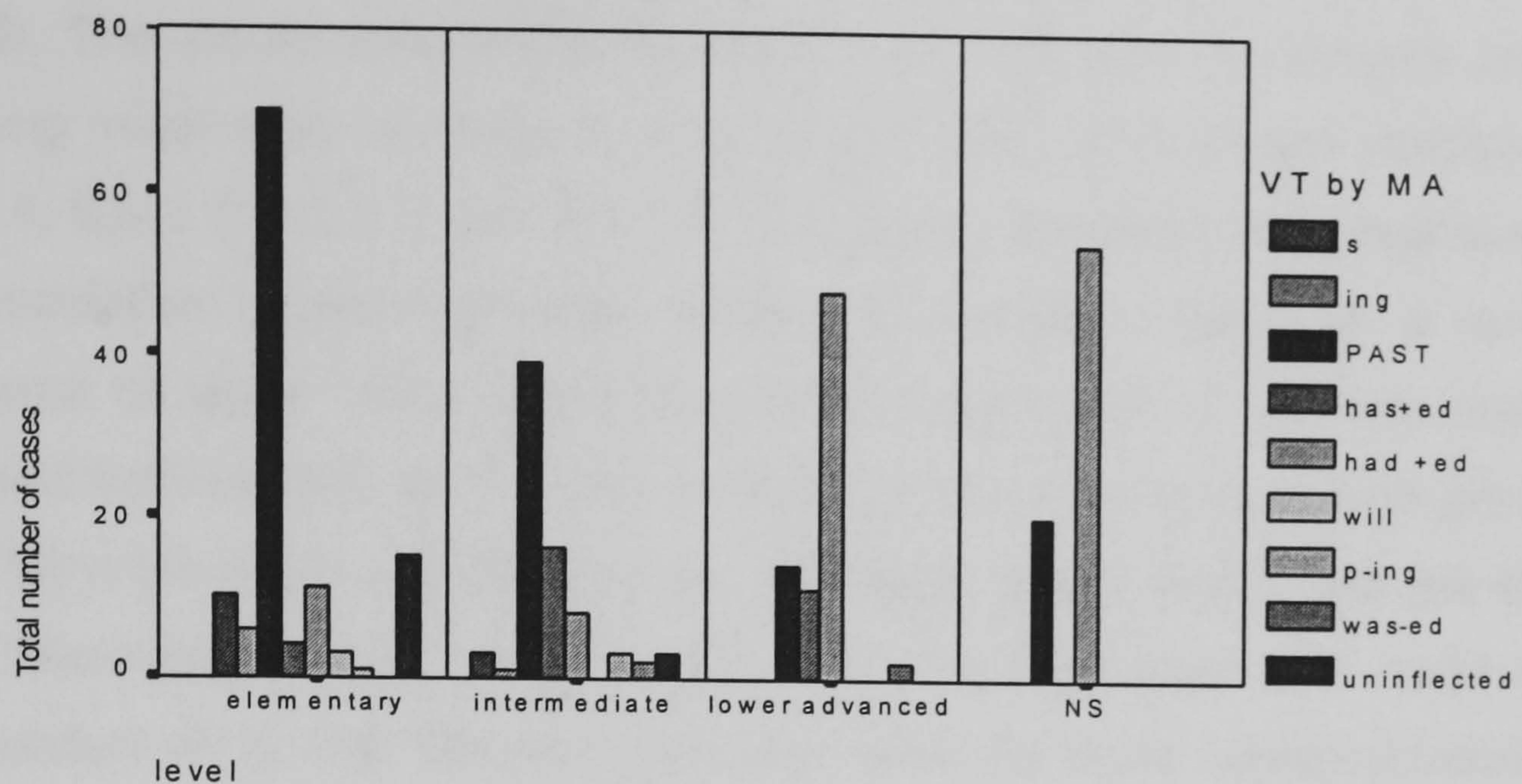


Figure 55. TNC – **Achievements**. Achievement verbs link with PAST marking, the ‘-ing’ morpheme, and past continuous form in the elementary and intermediate levels, but with the past perfect tense form ‘had + ed’ in the lower advanced level.

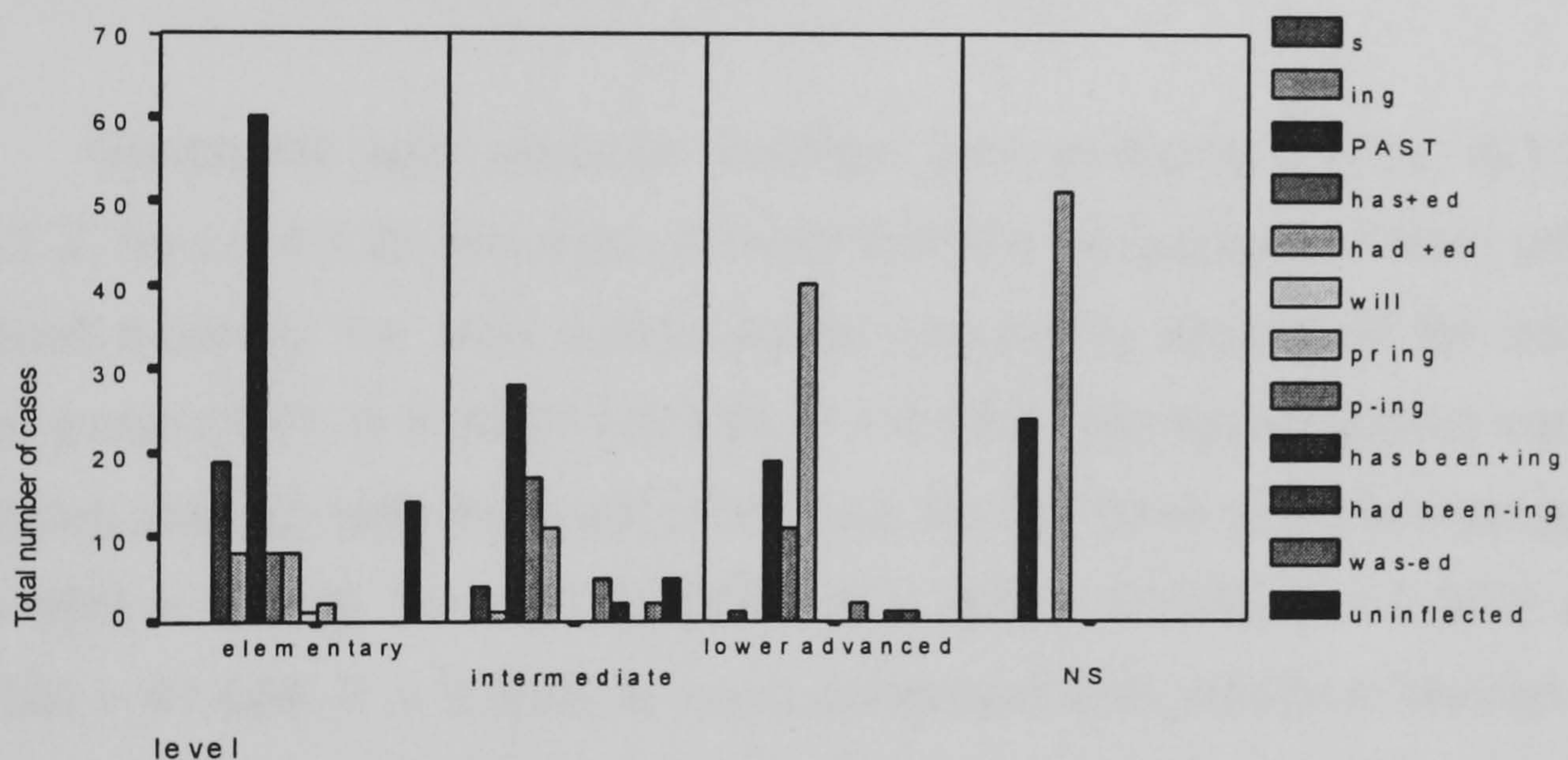


Figure 56. TNC – **Accomplishments**. Like achievements, accomplishments align with PAST marking in the elementary and intermediate levels, but with the past perfect tense form ‘had + ed’ in the lower advanced level.

### 6.4.2.1 The Use of Present Marking

Appendix C-4 shows that for the two lower groups, 42.5% and 44% respectively of all stative verbs were in the present form ‘-s’ – a highly significant



proportion ( $X^2(1, N = 480) = 56.226, P < 0.000$ ) and ( $X^2(1, N = 300) = 81.385, P < 0.000$ ). The results lend further support to the link between stative and present marking morpheme '-s' seen in other tenses (see, for example, sections 6.1.2.1, 6.2.2.1, 6.3.1.1, 6.3.2.1, and 6.4.1.1). The lower advanced level learners revealed a dissociation between present marking and stative aspect as a result of the influence of tense. Thus, the predominant association of '-s' with stative verbs dropped from (42.5%, 44%) in the elementary and intermediate level groups to just (10.7%) in the lower advanced group (Research Hypothesis 2, that the elementary and intermediate level learners will show the narrowest and most significant association of '-s' with stative predicates, while the lower advanced-level learners will show the weakest dependence, if any, of verb morphology upon lexical aspect, and sections 6.1.1.1, 6.1.3.1, 6.3.1.1, and 6.4.1.1).

#### **6.4.2.2 The Use of Progressive Marking**

Congruent with previous findings (see sections 6.1.1.2, 6.1.2.2, 6.2.2.2, 6.3.2.2, and 6.4.1.2), the data showed that the association of verb inflection '-ing' without auxiliary 'be' with activity verbs was highly significant for the elementary level group ( $X^2(1, N = 480) = 100.968, P < 0.000$ ). Moreover, activity verbs exhibited a strong alliance with the past continuous for the three experimental groups ( $X^2(1, N = 480) = 13.966, P < 0.000$ ), ( $X^2(1, N = 300) = 77.983, P < 0.000$ ) and ( $X^2(1, N = 300) = 41.686, P < 0.000$ ), a result consistent with previous findings, in sections 6.1.1.2, 6.2.2.2 and 6.3.3.2 (cf. Research Hypothesis 2, and Appendix C-4).

Achievements and accomplishments exhibited a significant affiliation with the '-ing' morpheme without auxiliary 'be' at ( $P < 0.003$ ) and ( $P < 0.022$ ) confidence levels for the two lower groups, and with the past continuous at ( $P < 0.005$ ) and ( $P < 0.012$ ) confidence levels for the intermediate and lower advanced level groups, respectively.



Consistent with Research Hypothesis 4b, in the lower advanced group the tendency to affiliate progressive marking with telic events dropped to zero in achievements and to just two cases in accomplishments. These results accord with previous findings, in sections 6.1.2.2, 6.2.2.2, and 6.4.1.2 (see Appendix C-4).

Regarding statives, there were only two cases of stative verbs affiliated with present continuous marking, one in the elementary and the other in the intermediate level group, constituting 0.8 and 1.3 percent of verb types respectively. These are too scarce to be of any significance. Thus, statives exhibit the weakest association with progressive marking (see sections 6.1.1.2, 6.1.2.2, 6.1.3.2, 6.2.1.2, and 6.3.1.2), but the strongest with present marking (see, for example, sections 6.1.1.1, 6.1.2.1, 6.2.1.1, 6.3.1.1, and 6.4.1.1).

### **6.4.2.3 The Use of PAST Marking**

We have seen (sections 6.1.1.3, 6.1.2.3, 6.2.1.3, 6.2.2.3, 6.3.1.3, and 6.4.1.3) that there is a strong alliance between PAST marking and achievement and accomplishment verbs. Chi square tests showed that PAST marking was the most significant feature of punctual events and, to a lesser extent, of accomplishments. The data showed a high concentration of PAST marking on achievements for the elementary and intermediate level groups: 58.3% and 52% of achievements, respectively. The cell value of the chi square for PAST-achievements alone was highly significant for these two groups ( $X^2(1, N = 480) = 30.293, P < 0.000$ ) and ( $X^2(1, N = 300) = 18.382, P < 0.000$ ) respectively. This effect was not significant for the lower advanced and NS groups. Along similar lines, accomplishments exhibited a significant correlation with PAST marking for the elementary level group ( $X^2(1, N = 480) = 11.050, P < 0.001$ ) but not for the intermediate or lower advanced level groups (see Appendix C-4).



Consistent with Research Hypothesis 3, the bias towards lexical aspect diminished dramatically in moving from the elementary and intermediate level groups to the lower advanced group, from (58.3%, 52%) to (18.7%) for achievements and from (50%, 37.3%) to (25.3%) for accomplishments, and was replaced by the correct target tense form which was extended uniformly to other aspectual verbs. Thus, there is a change from the prototypical past marking of telic situations by the elementary and intermediate level groups to an increasing tendency by the lower advanced group to use non-prototypical past perfect reference verbs. This follows naturally from the Aspect Hypothesis.

To sum up, the development of tense-aspect morphology was constrained by lexical aspect in the elementary and intermediate levels, so that aspectual markers outnumbered inflectional markers, but controlled by temporal reference in the lower advanced level group. Therefore, the lower advanced level learners used more inflectional markers in proportion to aspectual markers (see Appendices E-4 and F-4). Figures 57-58 illustrate these effects.

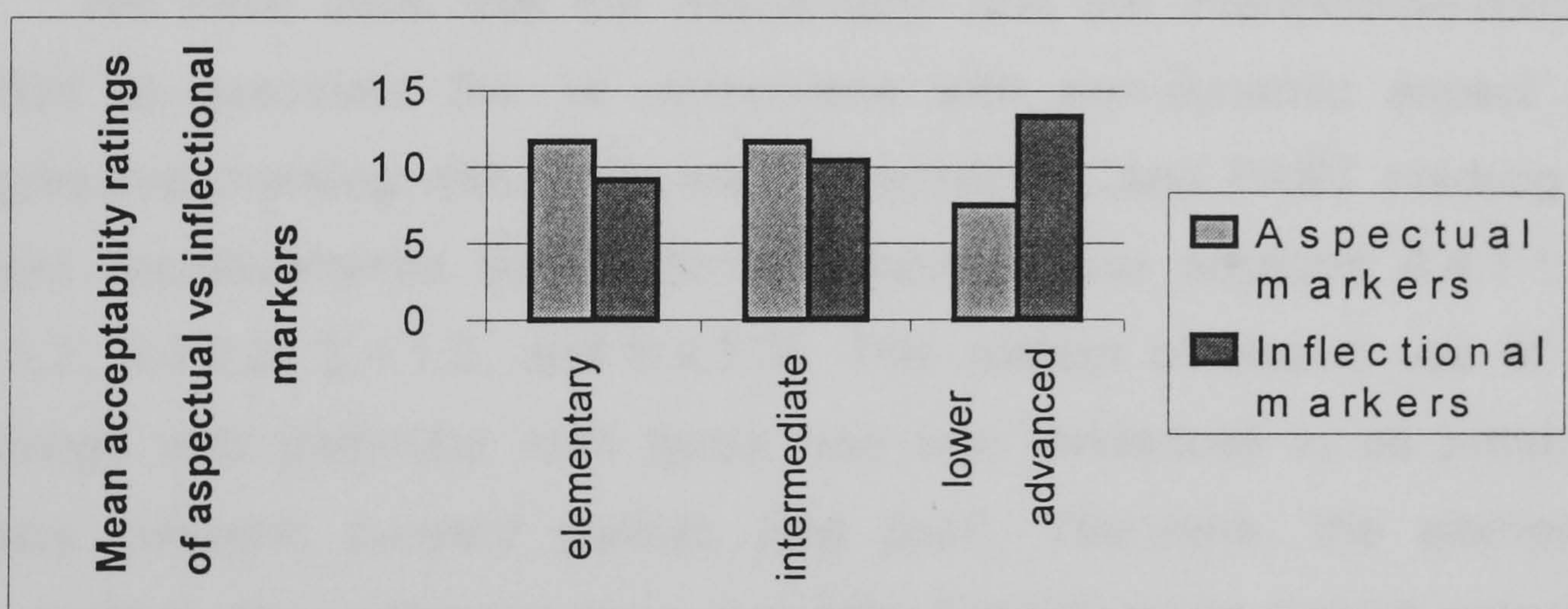


Figure 57. Mean acceptability ratings of aspectual vs inflectional markers across the groups for the target tense past perfect in the GJT. The preference for aspectual markers is greater than that for inflectional markers in the elementary and intermediate levels (11.6000, 11.6800 versus 9.0750, 10.5200). The lower advanced level shows the opposite preference (13.3600 versus 11.6000).



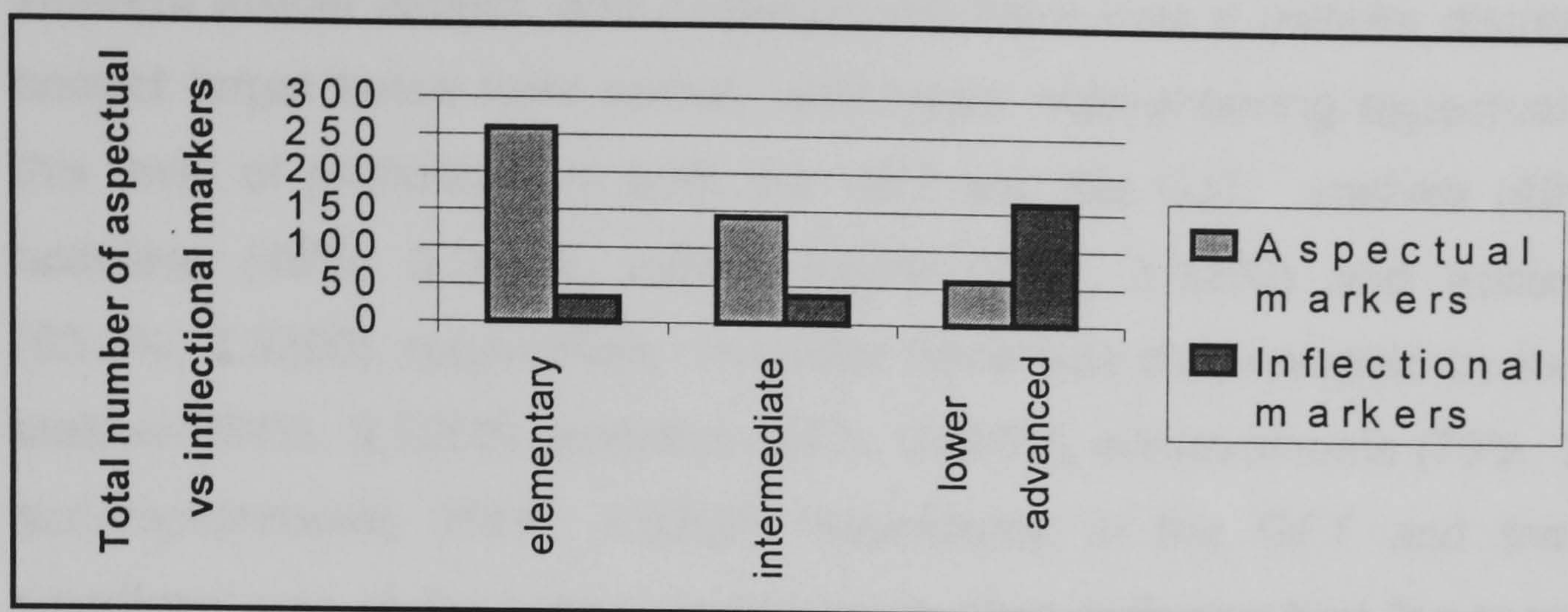


Figure 58. Total number of aspectual vs inflectional markers across the groups for the target tense past perfect in the GFT. The frequency of aspectual markers is higher than that of inflectional markers (224, 149 versus 32, 36) for the elementary and intermediate levels, with the reverse applying to the lower advanced level (57 versus 161).

### 6.4.3 Emergence and Development of Past Perfect Tense: Semantic Evidence

We have seen that the elementary- and the intermediate-level learners tended to associate the ‘-s’ morpheme with non-dynamic aspect (statives), progressive marking with atelic aspect (activities), and PAST marking with telic aspect (achievements and accomplishments) (see sections 6.4.1.1., 6.4.2.1, 6.4.1.2, 6.4.2.2, 6.4.1.3, and 6.4.2.3). This pattern of biased use of aspectual markings with particular verb types was also evidenced in all previous target tenses (present, present perfect, and past). Therefore, the elementary and intermediate level learners have acquired English tense-aspect morphology by reactivating their innate knowledge of universal aspectual values (namely, punctuality, telicity, and dynamicity) rather than tense, which was neglected at this level of proficiency (see Appendices B-4 and C-4).

In the lower advanced level, the dissociation of aspectual markings with lexical aspects took place due to the strong use of the correct target tense form, ‘had + ed’, which was significantly aligned with all verbs independent of their



inherent lexical aspect, and consequently there was a uniform distribution of the correct target tense form across verb types, outnumbering aspectual markers at this level of proficiency in both the GFT and the GJT: statives (48%, 3.3600), activities (49%, 3.2400), achievements (64%, 3.3200) and accomplishments (53.3%, 3.3200), respectively. A similar trend was also revealed by the NS group: statives (64%, 3.7200), activities (48%, 3.6800), achievements (73%, 3.6800) and accomplishments (68%, 3.9200) respectively in the GFT and the GJT. The significant use of the correct target tense form indicates that the lower advanced level learners have mastered the concept of arranging the three temporal points involved in the representation of the past perfect tense (see Chapter 2, section 2.2). These findings are reinforced by Jabbari (1998). Figures 59-60 show the development of the correct tense form 'had + ed' in the GJT and GFT, respectively.

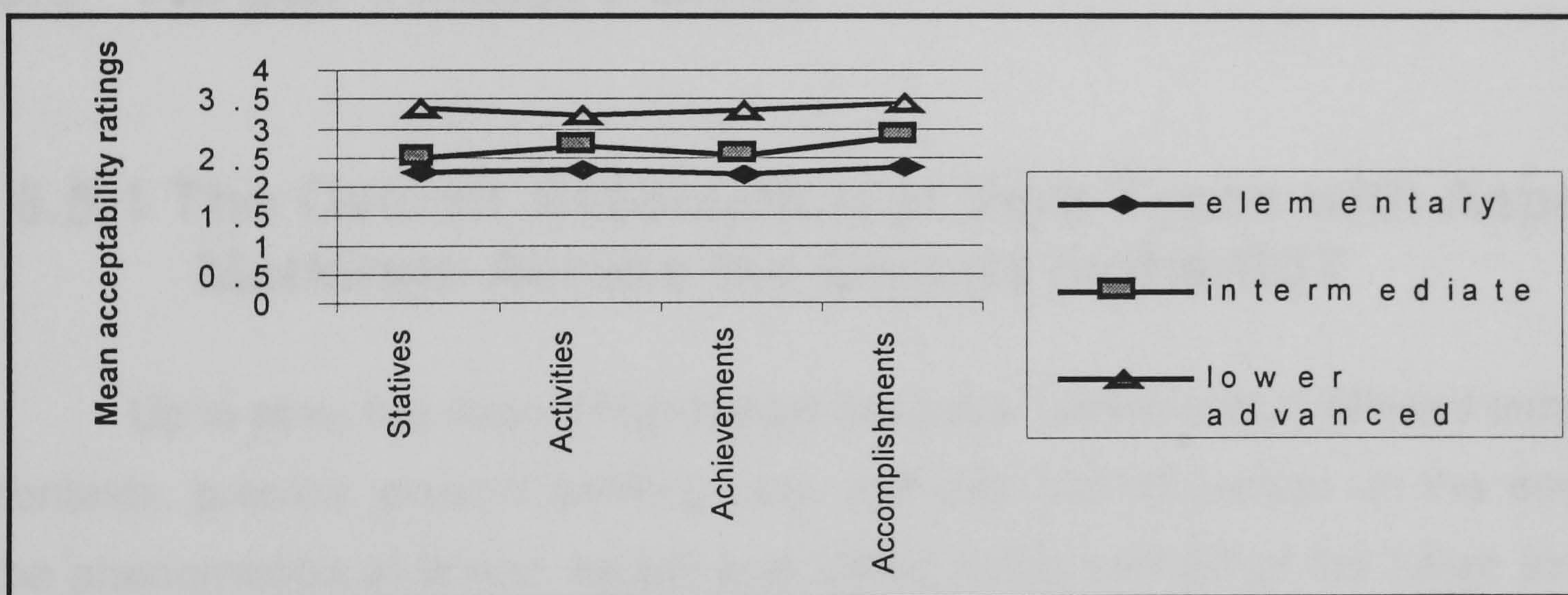


Figure 59. Development of past perfect morphology 'had + ed' across the groups in the GJT. The acceptability of this tense form is more strongly marked in the lower advanced level (statives 3.3600, activities 3.2400, achievements 3.3200, and accomplishments 3.4400) than in the elementary and intermediate levels (statives 2.2500, 2.4800, activities 2.3000, 2.6800, achievements 2.2000, 2.5200, and accomplishments 2.3250, 2.8400, respectively).



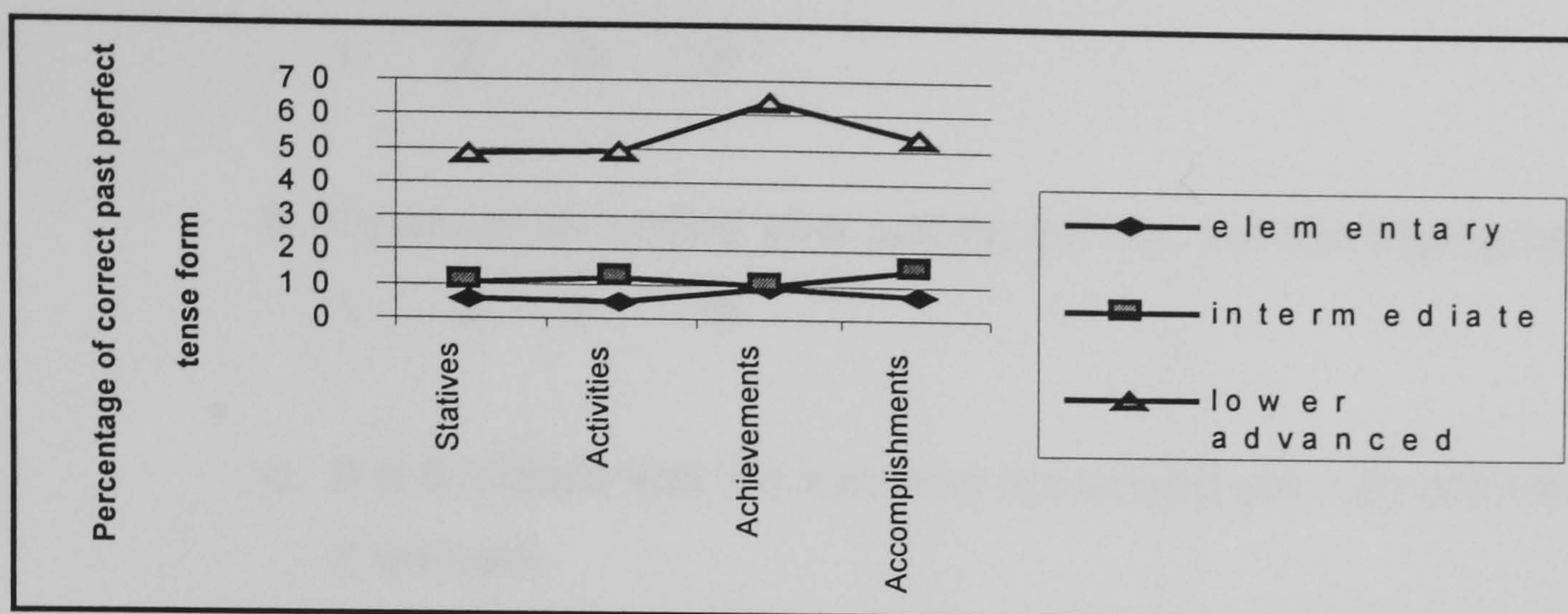


Figure 60. Development of past perfect morphology 'had + ed' across the groups in the GFT. Past perfect morphology is far more developed in the lower advanced level (statives 48%, activities 49.3%, achievements 64%, and accomplishments 53.3%) than in the elementary and intermediate levels (statives 5.8%, 10.7%, activities 5%, 12%, achievements 9.2%, 10%, and accomplishments 6.7%, 14.7%).

## 6.5 Target Tense: Future

### 6.5.1 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GJT

Up to now, the Aspect Hypothesis has been tested in four different temporal contexts: present, present perfect, past, and past perfect tenses. In this section, the phenomenon of lexical aspect was tested in the context of the future simple. To this end, 16 test items out of 88 GJT target sentences, four items per verb type, were constructed with four morphemes: '-s', '-ing', PAST, and 'will'. The first three morphemes were attached to verb types in such a way that adherence to or violations of universal aspectual values were created. The last aspect marking was the correct target tense form. Typical examples of the biased association of verb types with aspect markings by the elementary- and intermediate-level learners are given in (13) below:

- (13) a. Ali has passed a lot of exams. I think he **wants** a better job soon.



1 2 3 ④

b. My daughter smiled after getting the toy, but she **crying** before.

1 2 3 ④

c. It is 5 o'clock and the train has not arrived yet. I do not know when it **arrived**.

1 2 3 ④

e. Ali's watch is broken. I don't know when he fixed it.

1 2 3 ④

The subjects' judgements were analyzed by a repeated measures MANOVA which showed that the interaction of verb types with aspect marking was significant across levels of proficiency ( $F(27,301.46) = 2.24178, P < 0.001$ ). Figures 61- 64 represent this effect.

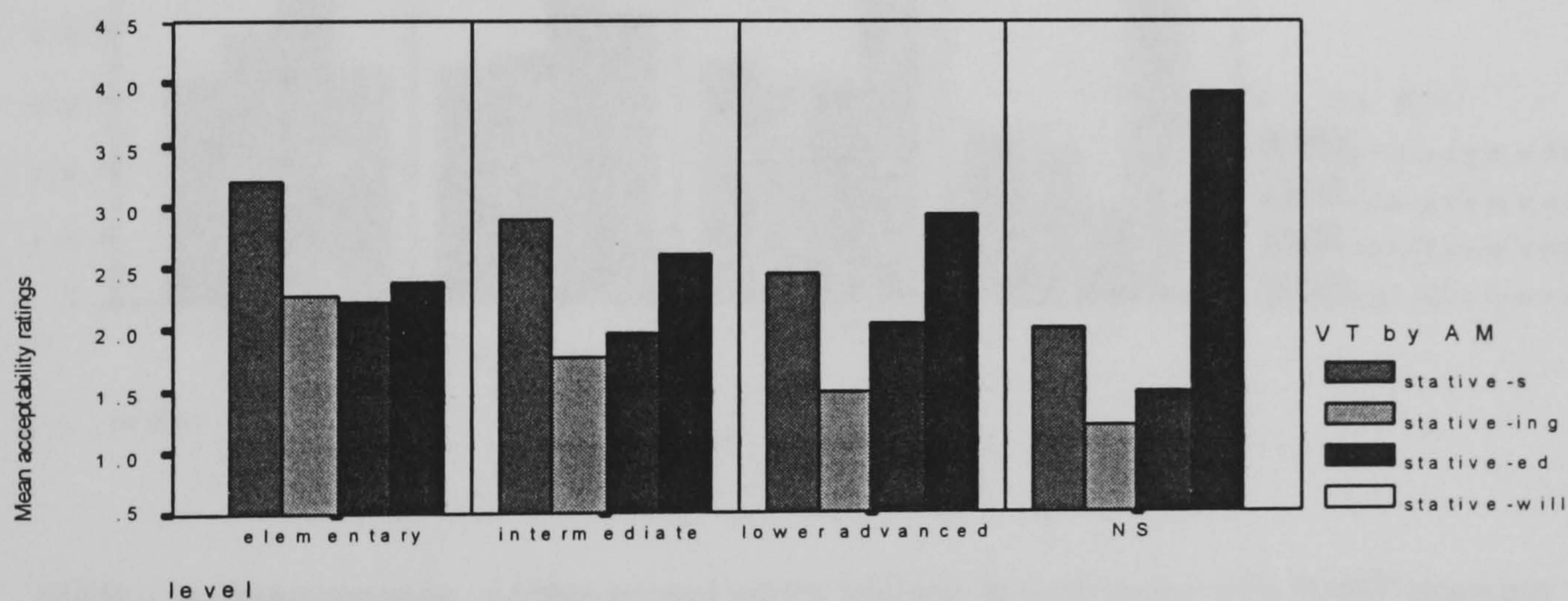


Figure 61. MAR – **Statives**. The use of '-s' is prominent in the elementary and intermediate levels, but the correct future tense form is significantly preferred by the lower advanced level.



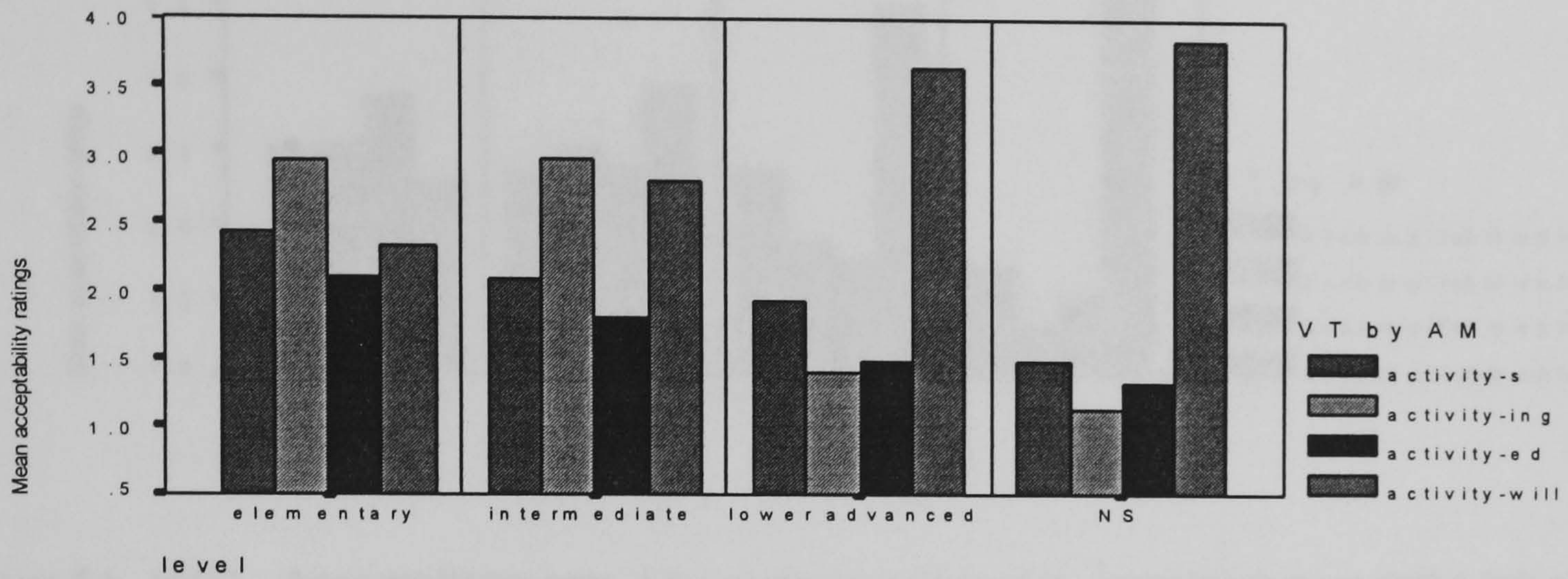


Figure 62. MAR – **Activities**. Activity verbs align with the ‘-ing’ form in the elementary and intermediate levels. The lower advanced level use the correct future tense form ‘will’.

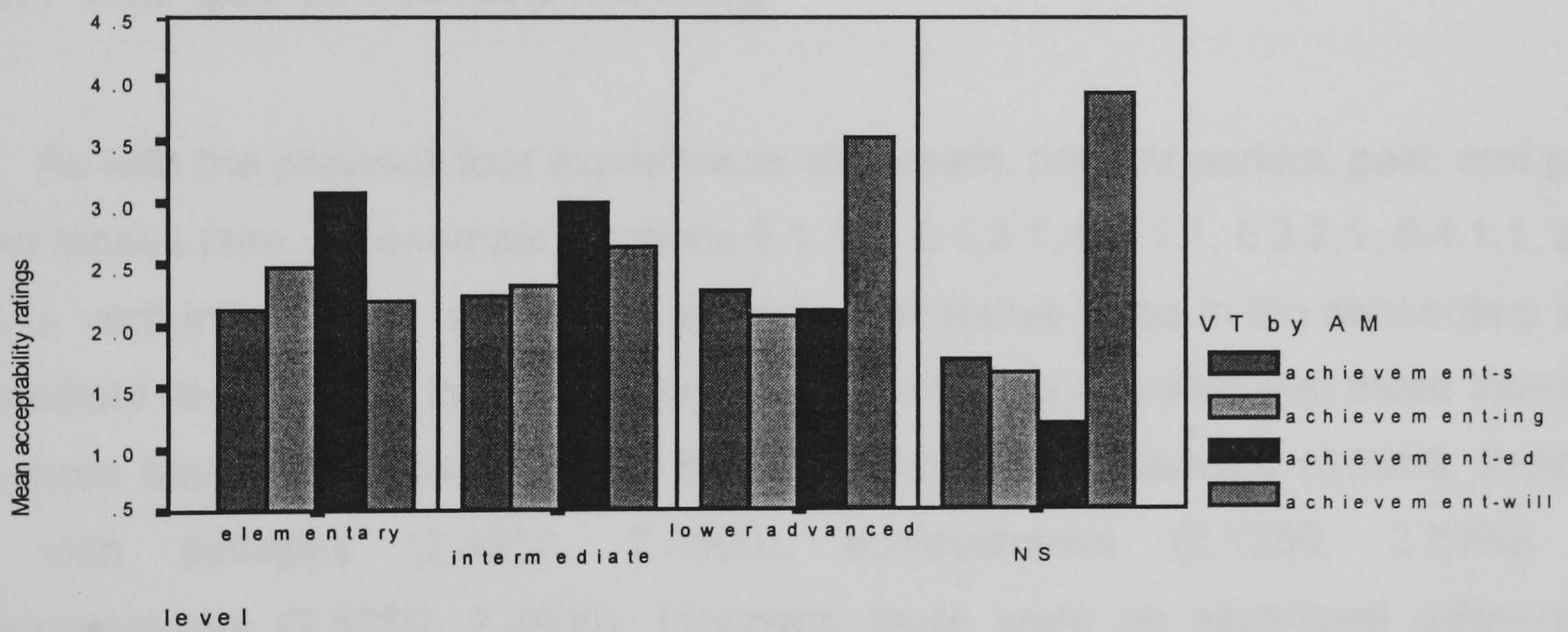


Figure 63. MAR – **Achievements**. Achievement verbs affiliate significantly with PAST marking, and to a lesser extent, with the ‘-ing’ form, but the correct future tense form appears in the lower advanced level.



### 6.5.1.2 The Use of Progressive Marking

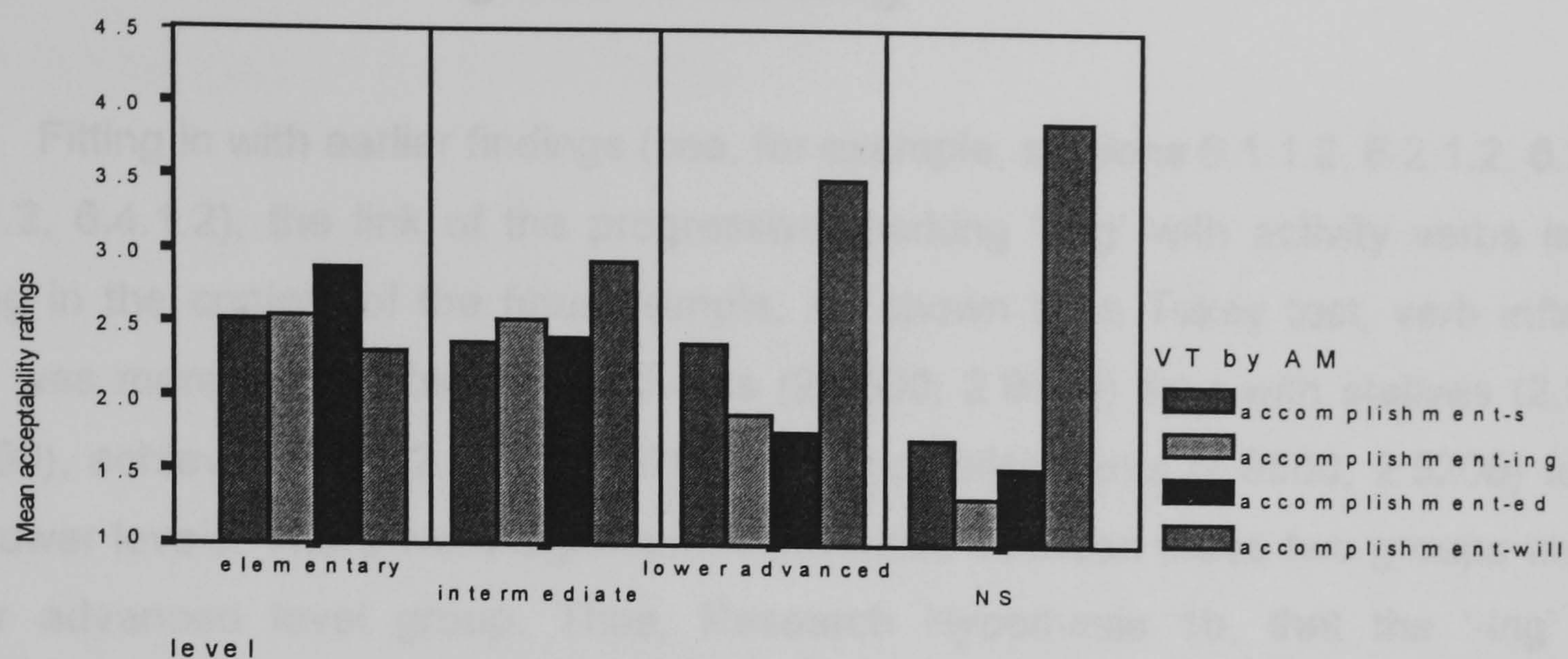


Figure 64. MAR – **Accomplishments**. Like achievement aspect, accomplishment verbs link significantly with PAST marking as well as with the ‘-ing’ form in the elementary and intermediate levels, but with the correct future tense form in the lower advanced level.

### 6.5.1.1 The Use of Present Marking

As with the previous four experiments of present, present perfect, past, and past perfect tenses (see, for example, sections 6.1.1.1, 6.1.2.1, 6.2.1.1, 6.3.2.1, 6.4.1.1, and 6.4.2.1), verb inflection ‘-s’ associates strongly with stative verbs in the elementary and intermediate level groups in this experiment. A Tukey test revealed that these learners were more biased towards attaching the ‘-s’ morpheme to statives (3.2000, 2.8800) than with activities (2.4250, 2.0800), achievements (2.1250, 2.2400) or accomplishments (2.5250, 2.3600). However, there were no significant differences between the elementary- (3.2000) and intermediate- (2.8800) level learners on the one hand versus the lower advanced learners (2.4400) on the other. The absence of significant differences between these groups indicates that lexical aspect was not mediated by level of proficiency. There was a continued effect of lexical aspect present even at higher level of proficiency (see sections 6.2.1.1, 6.3.1.1, 6.3.2.1, and 6.3.3.1).



### 6.5.1.2 The Use of Progressive Marking

Fitting in with earlier findings (see, for example, sections 6.1.1.2, 6.2.1.2, 6.2.2.2, 6.3.1.2, 6.4.1.2), the link of the progressive marking ‘-ing’ with activity verbs is also strong in the context of the future simple. As shown by a Tukey test, verb inflection ‘-ing’ was more acceptable with activities (2.9500, 2.9600) than with statives (2.2750, 1.7600), achievements (2.4750, 2.3200) or accomplishments (2.5500, 2.5200) for the two lower levels. There were significant differences between these two groups and the lower advanced level group. Thus, Research Hypothesis 1b, that the ‘-ing’ form affiliates with activity aspect in the elementary and intermediate levels, is confirmed (see Appendix B-5).

Regarding achievements and accomplishments, there was an elevated use of the ‘-ing’ form even in the lower advanced level group. A Tukey test found no significant differences between the elementary and intermediate level groups compared with the lower advanced level group as regards achievement-ing. However, there were significant differences between the elementary level group and the lower advanced level group as regards accomplishment-ing. These results are consistent with some findings in other tenses (see sections 6.2.1.2, 6.3.1.2, and 6.4.1.2).

Contrary to the universal entailment of stative verbs, significant differences existed in the affiliation of the progressive marking with statives between the elementary and lower advanced groups (2.2750 and 1.4800) but not between the intermediate and lower advanced groups (1.7600 and 1.4800) – a finding consistent with the universal entailment of stative verbs (i.e., that statives associate with present reference). The significant association of stative verbs with progressive marking could be due to an effect from L1. In Arabic, imperfectivity denotes progressive meaning (see sections 3.5.1 and 3.6.2). As Comrie (1976) and Weist et al (1984) suggest, imperfective aspect is associated with durativity, and therefore it is plausible that learners affiliate the ‘-ing’ marker with imperfective aspect in their first language because progressive is part of imperfectivity (see sections 4.2 and 7.4).



### 6.5.1.3 The Use of PAST Marking

So far we have seen that PAST marking aligns significantly with achievement and accomplishment aspects (see, for example, sections 6.1.1.3, 6.2.1.3, 6.2.1.3, 6.3.2.3, and 6.4.2.3). The GJT data on the future lend further credence to the alliance of PAST marking with punctual and telic events. A Tukey test showed significant differences between the elementary level group and the lower advanced and NS groups, between the intermediate level group and the lower advanced and NS group, and between the lower advanced level group and the NS group. The elementary, intermediate and lower advanced level groups were more biased in associating PAST morphology with achievements (3.0750, 3.0000, 2.1200) and accomplishments (2.8750, 2.4000, 1.7600) than with statives (2.2250, 1.9600, 2.0400) or activities (2.1000, 1.8000, 1.4800). There were also significant differences in the use of the PAST marking with accomplishments between the elementary level group (2.8750) and the lower advanced (1.7600) and NS (1.5200) groups and between the intermediate level group (2.4000) and the NS group. The absence of significant differences between the intermediate and lower advanced level groups indicates that lexical aspect was not mediated by level of proficiency. There was a continued effect of lexical aspect even at higher levels of proficiency, a result corroborated by similar findings in other tenses (see section 6.2.1.3, and Appendix B–5).

Statives exhibited the weakest correlation with PAST marking in the two lower groups (2.2250) and (1.9600). The weak link between PAST and statives is consistent with the universal entailment of statives (that stative verbs align with present reference, see, for example, sections 6.2.1.3 and 6.4.3.3).

The spread of PAST appears to move in the order telics to activities to statives. This follows naturally from the Aspect Hypothesis.



## 6.5.2 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GFT

In this section, lexical aspect was examined in the context of the future by means of the GFT. Included in the GFT were 12 test items, three sentences per verb type, providing obligatory future contexts for the subjects to supply the correct target tense forms (cf. Appendix A–7). Examples of the biased association of verb types with aspect markings are given in (14):

- (14) a. Omar hasn't had any news from his family for a long time. Maybe he  
(hear) **hears** from them next week.
- b. Omar: What will Ahmad do after school?  
Ali: Oh! I think he (run) **running** in the park for one hour.
- c. I'm sure that Saud (reach) **reached** the top of Jabal Al Rahma in  
the near future.
- d. Look at all these dirty tables. I think the waiter (clean) **cleaned**  
them up soon.

Chi square tests were applied to test the association of verb types with aspectual markers. They showed that the overall association of aspect markings with verb types was highly significant for all groups ( $X^2(24, N = 480) = 145.784, P < 0.000$ ), ( $X^2(27, N = 300) = 201.194, P < 0.000$ ), ( $X^2(24, N = 300) = 66.671, P < 0.000$ ) and ( $X^2(15, N = 300) = 37.739, P < 0.001$ ). The following figures illustrate this interaction.



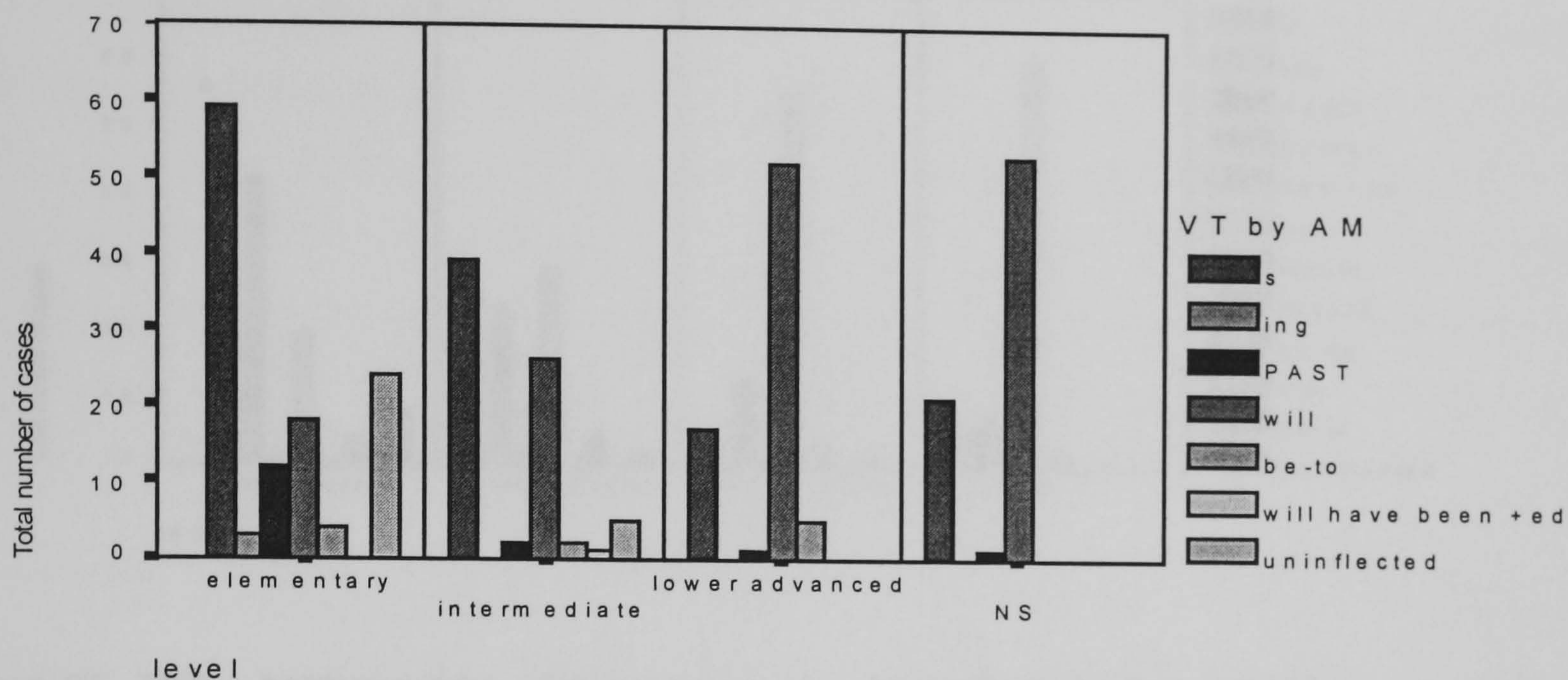


Figure 65. TNC – **Statives**. Stative verbs exhibit a strong alliance with the present tense marker '-s', and a significant occurrence of uninflected forms in the elementary and intermediate levels. In the lower advanced level, correct future tense form is predominantly used.

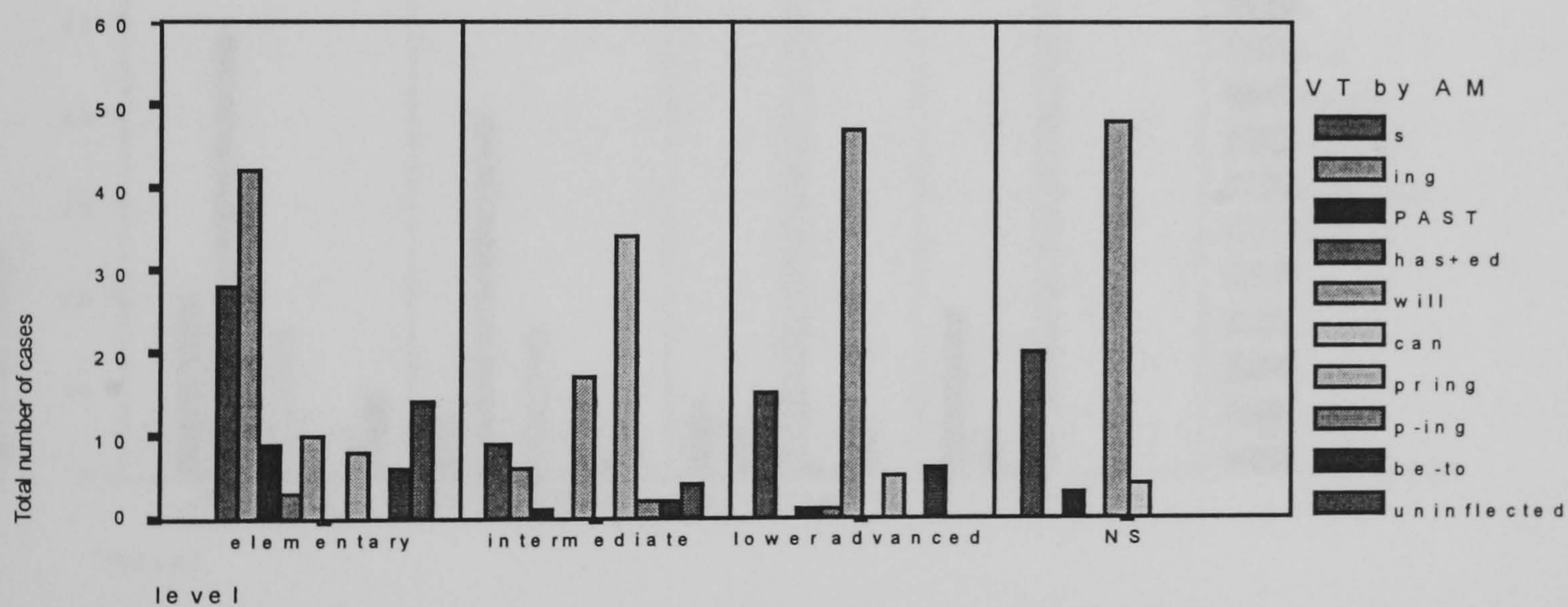


Figure 66. TNC – **Activities**. The '-ing' form and present continuous are decidedly elevated in the elementary and intermediate levels, but not in the lower advanced level, who opt for the correct future tense form .



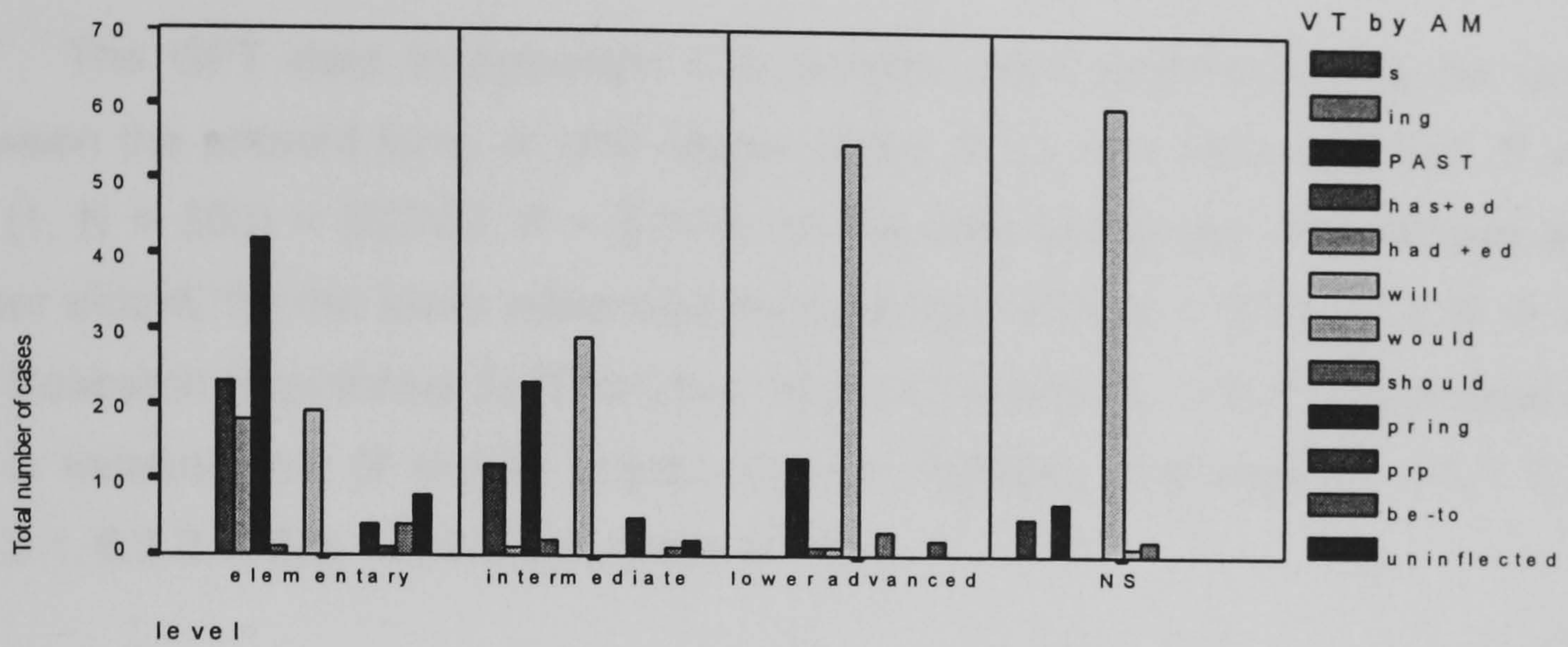


Figure 67. TNC – **Achievements**. Achievements show a biased association of PAST and an elevated use of progressive marking in the elementary and intermediate levels, but are largely replaced by the correct future tense form in the lower advanced level.

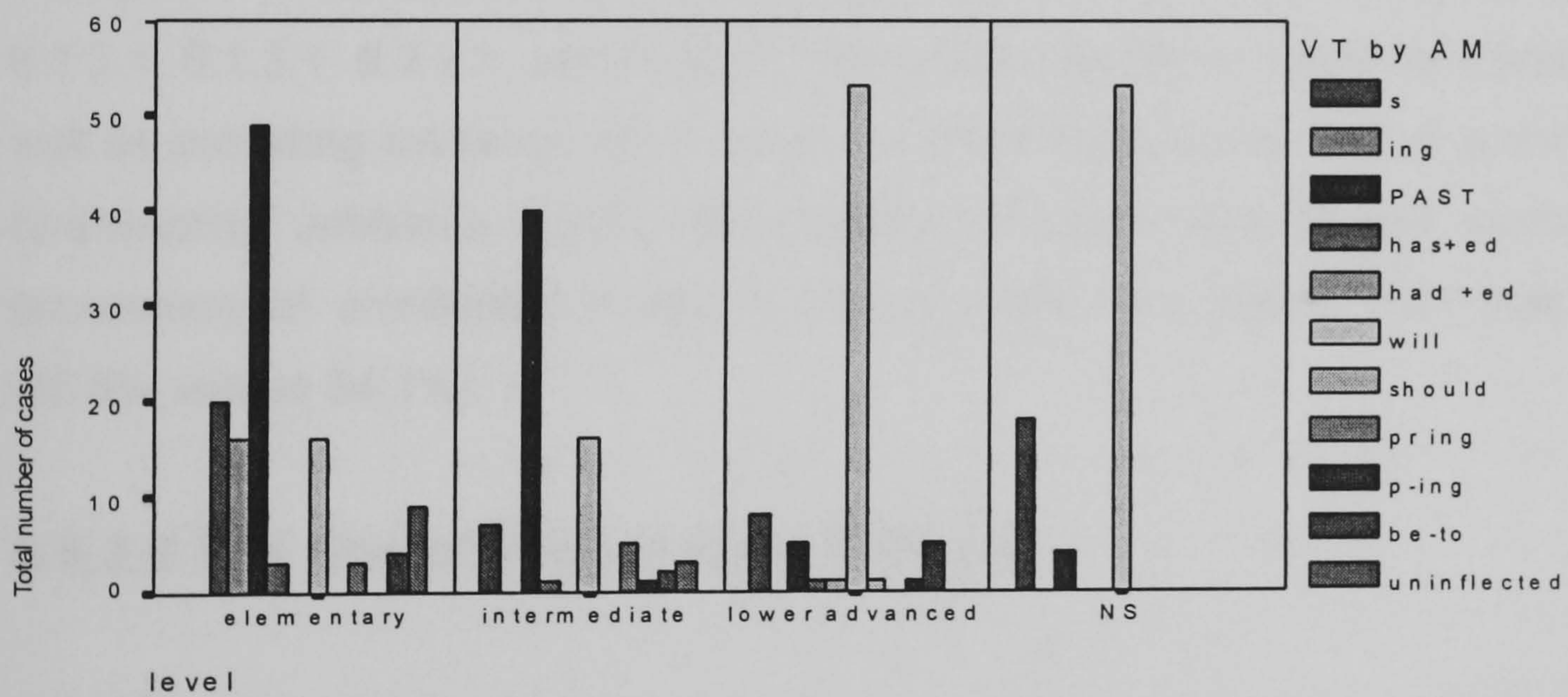


Figure 68. TNC – **Accomplishments**. Like achievements, accomplishments align with PAST marking, and to a lesser extent, with the progressive, in the elementary and intermediate levels, but with correct future tense form in the lower advanced level.



### 6.5.2.1 The Use of Present Marking

The GFT data in Appendix C-5 provide more confirmation of the correlation between the present form '-s' and stative verbs ( $X^2(1, N = 480) = 39.511, P < 0.000$ ), ( $X^2(1, N = 300) = 50.740, P < 0.000$ ) for the elementary and intermediate and, to a lesser extent, for the lower advanced level groups ( $X^2(1, N = 300) = 7.538, P < 0.006$ ) (cf. Research Hypothesis 2). Therefore the null hypothesis, that morphological marking '-s' is independent of stative aspect, can be rejected (see sections 6.1.1.1, 6.1.1.1, 6.1.3.1, 6.2.2.1, 6.3.1.1, 6.4.2.1, and 6.5.1.1).

Statives also exhibited a statistically significant high occurrence of uninflected forms ( $P < = 0.001$ ) for the elementary level, but not for the other groups, presumably due to increasing level of proficiency. The uninflected forms of Statives provide another piece of evidence for the affiliation of stative verbs with present reference, since uninflected forms function for present reference in English. It was argued (see sections 6.1.2.1, 6.1.3.1, 6.2.2.1, and 6.3.2.1) that uninflected forms could be developmental as well as providing evidence of L1 influence. Interesting in this regard is the fact that by re-analyzing Jabbari's (1998) GFT tables on future time, it was obvious that the occurrence of uninflected forms of stative verbs was higher than that of stative-s (38.6% versus 34.1%).

### 6.5.2.2 The Use of Progressive Marking

As with other tenses (see, for example, sections 6.1.2.2, 6.2.1.2, 6.2.2.2, 6.3.2.2, and 6.4.2.2), a biased application of progressive marking was the most significant feature of activities. Chi square tests showed that activities were significantly associated with progressive marking without auxiliary 'be' for the elementary and intermediate level groups only ( $X^2(1, N = 480) = 40.006, P < 0.000$ ) and ( $X^2(1, N = 300) = 14.091, P < 0.000$ ). The present continuous was also significantly associated with activities for all the experimental groups ( $X^2(1, N = 480) = 6.629, P < 0.010$ ), ( $X^2(1, N =$



300) = 75.142,  $P < 0.000$ ) and ( $X^2(1, N = 300) = 15.254, P < 0.000$ ). The significant association of progressive marking in the lower advanced level seems to be as a result of using the present continuous to express future action (see also Quirk et al, 1972; Jabbari, 1998).

Regarding the affiliation of progressive marking with telic events, achievements and accomplishments exhibited a significant alliance with the present continuous for the intermediate level group alone ( $X^2(1, N = 300) = 5.114, P < 0.024$ ) and ( $X^2(1, N = 300) = 5.114, P < 0.024$ ), respectively. However, this effect dropped to zero in the lower advanced level group - a result in line with earlier findings (see sections 6.2.2.2, 6.3.2.2., 6.3.3.2, and 6. 4.2.2).

As recorded in Appendix C-5, there were three cases of stative verbs associated with progressive marking without auxiliary 'be' - far fewer than the expected value of 19.8. Statives therefore do not align with progressive marking but with present reference (see sections 6.1.1.2, 6.1.2.2, 6.1.3.2, 6.2.1.2, 6.3.1.2, 6.3.2.2, 6.3.3.2, 6.4.2.2, and 6.5.1.2).

### **6.5.2.3 The Use of PAST Marking**

As with other experiments (see, for example, sections 6.1.1.3, 6.1.2.3, 6.2.1.3, 6.2.2.3, 6.3.1.3, 6.4.1.3, and 6.5.1.3), PAST marking bears a distinct association with punctual and telic events. Achievements exhibited a significant correlation with PAST marking for all the experimental groups ( $X^2(1, N = 480) = 27.391, P < 0.000$ ) and ( $X^2(1, N = 300) = 57.391, P < 0.000$ ), respectively. In similar vein, accomplishments exhibited a stronger association with PAST marking in the elementary, intermediate and lower advanced level groups ( $X^2(1, N = 480) = 12.174, P < 0.000$ ), ( $X^2(1, N = 300) = 4.377, P < 0.036$ ) and ( $X^2(1, N = 300) = 18.286, P < 0.000$ ). The significant association of PAST marking with accomplishments indicates that lexical aspect was not mediated by proficiency level (see sections 6.2.1.3 and 6.5.1.3). This confirms Research Hypothesis 2, that the elementary- and intermediate-level learners will show the narrowest and



most significant association of PAST with achievement and accomplishment predicates, whereas lower advanced-level learners and NS will extend the domains to include all categories of aspectual verbs, and the lower advanced-level learners will show the weakest dependence, if any, of verb morphology upon lexical aspect (see Appendix C-5).

### 6.5.3 The Overall Association of Verb Types with Aspect Markings Across the Groups in the RT

In this section, the spontaneous speech which the subjects produced in the context of target time 'future' was coded and analyzed by the statistical package SPSS for Windows. Chi square tests, applied to the data to test the interaction of verb types with aspect markings across the levels of proficiency (see sections 5.3.2.3 and 5.3.4.1), showed that the correlation between verb types and aspect markings was significant for all the groups ( $X^2(27, N = 407) = 323.996, P < 0.000$ ), ( $X^2(27, N = 276) = 247.661, P < 0.000$ ), ( $X^2(24, N = 213) = 50.864, P < 0.001$ ), and ( $X^2(24, N = 180) = 72.430, P < 0.000$ ). The following bar graphs illustrate this effect.

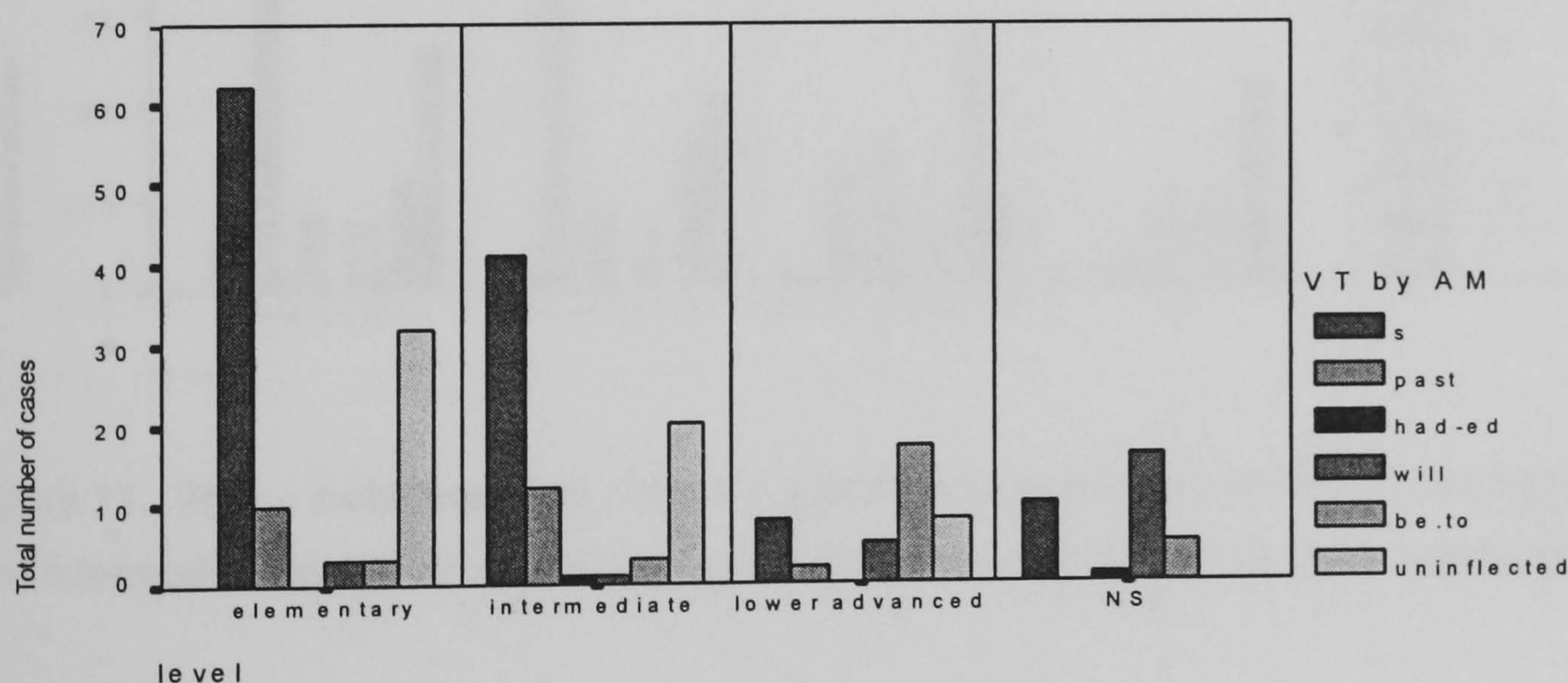


Figure 69. TNC – **Statives**. The biased use of '-s' and the high occurrence of uninflected forms are the most salient features for the elementary- and intermediate-level learners, whereas the lower advanced-level learners show significantly correct application of future forms.



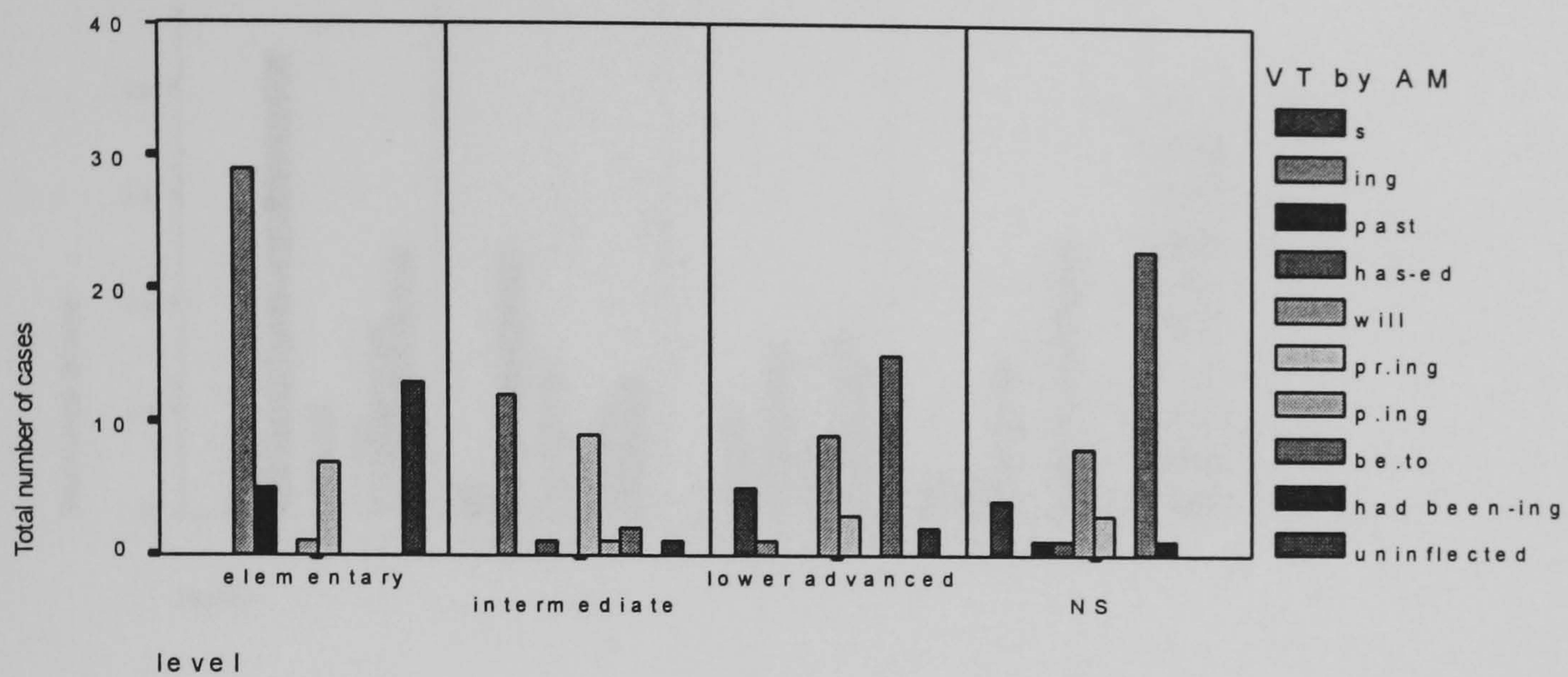


Figure 70. TNC – **Activities**. Activities exhibit a strong link with the '-ing' form and present continuous in the elementary and intermediate levels, but with correct future forms in the lower advanced level.

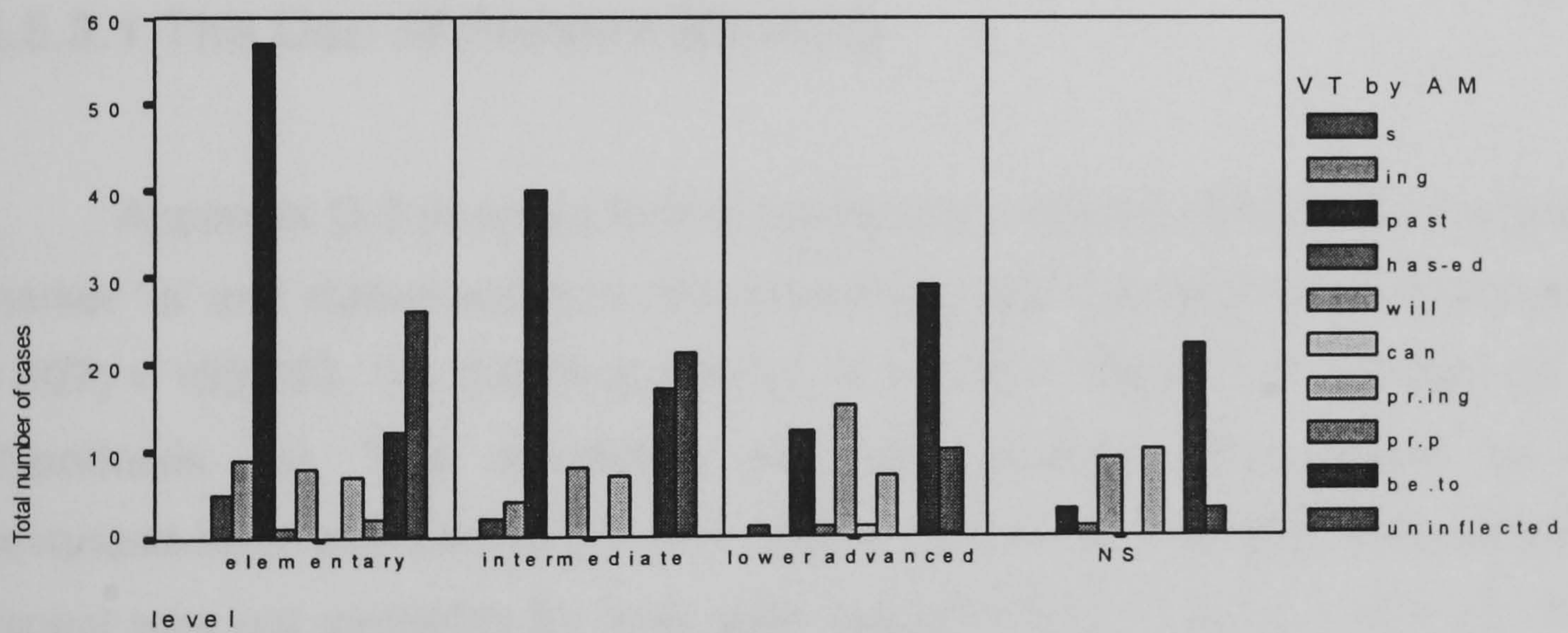


Figure 71. TNC – **Achievements**. There is a prominent application of PAST marking by the elementary- and intermediate-level learners, but of correct future tense forms by the lower advanced-level learners.



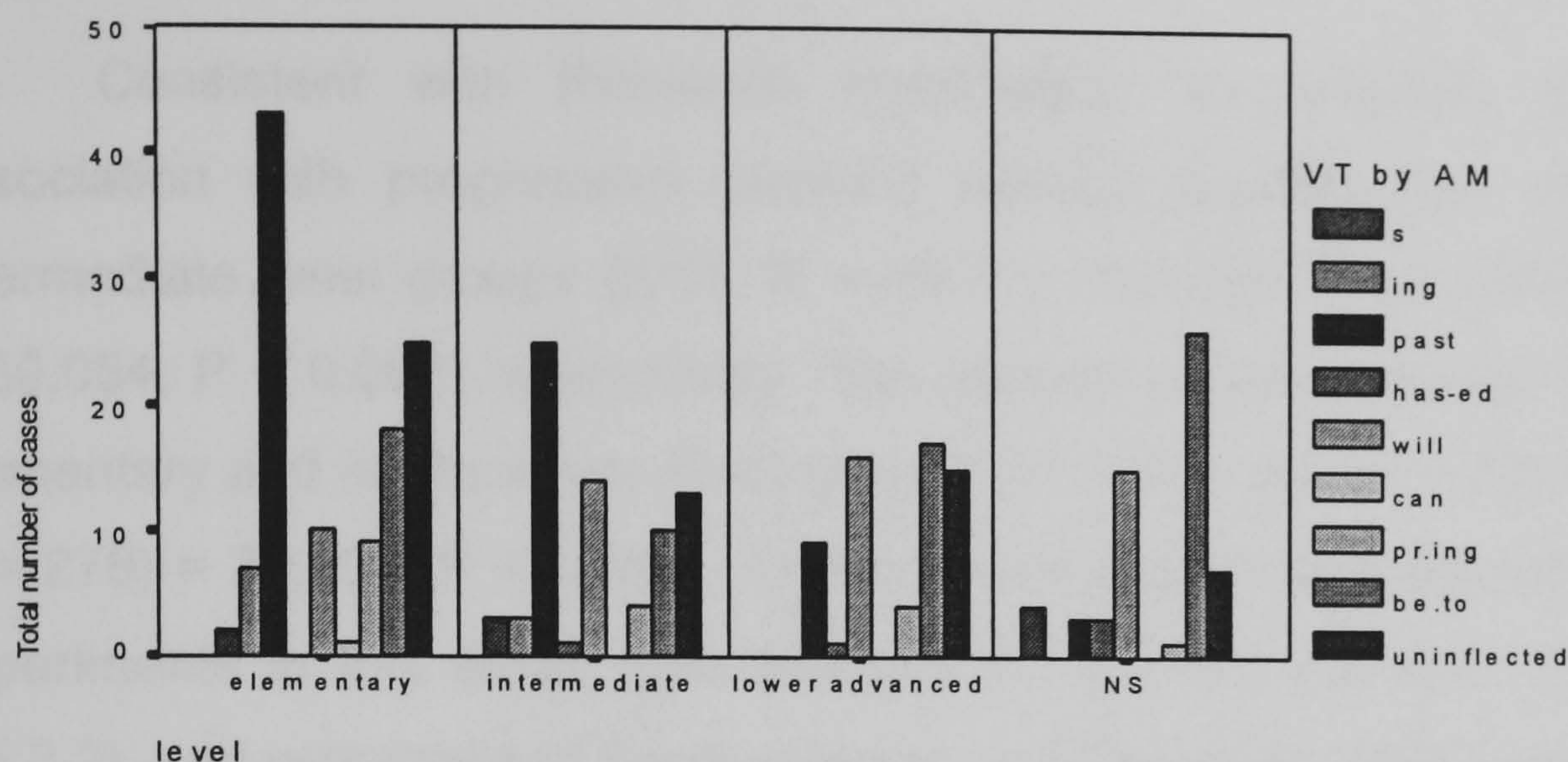


Figure 72. TNC – **Accomplishments**. Accomplishments show a biased use of PAST marking for the elementary and intermediate levels, and an elevated occurrence of the '-ing' form for the elementary level alone. For the lower advanced-level learners, correct future tense forms are significant.

### 6.5.3.1 The Use of Present Marking

Appendix D-3 provides further confirmation of the link between the present tense marker '-s' and stative aspect in the elementary and intermediate level groups ( $X^2(1, N = 407) = 166.293, P < 0.000$ ) and ( $X^2(1, N = 276) = 100.878, P < 0.000$ ) (cf. Research Hypothesis 1a). This correlation was also statistically significant for the lower advanced-level learners ( $X^2(1, N = 180) = 19.527, P < 0.000$ ), indicating that lexical aspect was not mediated by level (see sections 6.2.1.1, 6.2.2.1, 6.3.2.1, 6.5.1.1, and 6.5.2.1). This finding corroborates those from Collins (1998), Housen (1994) and Robison (1994) in terms of the use of the present marking morpheme '-s' with stative verbs.

Statives exhibited no significant occurrence of uninflected forms in any of the groups (see also section 6.5.2.1).



### 6.5.3.2 The Use of Progressive Marking

Consistent with Research Hypothesis 1b, activities exhibited a significant association with progressive marking without auxiliary 'be' in the elementary and intermediate level groups ( $X^2(1, N = 407) = 118.625, P < 0.000$ ) and ( $X^2(1, N = 276) = 69.054, P < 0.000$ ) respectively. The present continuous was highly significant in the elementary and intermediate level groups ( $X^2(1, N = 407) = 5.972, P < 0.015$ ) and ( $X^2(1, N = 276) = 31.990, P < 0.000$ ). These results accord with similar findings from previous experiments in this study (see sections 6.1.2.2, 6.2.2.2, 6.3.1.2, 6.4.2.2, 6.5.1.2, and 6.5.2.2), and with those of Bardovi-Harlig and Reynolds (1995) and Collins (1998).

Contrary to hypothesis 4b, but consistent with the Aspect Hypothesis, achievements exhibited no significant association with any form of progressive marking for any of the groups. Moreover, the NS and lower advanced level groups used the present continuous significantly to refer to future time (see section 6.5.2.2, and Appendix D-3).

### 6.5.3.3 The Use of PAST Marking

As with other tenses (see, for example, sections 6.1.1.3, 6.2.2.3, 6.3.1.3, 6.4.3.3, and 6.5.2.3), the use of PAST marking with achievements was statistically significant ( $X^2(1, N = 407) = 25.173, P < 0.000$ ) and ( $X^2(1, N = 276) = 12.002, P < 0.001$ ) for the two lower groups. PAST marking on accomplishments was also significant for the elementary level group alone ( $X^2(1, N = 407) = 6.599, P < 0.010$ ). Thus, Research Hypotheses 1c and 1d, that PAST marking aligns with achievement and accomplishment aspects, are confirmed. However, correct tense forms were significant for the lower advanced-level learners (see Research Hypothesis 3, that the dependence between verb inflection and tense is weakest with the lowest level learners, but strongest with the most advanced-level learners).



To sum up, the acquisition of tense-aspect morphology is influenced by lexical aspect in the elementary and intermediate levels, but by temporal reference in the lower advanced level. As a corollary, the ratio of aspectual markers to inflectional markers was higher for the elementary- and intermediate-level learners, whereas the reverse was true of the lower advanced- level learners (see Appendices E-5, F-5, and G-3). Figures 73-75 illustrate these effects.

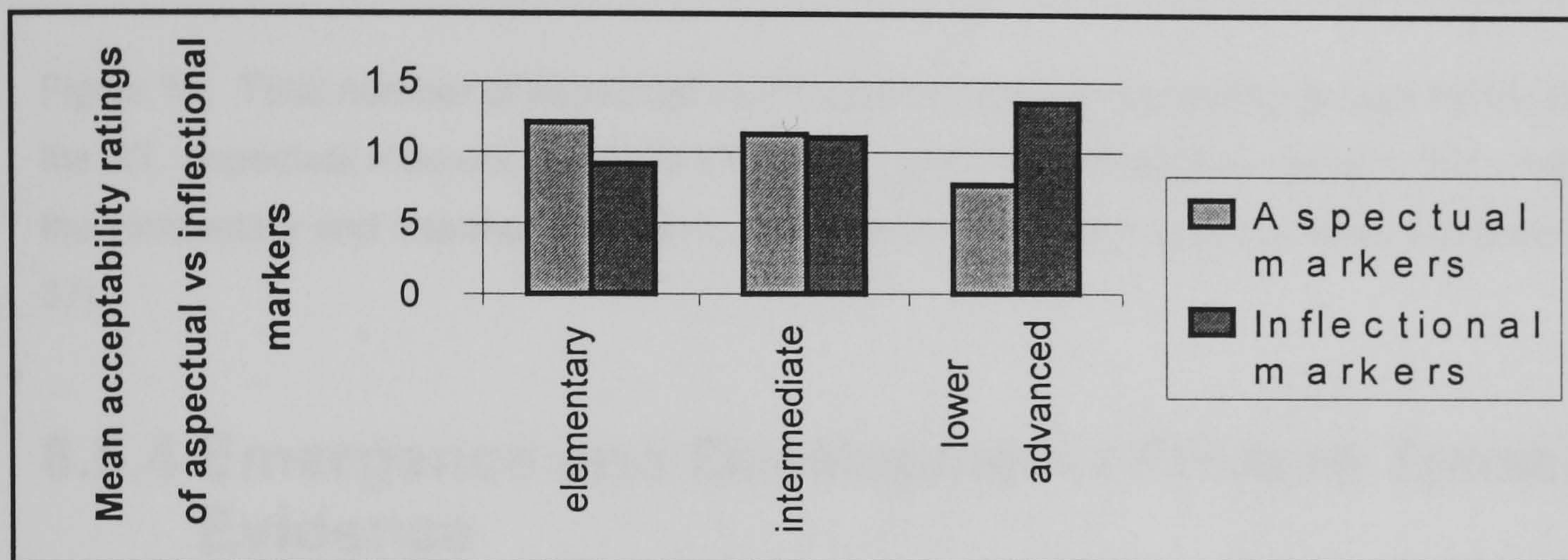


Figure 73. Mean acceptability ratings of aspectual vs inflectional markers across the groups for the target tense future in the GJT. Aspectual markers are more acceptable than inflectional markers for the elementary and intermediate levels (12.1000, 11.2400 versus 9.2000, 10.9600), but the situation reverses with the lower advanced level (13.5600 versus 7.7200).

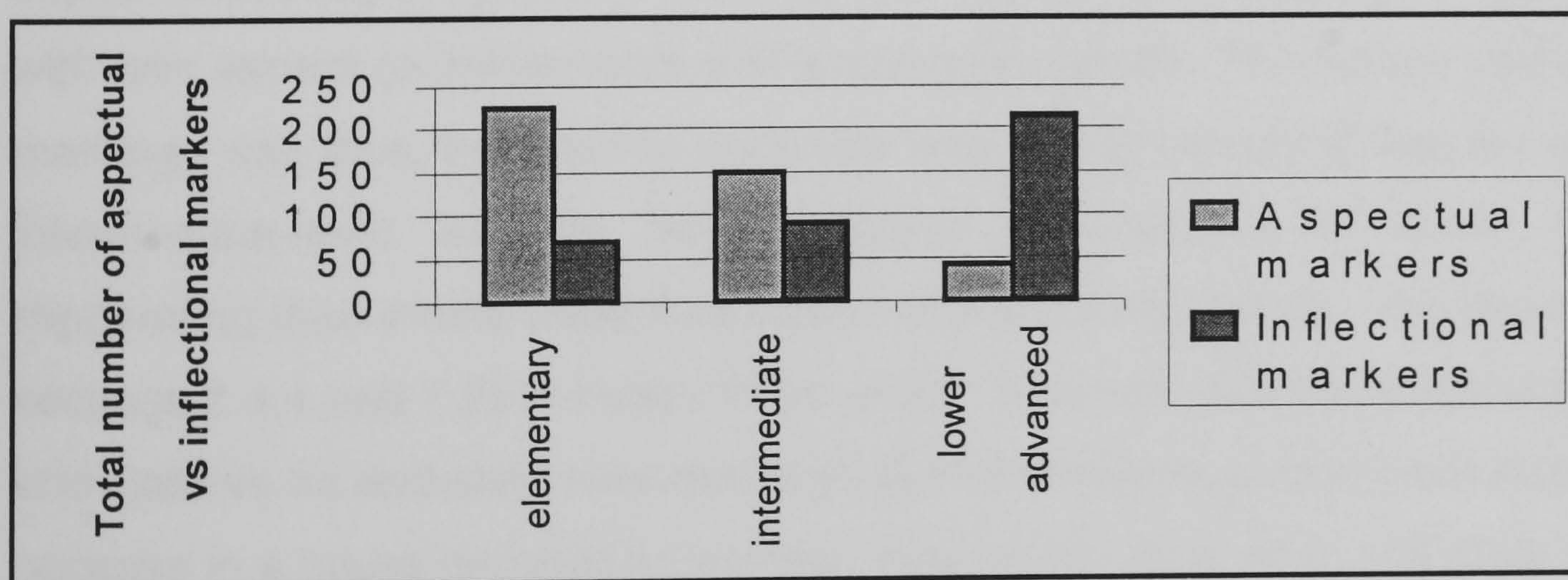


Figure 74. Total number of aspectual vs inflectional markers across the groups for the target tense future in the GFT. Lexical aspect is more powerful than tense in the elementary and intermediate levels (224 and 149 versus 71 and 91), whereas the reverse is true for the lower advanced level (214 versus 40).



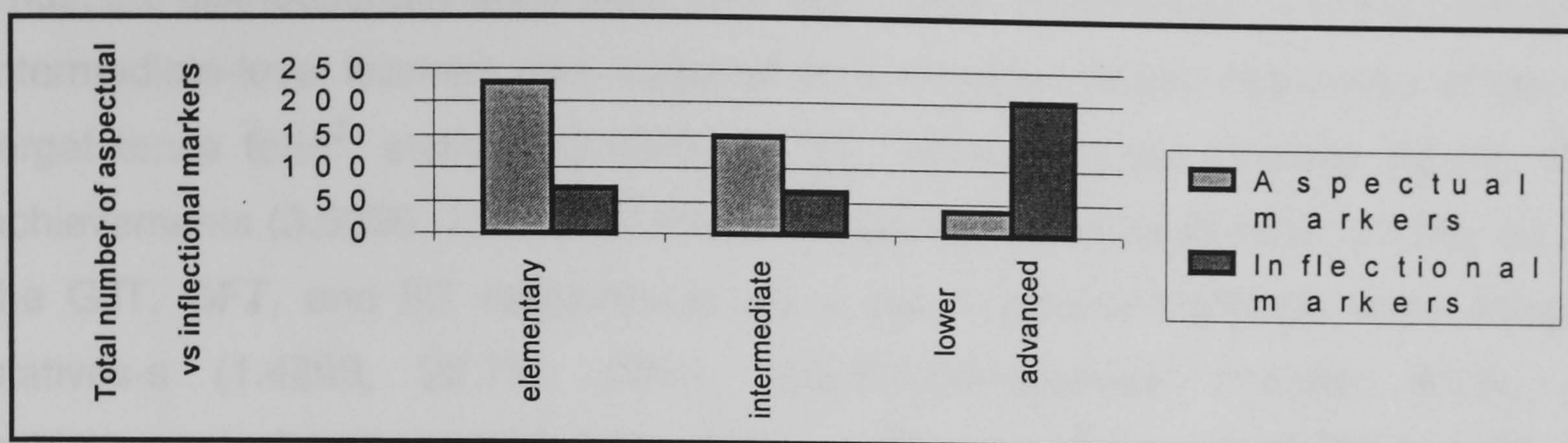


Figure 75. Total number of aspectual vs inflectional markers across the groups for the target time future in the RT. Aspectual markers are more frequently used than inflectional markers (230, 148 versus 70, 66) in the elementary and intermediate levels, with the reverse applying to the lower advanced level (204 versus 37).

#### 6.5.4 Emergence and Development of Future Tense: Semantic Evidence

As the data on the three tasks (GJT, GFT, and RT) demonstrate, Arabic-speaking learners of the elementary and intermediate level groups have acquired the English morphology ‘-s’, ‘-ing’, and PAST prior to the emergence of the future tense form. They predominantly associated the present marking morpheme ‘-s’ with non-dynamic, atelic aspect (statives), progressive marking with atelic aspect (activities), and PAST marking with telic aspect (achievements and accomplishments). The biased use of these aspect markings was thus restricted to particular verb types, indicating that the elementary- and intermediate-level learners have acquired the function of these morphemes by reactivating their innate aspectual values of punctuality, telicity, and dynamicity (see also sections 2.4.4 and 7.2). It needs to be noted, however, that the dimension of observable end-state vs no end-state was excluded by the elementary and intermediate level groups because in a future-demanding context, there is no observable end state vs no end state to be cognitively realized by the learners.

In the lower advanced level group, the link between aspect markings and verb types weakened due to the preponderance of the correct target tense form (‘will’) which was aligned uniformly with all aspectual verbs regardless of their inherent lexical aspect.



Thus, the distributionally dominated verb type pattern manifested by the elementary- and intermediate-level learners was replaced by a virtually uniform distribution of the correct target tense form<sup>3</sup>: statives (2.9200, 69.3%, 55%), activities (3.6400, 62.7%, 68.6%), achievements (3.5200, 70.7%, 57.9%) and accomplishments (3.4800, 73.3%, 53.2%) on the GJT, GFT, and RT respectively. As a result, aspect markings were dissociated: statives-s (1.4800, 22.7%, 20%), activities-progressive (1.4000, 6.7%, 2.9%), achievements-PAST (2.1200, 6.7%, 15.8%) and accomplishments-PAST (1.8800, 17.3%, 14.5%) in the GJT, GFT and RT respectively. This finding follows naturally from the Aspect Hypothesis. Figures 76-78 illustrate the development of the correct tense form 'will' in the GJT, GFT and RT, respectively.

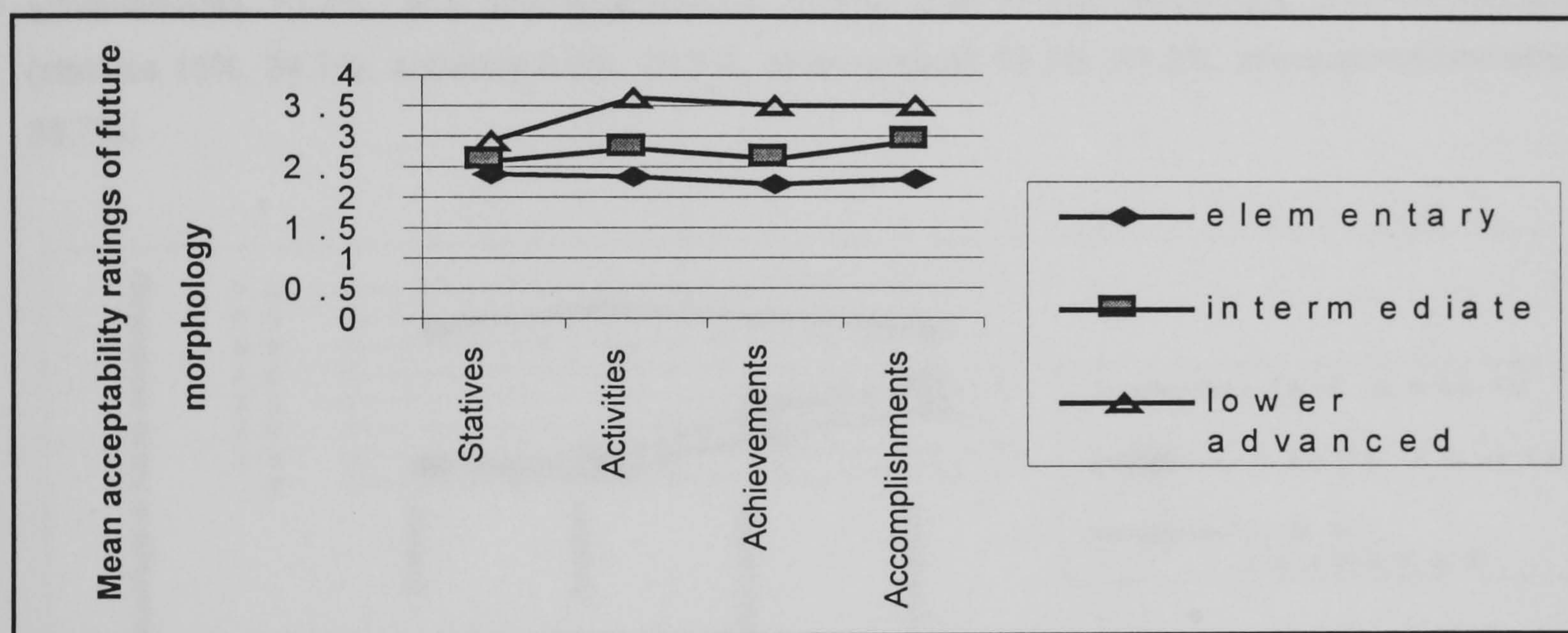


Figure 76. Development of future morphology across the groups for the target tense future in the GJT. The acceptability of future morphology is considerably higher in the lower advanced level (statives 2.9200, activities 3.6400, achievements 3.5200, and accomplishments 3.4800) than its counterpart in the elementary and intermediate levels (statives 2.3750, 2.6000, activities 2.3250, 2.8000, achievements 2.2000, 2.6400, and accomplishments 2.3000, 2.9200).

<sup>3</sup> In the RT, the future forms 'will' and 'be going to' are collapsed because 'be going to' is common in spoken style.



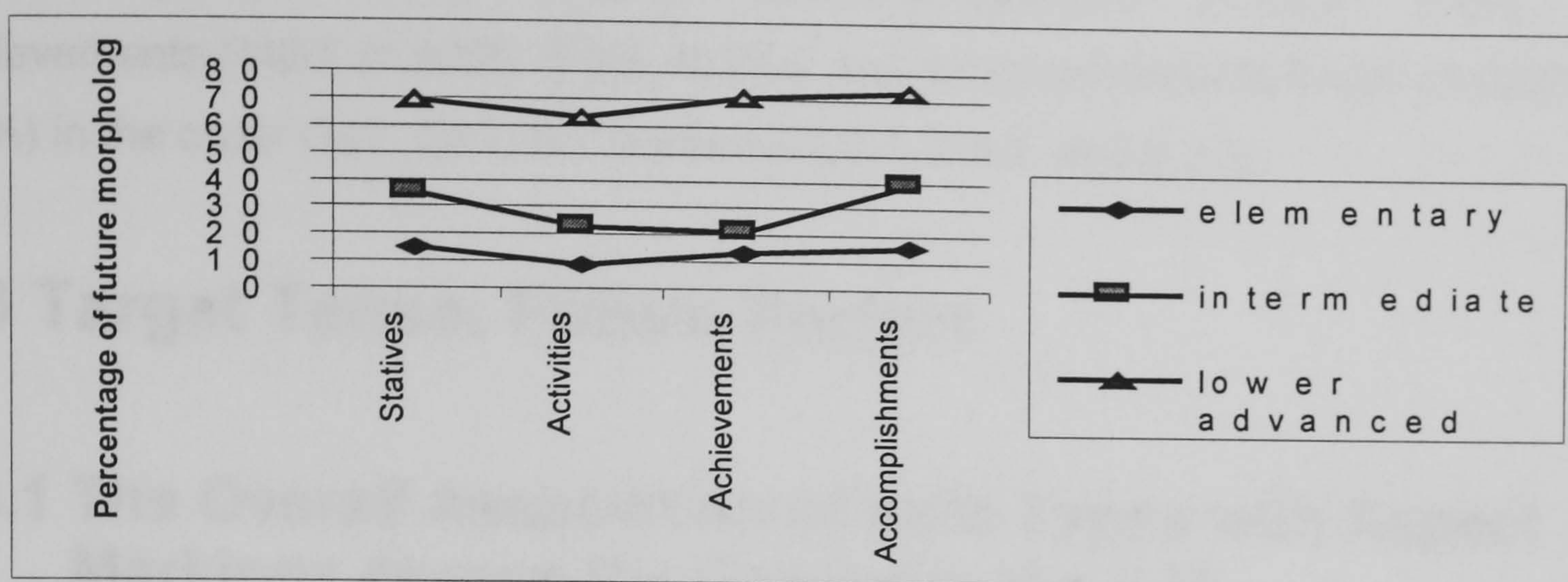


Figure 77. Development of future morphology across the groups for the target tense future in the GFT. Future morphology is more developed in the lower advanced level (statives 69.3%, activities 62.7%, achievements 70.7%, and accomplishments 73.3%) than in the elementary and intermediate levels (statives 15%, 34.7%, activities 8.3%, 22.7%, achievements 13.3%, 21.3%, and accomplishments 15.8%, 38.7%).

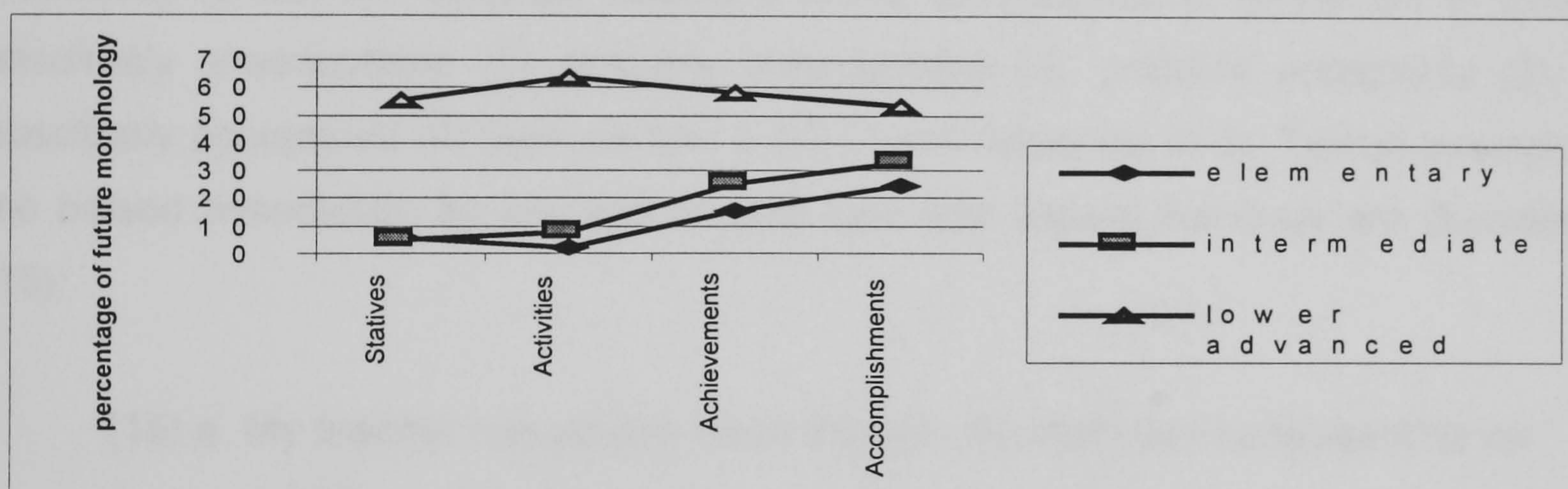


Figure 78. Development of future morphology across the groups for the target time future in the RT. Future morphology is nascent in the elementary and intermediate levels (statives 5.4%, 5.1%, activities 1.8%, 7.7%, achievements 15.7%, 25.3%, accomplishments 24.4%, 32.9%) respectively, but well-developed in the lower advanced level (statives 55%, activities 63.6%, achievements 57.9%, and accomplishments 53.2%).

These results are further reinforced by a similar trend revealed by the control group in which future morphology was strongly affiliated with all verb types: statives (3.9200, 70.7%, 50%), activities (3.8400, 64%, 19.5%), achievements (3.8800, 70.7%, 18.8%), accomplishments (3.8800, 80%, 25.4%), and aspect markings were divorced:



stative-s (2.0000, 28%, 31.3%), activity-progressive (1.1200, 0.0%, 7.3%), achievements-PAST (1.2000, 5.3%, 6.3%), and accomplishments-PAST (1.5200, 9.3%, 5.1%) in the order GJT, GFT, RT (sections 6.5.1, 6.5.2, and 6.5.3).

## 6.6 Target Tense: Future Perfect

### 6.6.1 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GJT

In this section, the Aspect Hypothesis was finally tested in the context of the future perfect by means of 16 test items out of 88 target sentences on the GJT, four items per verb type with four morpho-syntactic variants of '-s', '-ing', PAST, and 'will have'. The first three morphemes were attached to aspectual verbs correctly and incorrectly to test the subjects' intuitions of the acceptability of sentences in terms of absolutely unacceptable (1), possibly unacceptable (2), possibly acceptable (3), and absolutely acceptable (4) (see section 5.3.2.1, and Appendix A-3). Typical examples of the biased association by learners of verb type with aspect markings are illustrated in (15):

(15) a. My teacher has always loved this job. By next year he **loves** it for six years.

1    2    3    ④

b. Omar has been studying hard today. By 3 o'clock he **studying** for all the tests.

1    2    3    ④

c. Ahmad: Is Majid going to leave his room at 12 o'clock tonight?

Omar: No, he **left** it by 11 o'clock.

1    2    3    ④

b. Abdullah is going to clean his desk at 8 o'clock this evening but Khalid **cleaned his desk** by 7 o'clock.

1    2    3    ④



A repeated measures MANOVA was applied to the subjects' choices, and showed that the association of aspect markings with verb types was highly significant across levels of proficiency ( $F(27, 301) = 2.29720, P < 0.000$ ). Figures 79-82 illustrate this effect.

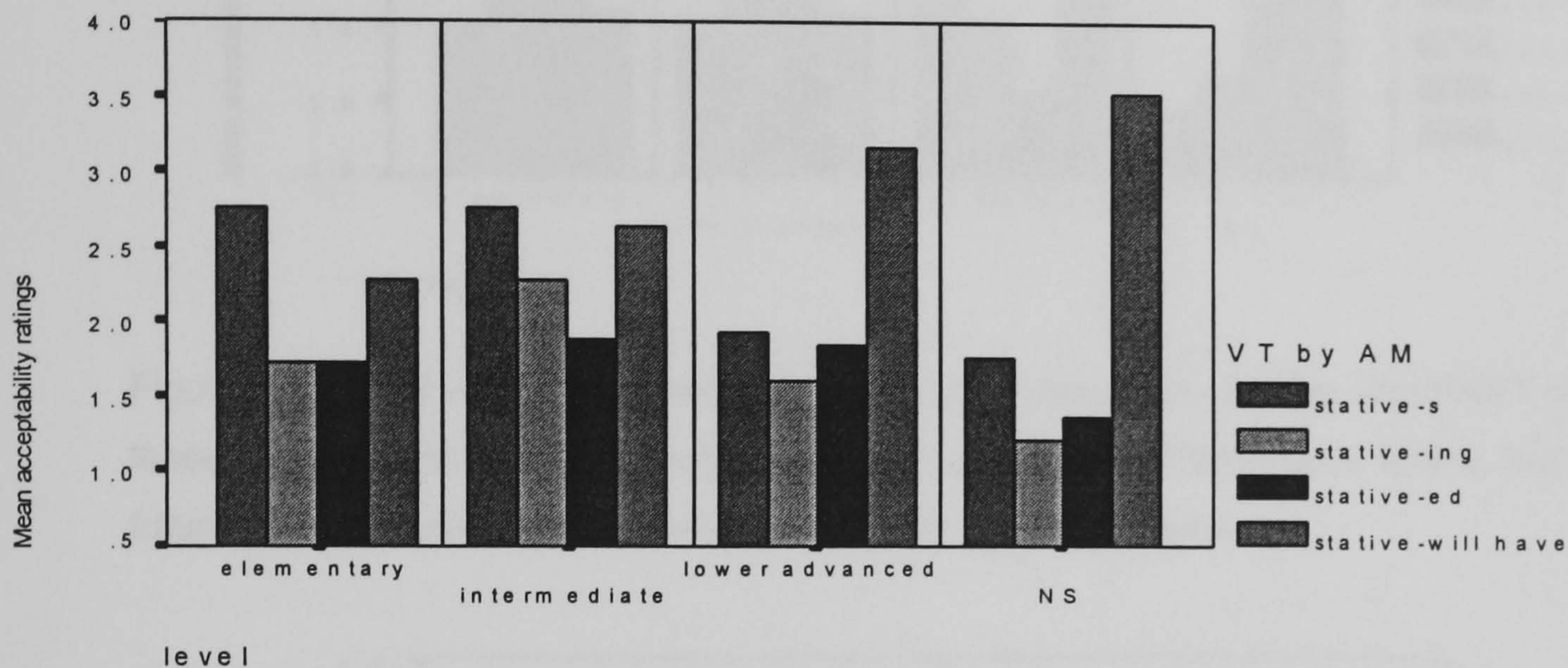


Figure 79. MAR – **Statives**. Stative verbs associate significantly with the present tense marker '-s' in the elementary and intermediate levels, but with the correct future perfect form 'will have' in the lower advanced level group.

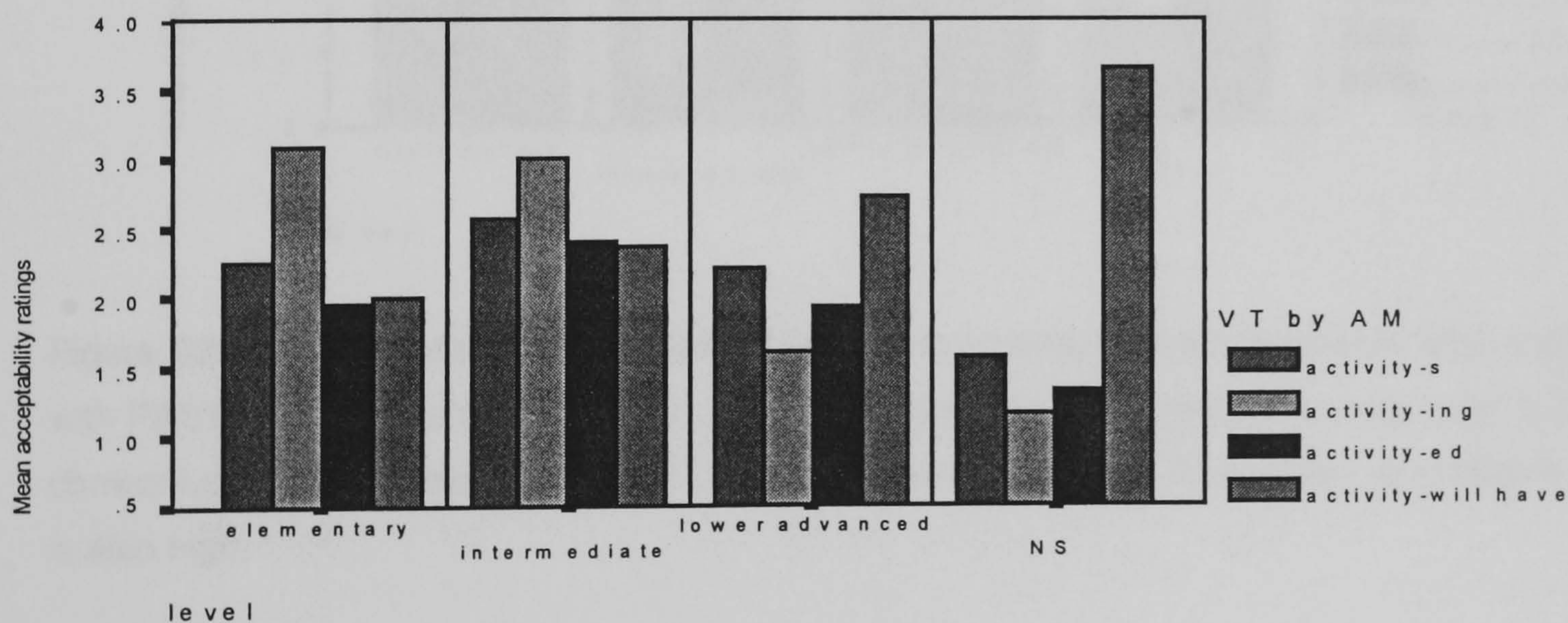


Figure 80. MAR – **Activities**. The '-ing' form dominates the marking of activity aspect in the elementary and intermediate level groups, but is overtaken by the correct future perfect form 'will have' in the lower advanced level group.



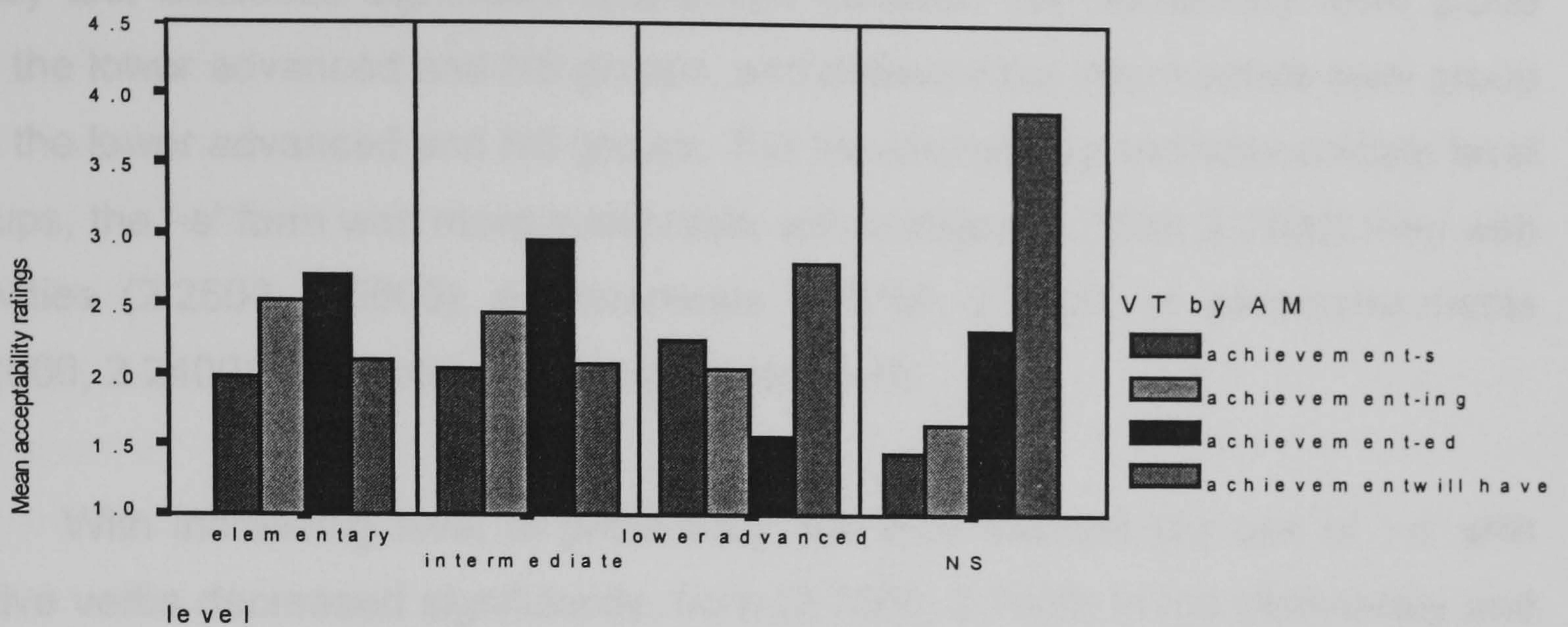


Figure 81. MAR – **Achievements**. Achievements associate strongly with PAST marking, and to a lesser extent, with the ‘-ing’ form in the elementary and intermediate levels, but with the correct future perfect tense form ‘will have’ in the lower advanced level.

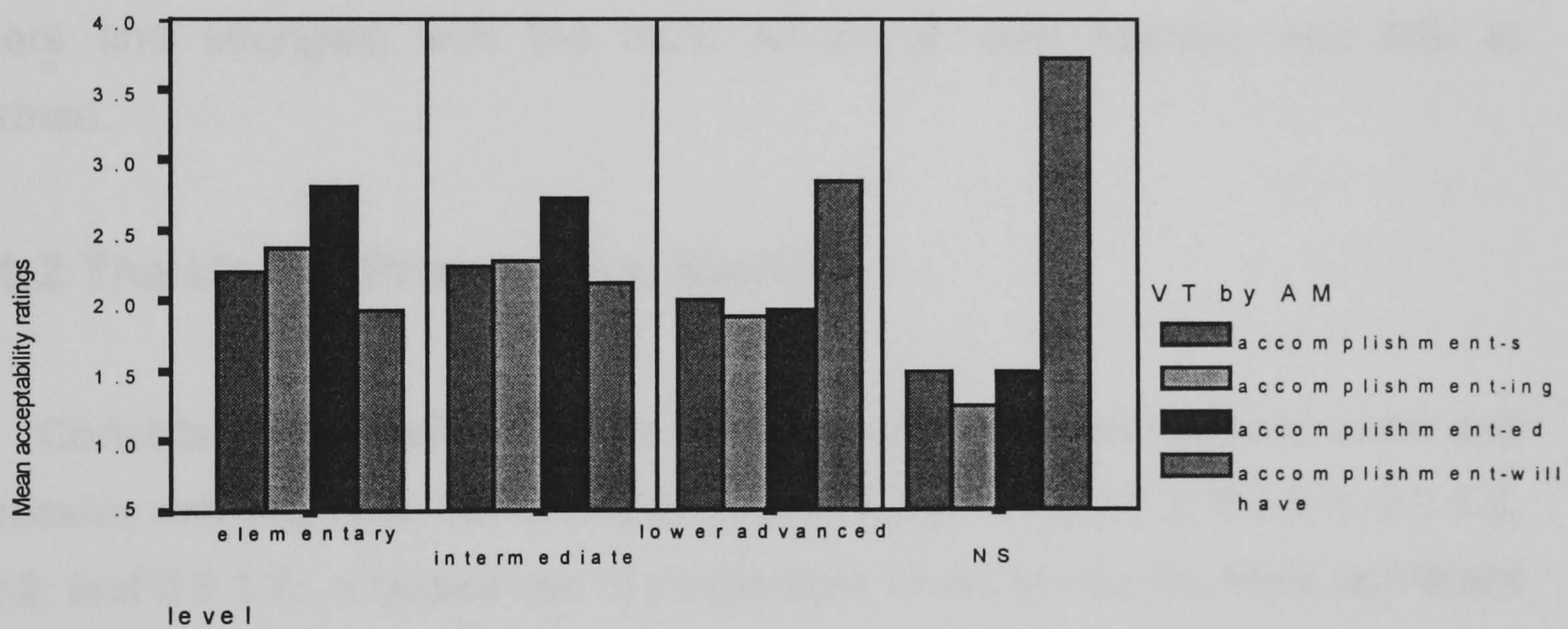


Figure 82. MAR – **Accomplishments**. Like achievements, accomplishments align significantly with PAST marking and the ‘-ing’ form in the elementary and intermediate level groups, but with the correct future perfect tense form ‘will have’ in the lower advanced level where progressive marking is also high.

### 6.6.1.1 The Use of Present Marking

As with other experiments which have involved five target tenses so far (see, for example, sections 6.1.1.1, 6.2.2.1, 6.3.2.1, 6.4.1.1, and 6.5.2.1), the use of the present marking morpheme ‘-s’ is strongly associated with stative aspect. A



Tukey test disclosed significant differences between the elementary level group and the lower advanced and NS groups, and between the intermediate level group and the lower advanced and NS groups. For the elementary and intermediate level groups, the '-s' form was more acceptable with statives (2.7500, 2.7600) than with activities (2.2500, 2.5600), achievements (1.9750, 2.0400) or accomplishments (2.2000, 2.2400), respectively (see Appendix B-6).

With increasing level of proficiency, the bias towards the use of '-s' with stative verbs decreased significantly, from (2.7500, 2.7600) in the elementary and intermediate level groups to (1.9200) in the lower advanced group, due to the influence of tense as reflected in the significant use of the correct target tense form 'will have' with all aspectual verbs. Thus, Research Hypothesis 3, that the dependence between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced level learners and NS, is confirmed.

#### **6.6.1.2 The Use of Progressive Marking**

Consistent with earlier findings on the alliance between activity verbs and progressive marking (see, for example, sections 6.1.1.2, 6.1.2.2, 6.2.2.2, 6.3.1.2, 6.4.2.2, and 6.5.1.2), a biased use of progressive marking was the most significant feature of activities in the two lower level groups. A Tukey test detected significant differences between the elementary level group and the lower advanced and NS groups, and between the intermediate level group and the lower advanced and NS groups. The elementary and intermediate level groups judged progressive marking more accurately with activities (3.0750, 3.0000) than with statives (1.7250, 2.2800), achievements (2.5250, 2.4400) or accomplishments (2.3750, 2.2800). By contrast, the lower advanced level group showed the weakest link with the '-ing' morpheme (1.6000) due to the influence of tense (see Research Hypothesis 2, and Appendix B-6).



Contrary to Hypothesis 4b (the tendency to mark achievement and accomplishment verbs with '-ing' will be prominent among elementary- and intermediate-level learners but will diminish with increasing level of proficiency), a Tukey test found no significant differences in the affiliation of the '-ing' form with achievements and accomplishments between the elementary and lower advanced level groups (2.5250, 2.3750) and (2.0400, 1.8800), and between the intermediate and lower advanced level groups (2.4400, 2.2800) and (2.0400, 1.8800) – a result consistent with similar findings from the study of other target tenses. The absence of such differences indicates that the use of the '-ing' form was still high even in the lower advanced level due to an effect from L1 (see sections 6.2.1.2, 6.3.1.2, 6.4.1.2, and 6.5.1.2).

Statives exhibited the weakest link with progressive marking in the elementary level group (1.7250), which is in conformity with the universal entailment of stative verbs (i.e., that stative verbs align with present marking rather than with progressive marking). This result is further reinforced by similar findings obtained in preceding experiments (see sections 6.3.2.2, 6.3.3.2, 6.4.2.2, and 6.5.1.2). However, a Tukey test showed significant differences between the intermediate level group (2.2800), and the lower advanced (1.6000) and NS (1.2000) groups. The elevated use of progressive marking in the intermediate level group is inconsistent with the universal entailment of stative verbs. This tendency seems to be due to the Imperfect form in Arabic, which denotes progressive meaning (see sections 3.3, 3.5.1, 3.6.2, 4.2, and 7.4).

### **6.6.1.3 The Use of PAST Marking**

PAST marking associated strongly with achievements and accomplishments in the elementary and intermediate levels. As a Tukey test disclosed, there were significant differences between the two lower groups on the one hand and the lower advanced level group. For the former, PAST marking was more acceptable with achievements (2.7000, 2.9600) and accomplishments



(2.8000, 2.7200) than with statives (1.7250, 1.8800) or activities (1.9500, 2.4000). These results are corroborated by similar findings found in previous experiments (e.g., sections 6.1.1.3, 6.1.2.3, 6.2.1.3, 6.2.2.3, 6.4.2.3, and 6.5.1.3) (see Research Hypotheses 1c and 1d). However, there were no significant differences between the intermediate level group and the lower advanced level group. The absence of significant differences between the elementary level group and the NS group or between the intermediate level group and the NS group in terms of PAST-marked achievements, and between the intermediate level group and the lower advanced level group in terms of PAST-marked accomplishments, indicates that PAST marking remains strong in the lower advanced level. Lexical aspect was not mediated by level of proficiency (see sections 6.1.1.3, 6.1.2.3, 6.3.2.3, and 6.5.1.3).

Regarding statives, a Tukey test could find no significant differences in the use of PAST marking with statives between any two groups. This again shows that statives do not align with PAST marking but with present reference (see sections 6.2.1.3, 6.4.3.3, and 6.5.1.3).

## **6.6.2 The Overall Association of Verb Types with Aspect Markings Across the Groups in the GFT**

In this section, the influence of lexical aspect was examined in the context of the future perfect by means of the GFT, the last part of a series of six experiments in this study. As Appendix A–7 shows, 12 test items out of 72 target sentences on the GFT, three items per verb type, were constructed to provide obligatory contexts for the future perfect tense. Typical examples of the biased association of verb type with aspect markings for the elementary- and intermediate-level learners are illustrated in (16):

(16) a. Omar has known Khalid for five years. By next year he (know )



**knows** him for six years .

- b. By Friday Khalid (walk) **is walking** in the park every evening this week.
- c. Omar: Is Ahmad going to finish his homework tomorrow morning?  
Ali: No, he (finish) **finished** by 9 o'clock tonight.
- b. Abdullah can take us to the football match tonight. He (fix) **fixed his car** by then.

We applied null hypothesis tests by means of chi square tests to see whether the associations are statistically significant (see Chapter 5, section 5.3.4). Chi square tests showed that the correlation between verb type and aspect markings was significant ( $X^2(36, N = 480) = 258.551, P < 0.000$ ), ( $X^2(36, N = 300) = 234.505, P < 0.000$ ), ( $X^2(39, N = 300) = 94.340, P < 0.000$ ) and ( $X^2(24, N = 300) = 58.873, P < 0.000$ ) for all four groups. Thus the null hypothesis, that the effect of lexical aspect and verb type is independent can be rejected. Figures 83-86 illustrate the link between aspect marking and verb type across levels of proficiency.

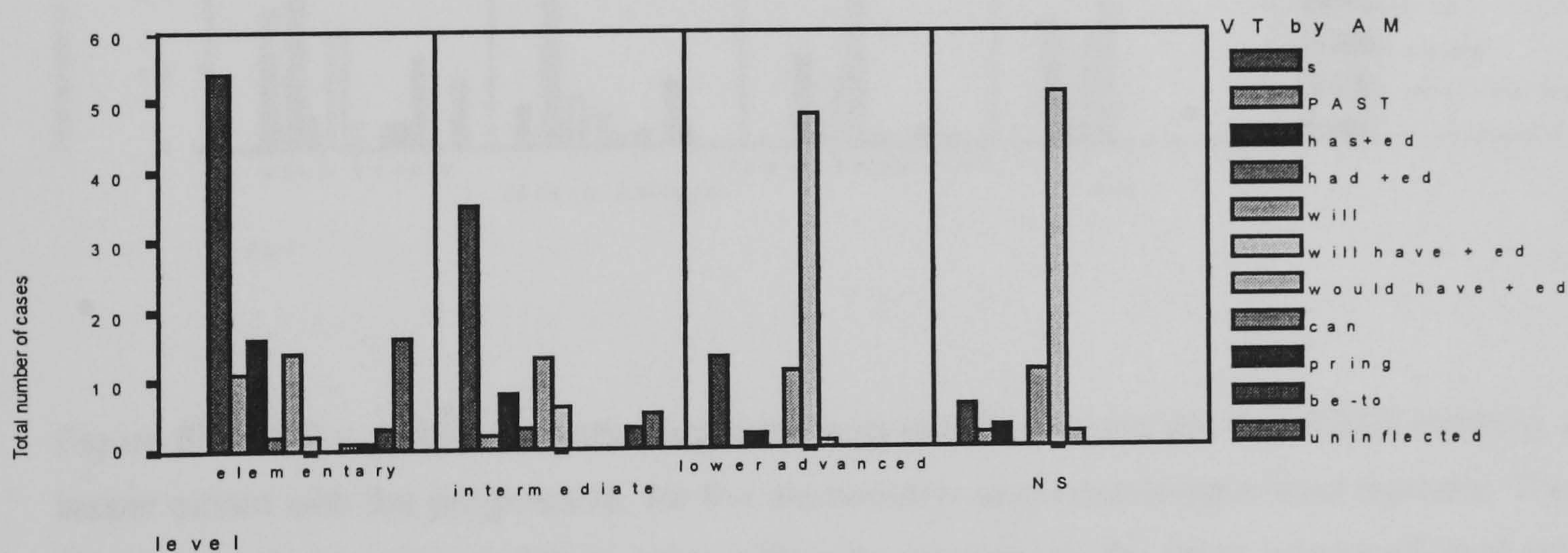


Figure 83. TNC – **Statives**. Stative verbs exhibit a high use of the present tense marker '-s', and a significant occurrence of uninflected forms in the elementary and intermediate levels, but are significantly replaced by the correct future perfect tense form 'will have' in the lower advanced level.



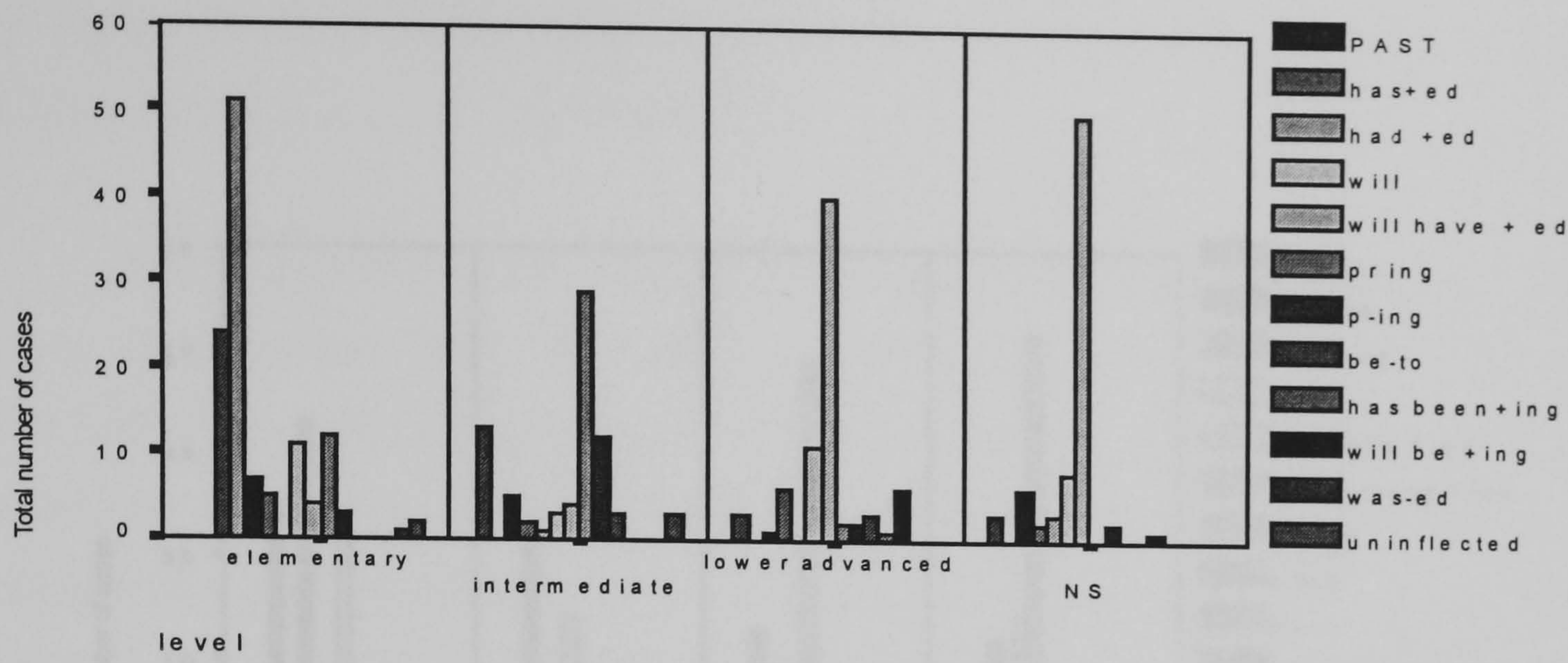


Figure 84. TNC – **Activities**. Expressing activity aspect is preferentially achieved by progressive marking in the elementary and intermediate levels, but by use of the correct future perfect tense form 'will have' in the lower advanced level.

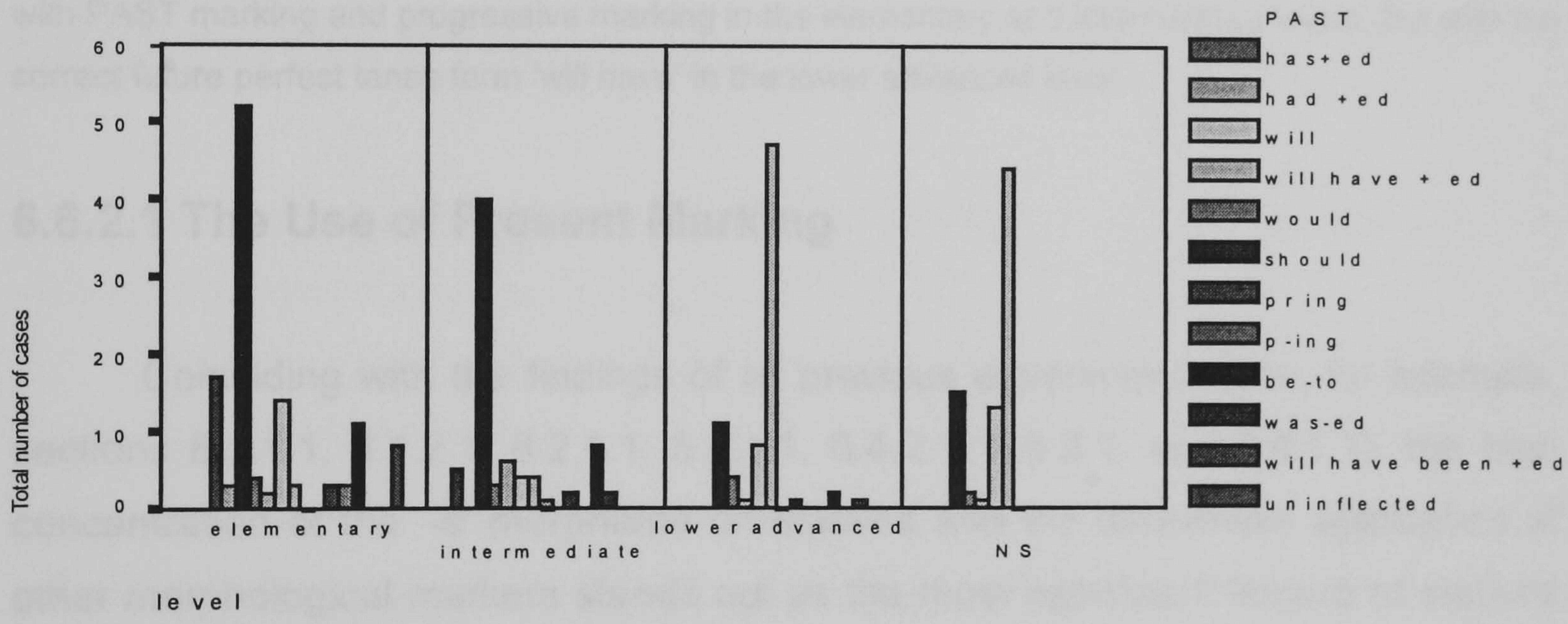


Figure 85. TNC – **Achievements**. Achievements exhibit a strong link with PAST marking, and to a lesser extent with the progressive, for the elementary- and intermediate-level learners. The correct future perfect tense form 'will have' is significantly opted for by the lower advanced-level learners.



by similar findings in previous sections (see sections 6.2.1.1, 6.3.1.1, 6.4.2.1, 6.5.2.1, and 6.5.3.1, and Appendix C-6).

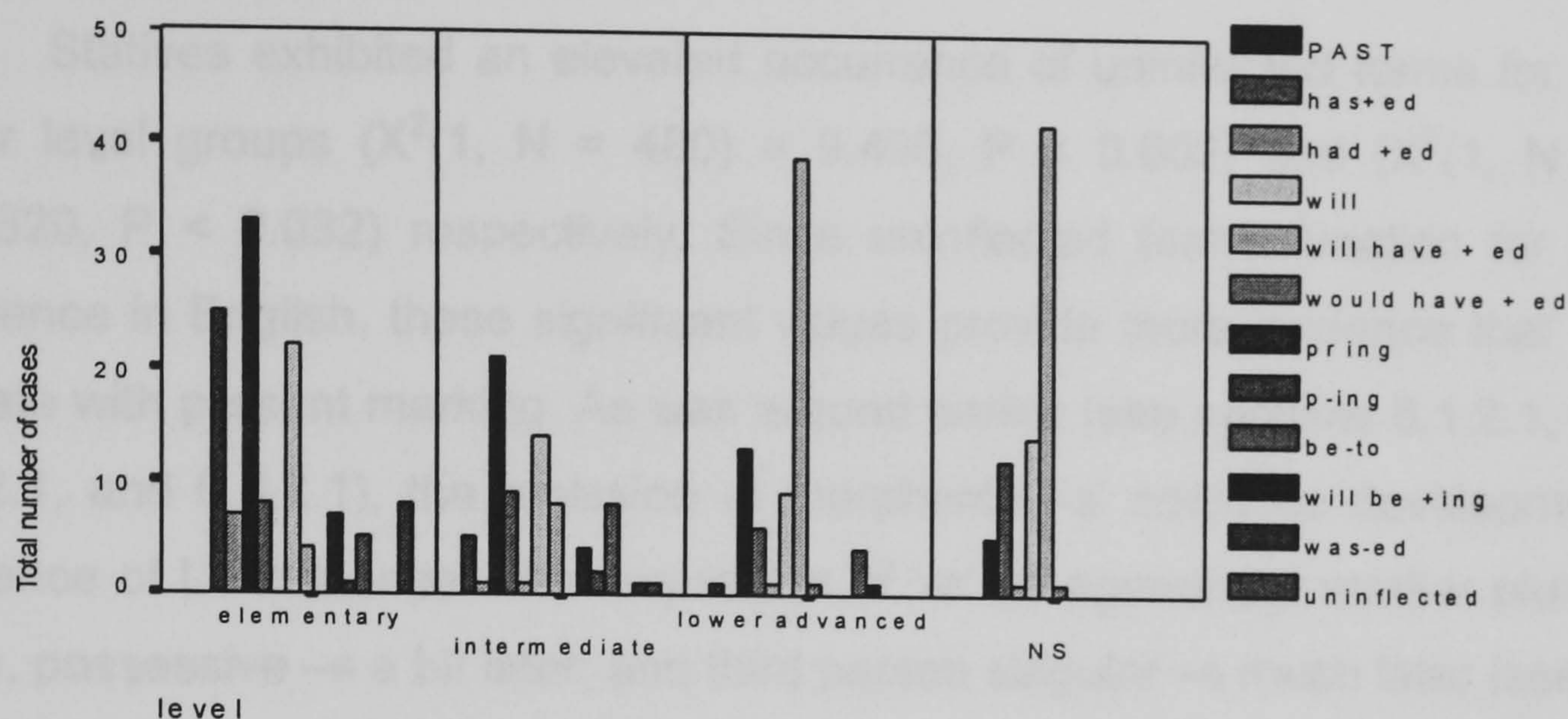


Figure 86. TNC – **Accomplishments**. Like achievement aspect, accomplishments affiliate strongly with PAST marking and progressive marking in the elementary and intermediate levels, but with the correct future perfect tense form 'will have' in the lower advanced level.

### 6.6.2.1 The Use of Present Marking

Coinciding with the findings of all previous experiments (see, for example, sections 6.1.1.1, 6.1.2.1, 6.2.1.1, 6.3.1.1, 6.4.2.1, 6.5.2.1, and 6.6.1.1), the high concentration of the '-s' morpheme on statives and the depressed application of other morphological markers stands out as the most significant feature of statives for the two lower level groups ( $X^2(1, N = 480) = 34.133, P < 0.000$ ), ( $X^2(1, N = 300) = 47.905, P < 0.000$ ). With increasing level of proficiency, however, the predominant use of '-s' with statives decreased, from (45%, 46.7%) in the elementary and intermediate level groups, to (17.3%) in the lower advanced group where the correct target tense form was salient among all aspectual verbs. Association of the '-s' morpheme with stative verbs was statistically significant in the lower advanced level, indicating that the link between stative verbs and the '-s' marking remains strong even at this more advanced level. This result is reinforced



by similar findings in previous sections (see sections 6.2.1.1, 6.3.1.1, 6.3.2.1, 6.3.3.1, and 6.5.3.1, and Appendix C-6).

Statives exhibited an elevated occurrence of uninflected forms for the two lower level groups ( $X^2(1, N = 480) = 9.496, P < 0.002$ ) and ( $X^2(1, N = 300) = 4.620, P < 0.032$ ) respectively. Since uninflected forms function for present reference in English, these significant values provide more evidence that statives affiliate with present marking. As was argued earlier (see sections 6.1.2.1, 6.1.3.1, 6.2.2.1, and 6.3.2.1), the omission of morpheme '-s' could be developmental or evidence of L1 influence. The acquisition of '-s' as agreement marker plural -s is early, possessive -s a bit later, and third person singular -s much later (see Brown 1973).

### **6.6.2.2 The Use of Progressive Marking**

As Appendix C-6 indicates, the verb inflection '-ing' without auxiliary 'be' with activity aspect was highly significant ( $X^2(1, N = 480) = 128.011, P < 0.000$ ) for the elementary level group alone, as was the present continuous for the elementary and intermediate level groups ( $X^2(1, N = 480) = 9.514, P < 0.002$ ) and ( $X^2(1, N = 300) = 70.739, P < 0.000$ ). In addition, activities were significantly associated with the past continuous form for the intermediate level group alone ( $X^2(1, N = 300) = 28.871, P < 0.000$ ) (cf. Research Hypothesis 1b). These results are further corroborated by previous findings in other experiments (see sections 6.1.1.2, 6.1.2.2, 6.2.1.2, 6.2.2.2, 6.3.1.2.2, 6.3.2.2, 6.4.1.2, 6.4.2.2, 6.5.2.2, and 6.6.1.2). However, the affiliation of progressive marking with activities weakened significantly, from (42.5%, 38.7%) in the elementary and intermediate level groups to (2.7%) in the lower advanced group. The dissociation between progressive marking and activities coincided with the increased use of the correct target tense form ('will have'). Thus the influence of tense is comparable to that of lexical aspect in the elementary and intermediate levels.



Consistent with Hypothesis 4b, achievement and accomplishment aspects were significantly associated with progressive marking '-ing' without auxiliary 'be' for the elementary level group ( $X^2(1, N = 480) = 15.030, P < 0.000$ ). Moreover, achievements were also significantly affiliated with the present and past continuous ( $X^2(1, N = 300) = 7.860, P < 0.005$ ) for the intermediate level group alone ( $X^2(1, N = 300) = 4.895, P < 0.027$ ). In similar vein, accomplishments revealed a significant affiliation with progressive marking without auxiliary 'be' for the elementary level group alone ( $X^2(1, N = 480) = 6.817, P < 0.009$ ). These results are consistent with earlier findings in other tenses (see sections 6.2.1.2, 6.3.1.2, and 6.4.1.2). However, the tendency to affiliate progressive marking with telic events dropped to zero in the lower advanced group (see Appendix C-6). The association of achievements with the progressive seems to be due to an effect from L1 (see section 2.5.3.1) and with accomplishments due to the fact that they have an internal structure of successive stages compatible with those of the progressive (see sections 2.4.4.4 and 2.5.3.2).

Statives exhibited a near-absent affiliation with progressive marking. There was only a single case of a stative verb associated with the present continuous marking in the elementary level - much less than its expected value of 5.8. This result confirms the prevailing trend in this study, namely, that stative verbs exhibit the weakest correlation with progressive marking and the strongest with present marking. Such correlation is consistent with the characterization of statives in that they are completely homogeneous and therefore have no internal structure of successive stages (see sections 2.4.4.1 and 2.5.1).

### **6.6.2.3 The Use of PAST Marking**

As with other experiments, PAST marking stands out as the most significant feature of punctual events for the two lower level groups ( $X^2(1, N = 480) = 45.428, P < 0.000$ ) and ( $X^2(1, N = 300) = 53.651, P < 0.000$ ) (see sections 6.1.1.3, 6.2.1.3, 6.3.1.3, 6.3.2.3, 6.4.2.3, 6.5.1.3, and 6.6.1.3). This effect was also significant for



the two higher level groups ( $X^2(1, N = 300) = 5.251, P < 0.022$ ) and ( $X^2(1, N = 300) = 13.445, P < 0.000$ ) respectively. Contrary to Hypothesis 1c, accomplishments exhibited no significant values for the correlation with PAST marking for the elementary and intermediate level groups, but were significant for the NS group ( $X^2(1, N = 300) = 10.604, P < 0.001$ ). The link between PAST marking and achievements and accomplishments remains strong in the lower advanced and NS groups. Lexical aspect was not mediated by level of proficiency. However, the insignificant association of PAST marking with accomplishments in this case cannot be held to refute the prevailing evidence in this study that accomplishments associate strongly with PAST marking. Interesting in this context is Jabbari's (1998) lack of success in finding any significant correlation between PAST marking and accomplishments throughout his study.

In the lower advanced group, the biased use of PAST with achievements and accomplishments decreased significantly, from (43.3%, 53.3%) and (27.5%, 28%) in the two lower level groups to (14.7%, 17.3%) in the lower advanced group. This change, from the prototypical past marking of achievements and accomplishments to more non-prototypical marking of the correct tense form ('will have'), which was uniformly distributed among aspectual verbs, is consistent with the Aspect Hypothesis (see Hypotheses 1c, 1d, 3, and Appendix C-6).

To sum up, there are two polarizing influences operating in the GJT and GFT data on the future perfect: (i) lexical aspect, and (ii) tense. The former has resulted in a predominant use of aspectual markers with tense distinctions being neglected in the elementary and intermediate levels, whereas the influence of tense has produced more inflectional markers in proportion to aspectual markers in the lower advanced level group (see Appendices E-6 and F-6). Figures 87-88 represent these effects.



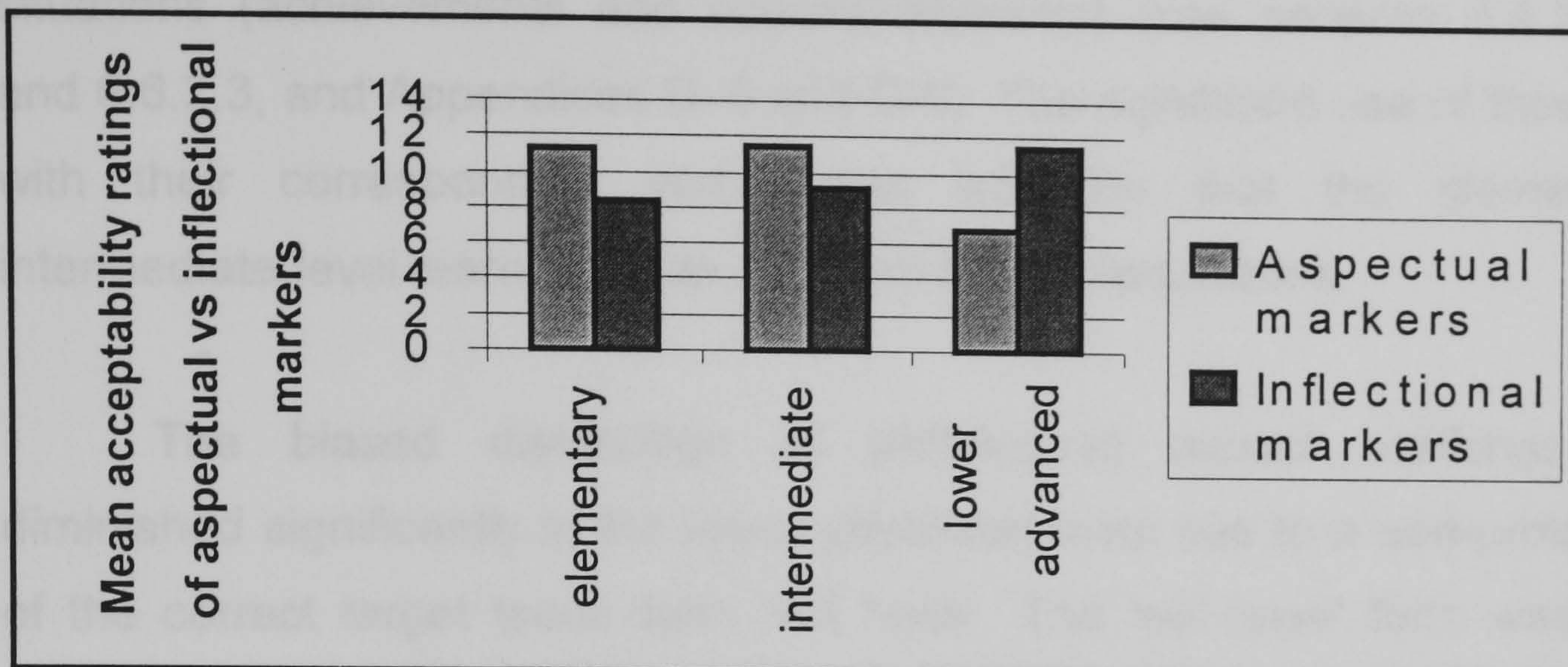


Figure 87. Mean acceptability ratings of aspectual vs. inflectional markers across the groups for the target tense future perfect in the GJT. Aspectual markers are more acceptable than inflectional markers for the elementary and intermediate levels (11.3250, 11.4400 versus 8.3000, 9.2000), whereas the reverse holds true for the lower advanced level (11.5200 versus 7.0000).

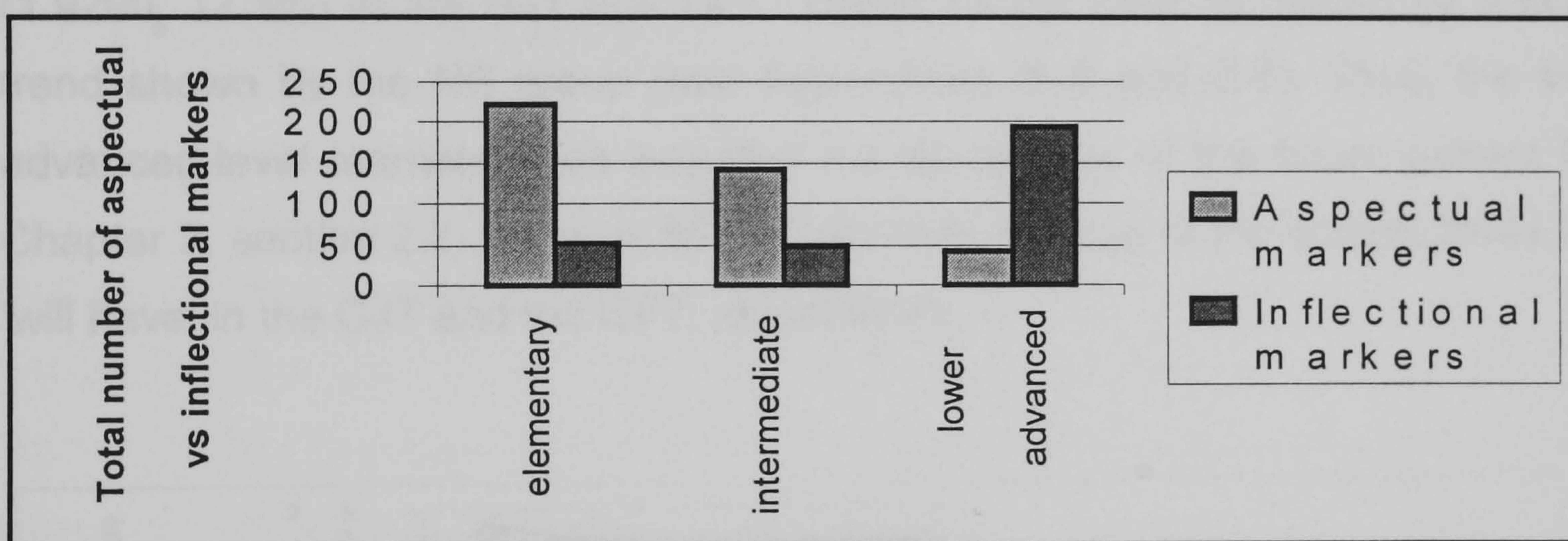


Figure 88. Total number of aspectual vs inflectional markers across the groups for the target tense future perfect in the GFT. For the elementary and intermediate levels, aspectual markers are more frequently used than inflectional markers (221, 142 versus 52, 47), while for the lower advanced level, inflectional markers dominate (195 versus 41).

### 6.6.3 Emergence and Development of Future Perfect Tense: Semantic Evidence

The elementary- and intermediate-level learners showed a significant application of the '-s' form with non-atelic aspect (statives), the progressive marking with atelic, dynamic aspect (activities), and PAST marking with telic



situations (achievements and accomplishments) (see sections 6.6.2.1, 6.6.2.2, and 6.6.2.3, and Appendices B-6 and C-6). The significant use of these markings with their corresponding verb types indicates that the elementary- and intermediate-level learners have acquired these morphemes.

The biased distribution of prototypical aspect markings, however, diminished significantly in the lower advanced level due to a non-prototypical use of the correct target tense form 'will have'. The 'will have' form was accurately aligned with all verb types on the GJT and GFT regardless of their inherent lexical aspect: statives (3.1600, 64.0%), activities (2.7200, 53.3%), achievements (2.8000, 62.7%) and accomplishments (2.8400, 52.0%). Consequently, aspect markings were dissociated from verb types: stative-s (1.6000, 17.3%), activity-ing (1.6000, 2.7%), achievement-PAST (1.5600, 14.7%,) and accomplishment-PAST (1.9200, 17.3%) in the GJT and GFT. These results were reinforced by a similar trend shown by the NS group (see Appendices B-6 and C-6). Thus, the lower advanced-level learners have acquired the deictic use of the future perfect (see Chapter 2, section 2.2). Figures 89 - 90 illustrate the use of the correct tense form 'will have' in the GJT and the GFT, respectively.

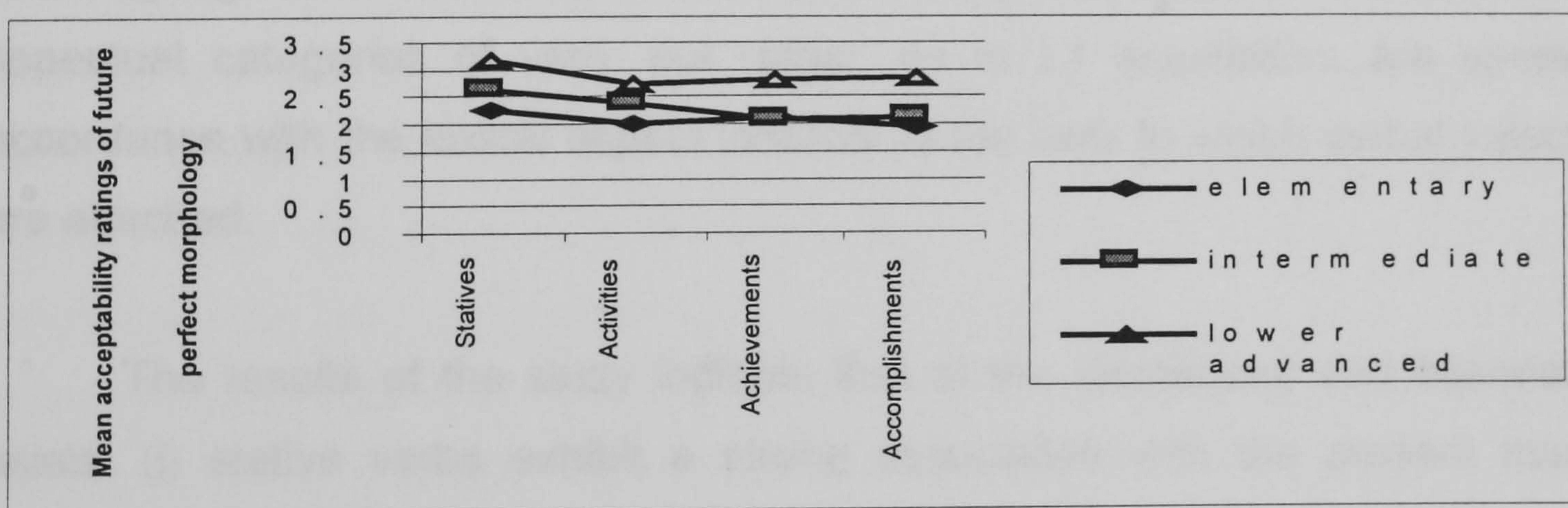


Figure 89. Development of future perfect morphology 'will have' across the groups in the GJT. The use of the future perfect tense form 'will have' is well-developed in the lower advanced level (statives 3.1600, activities 2.7200, achievements 2.8000, and accomplishments 2.8400), but is still at a nascent stage in the elementary and intermediate levels (statives 2.2750, 2.6400, activities 2.0000, 2.3600, achievements 2.1000, 2.0800, and accomplishments 1.9250, 2.1200).



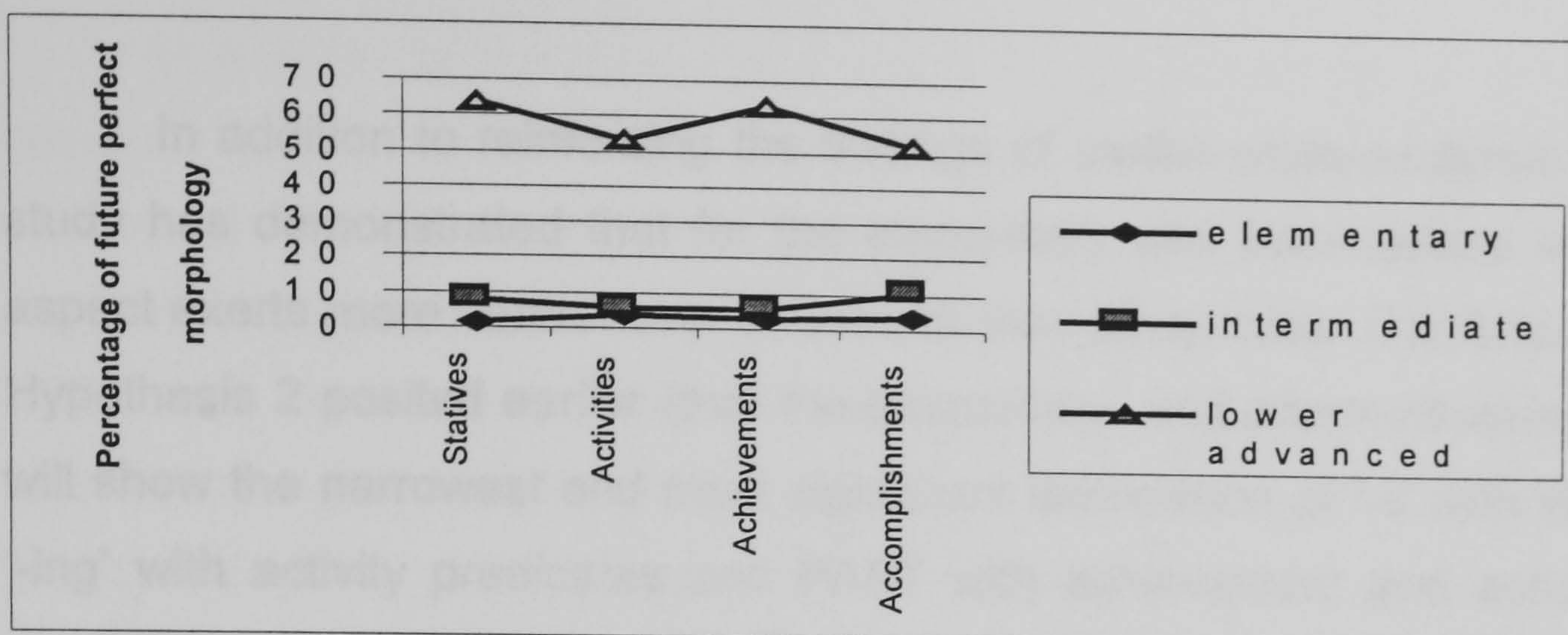


Figure 90. Development of future perfect morphology 'will + have' across the groups in the GFT. Future perfect morphology is more marked in the lower advanced level (statives 64%, activities 53.3%, achievements 62.7%, and accomplishments 52%) than in the elementary and intermediate levels (statives 1.7%, 8%, activities 3.3%, 5.3%, achievements 2.5%, 5.3%, and accomplishments 3.3%, 10.7%).

## 6.7 General Discussion

This study has shown that adult Arabic learners of English as a second language follow the universal tendency predicted by the Aspect Hypothesis. It has furnished some confirmation that L2 verb morphemes, when they appear in the interlanguage of an adult learner, are not uniformly distributed across all the lexical aspectual categories of verb, but rather, as in L1 acquisition, are spread in accordance with the lexical aspect inherent in the verb to which verbal inflections are attached.

The results of the study indicate that at the elementary and intermediate levels: (i) stative verbs exhibit a strong association with the present marking morpheme '-s' and a significant occurrence of uninflected forms (which, it was argued, provided further evidence for stative verb alliance with present marking), (ii) activity verbs with progressive marking (which was also significantly affiliated with achievement and accomplishment verbs, but mostly insignificantly with stative verbs), and (iii) achievement and accomplishment verbs with PAST marking.



In addition to reinforcing the findings of earlier cross-sectional studies, the study has demonstrated that for the elementary and intermediate levels, lexical aspect exerts more control over inflections than tense does. Confirming Research Hypothesis 2 posited earlier (that the elementary- and intermediate-level learners will show the narrowest and most significant association of '-s' with stative verbs, '-ing' with activity predicates and PAST with achievement and accomplishment predicates, while lower advanced-level learners and NS will extend the domains to include all categories of aspectual verbs), the elementary and intermediate level groups showed stronger attachment of '-s' to stative verbs than to present reference, PAST to achievement and accomplishment verbs than to anterior reference, and progressive to activity verbs than to any of the target tenses.

Regarding the variation across proficiency levels, at least three trends have emerged. In connection with tense, Research Hypothesis 2 was confirmed: the correlation of inflection with tense, '-s' with the present reference and PAST with anterior reference increases with proficiency level. The influence of tense in the lower advanced level and NS groups is comparable to that of lexical aspect in the elementary and intermediate level groups, for whom lexical aspect dominates the distribution of verbal inflections. Consequently, the lower advanced and NS groups showed the weakest dependence of verb morphology upon lexical aspect – a result consistent with the prediction of Research Hypothesis 3, that the link between verb inflection and tense is weakest with the lowest level learners and strongest with the most advanced learners and NSs. The weak influence of inherent lexical aspect at higher levels of proficiency seems to indicate that lexical aspect, while not actually defunct, is nevertheless no longer an active force in language acquisition. The acquisition of a high level of linguistic competence overrides the influence of lexical aspect, which appears very occasionally at higher levels of proficiency. Such remnants of lexical aspect are probably due to its innateness (see Chapter 1, section 1.0).



In addition to the above, the results show that transfer is so robust that it operates even at higher levels of proficiency. The Arabic-speaking learners have transferred the use of the past simple tense from Arabic into present perfect contexts in English on both the GJT and GFT. As noted earlier (Chapter 3, section 3.7), Arabic does not have a present perfect form so that learners use the past simple form to express the function of the present perfect tense in English. This finding is corroborated by Collins (1998) and Jabbari (1998). The former found that francophone learners use of the English perfect (similar in *form* but not in *function* to the French *passé composé*) occurs more frequently with telics. The latter found that Persian low-level learners transfer the Persian present perfect to the English future perfect and associate it with stative aspect.

Furthermore, the influence of L1 is clearly visible in marking achievements with progressive forms. Achievements are compatible with the progressive in Arabic, but not in English (see Chapter 2, sections 2.4.4.3, 2.5.3.1, and 2.5.4). This finding is reinforced by Shirai and Kurono (1998) who found that Chinese JSL learners used the Japanese imperfective marker *te- i-* more often with activity verbs, even though NSs used it more often with achievement verbs. Chinese JSL learners mapped the Chinese progressive marker *zai* onto Japanese *-te i-*.

Regarding Research Hypothesis 4b, this hypothesis does not seem to be frequently supported. The tendency to affiliate the progressive with accomplishments does not diminish significantly with increasing level of proficiency, presumably due to the influence of L1 and the compatibility of the progressive with accomplishments. The progressive and accomplishments have an internal structure of successive stages. In this structure, successive phases follow one another in time, implying a dynamic process. It is plausible therefore that the influence of L1 and the compatibility of the progressive with the accomplishment aspect override that of the proficiency level.



In the following section, we shall try to explain the phenomenon of lexical aspect as demonstrated in the present work.

## 6.8 Principles of Tense-Aspect Acquisition and Use

To attempt an explanation of the phenomenon of lexical aspect within the scope of this study, We shall explore the results in relation to the cognitive operating principles: (a) the Relevance Principle (Bybee, 1985, and Slobin, 1985), and (b) the One to One Principle (Andersen, 1984). We shall also apply the prototype model of language acquisition (Andersen and Sharai, 1994), and finally refer to Bickerton's (1981) Language Biogram Hypothesis (LBH) as a complementary explanation. With reference to previous parallel studies, Andersen and Shirai (1994) and Shirai and Kurono (1998) explained their results in terms of the cognitive operating principles and the prototype model of language acquisition, Collins (1998) in terms of the cognitive operating principles, while Jabbari (1998) argued for Bickerton's (1981) Language Biogram Hypothesis (LBH), and Robison (1995) for the cognitive operating principles and the LBH.

According to Bybee's (1985:318) Relevance Principle (see also Slobin, 1985), "inflections are more naturally attached to a lexical item if the meaning of the inflection has direct relevance to the meaning of the lexical item". Because aspect is more relevant to the meaning of the verb than tense (Andersen and Shirai, 1994:144; Robison, 1995:364), a tense marker such as the English morpheme '-s', '-ing' or PAST takes on aspectual meaning when it is first used. This is the case in the present study. The elementary- and intermediate-level learners significantly used the present marker '-s' with stative verbs (e.g., *love, want, see*), progressive marker with activity verbs (e.g., *play, write, swim*), and PAST marker with verbs of achievement (e.g., *reach, arrive, win*) and accomplishment (e.g., *write a letter, build a house, paint a picture*) in all experimental target tenses (present, present perfect, past, past perfect, future, and future perfect) and on all tasks (the GJT, GFT, and RT). As learners develop their



L1 and L2, they move away from using verbal morphology in accordance with lexical aspect towards marking tense uniformly across all aspectual verbs, thus moving towards a target-like use of tense. We have seen this pattern in the lower advanced level group in all target tenses and on all the tasks. For example, in the target tense future, the lower advanced-level learners revealed an almost even distribution of the correct target tense form across all aspectual verbs: statives (2.9200, 69.3%), activities (3.6400, 62.7%), achievements (3.5200, 70.7%), and accomplishment (3.4800, 73.3%) on the GJT and GFT respectively. Such a pattern is corroborated by a similar trend revealed by the NS group (see Chapter 6 and Appendices B-1 to B-6, C-1 to C-6, and D-1 to D-3). This finding is also corroborated by Jabbari (1998), who found that high-level learners use correct tense forms predominantly across all target tenses, and Robison (1995) who found that higher-level groups evidence a much stronger association of the present tense marker '-s' and PAST with present reference and anterior reference respectively. It is worth noting, however, that the Relevance Principle governs the choice of inflection on the part of the learner, while the DBH is concerned with a bias of verb inflections in the input, which is therefore assumed to produce a distributional bias in the results.

The task of the Relevance Principle seems to be facilitated by the One to One Principle (Andersen, 1984, 1990, Slobin, 1985). What does this principle state? The emergent grammar of a learner associates one meaning with one form or function. The one-meaning one-form relation reinforces the learner's perception that the present morpheme '-s' signals a "permanent state", the progressive morpheme '-ing' an ongoing activity and the past morpheme completion or an endpoint and not a second function. Therefore, the original meaning will be more limited than the final association. An example of the One to One Principle is the initial association of the present marking morpheme '-s' with stative verbs. As we have seen, the elementary- and intermediate-level learners virtually restricted their use of '-s' to stative verbs in the GFT and RT, and their acceptability of this morpheme with stative verbs was much higher than any other morpheme



associated with stative verbs on the GJT (see Chapter 6 and Appendices B–1 to B–6, C–1 to C–6, and D–1 to D–3). The question to be posed now is: how does the One to One Principle operate in relation to the lower advanced-level learners? These learners did not maintain a strict one to one relationship between the form ‘-s’, ‘-ing’, or PAST and the limited meaning of stative, activity, or achievement and accomplishment verbs respectively. They showed a uniform distribution of correct target tense forms across all aspectual verbs regardless of their inherent lexical aspect. The uniform use of these morphemes suggests a more general meaning than earlier, that there is pressure on the learner’s grammar to move towards broader meaning. In other words, the learner moves from a prototypical to a non-prototypical marking of verbs. This will be the topic of the following section.

## **6.9 Prototype Model of Language Acquisition**

The conservative behaviour of learners in their association of morphological tense-aspect markers to verbs can also be accounted for by the prototype model of language acquisition (see Andersen and Shirai, 1994, 1996). According to this model, learners start with the prototype of the category, and later expand its application to less prototypical cases. Put another way, learners initially infer from the input the most prototypical meaning of each inflection and associate the inflections with the most prototypical members of each aspectual category of verbs. They gradually relax this restriction and expand the inflections to less prototypical verbs, and then onto other verb classes, as we will see later (Andersen and Shirai, 1994:145).

In this study, the elementary- and intermediate-level learners started out marking stative verbs with the present tense marker ‘-s’ to refer to “continued existence” which, as Andersen and Shirai (1994) claim, is the prototype of the present category. This morpheme was predominantly used with stative verbs regardless of temporal reference at this level of proficiency, so that the prototypical features of the present are [-telic], [-punctual] and [-dynamic]. The empirical



evidence comes, for example, from the biased use of the ‘-s’ morpheme with stative verbs compared with other verb types for the elementary and intermediate levels in the target tense present: (stative-s 58.3%, 60%, activity-s 30%, 26.7%, achievement-s 35%, 28%, accomplishment-s 30%, 33.3%, respectively). They also started to use progressive morphology to refer to ongoing activity or “action in progress” which, as Andersen and Shirai (1994) again claim, is the prototype of the progressive category. This form was significantly affiliated with activity verbs, but was overextended to achievement and accomplishment verbs due to an L1 effect from Arabic, the native language of the learners. Thus, the prototypical features of progressive are [+dynamic], [+telic], and [+punctual] (see Appendices B–1 to B–6, C–1 to C–6, and D–1 to D–3).

The development of PAST can also be explained by the prototype. The elementary- and intermediate-level learners marked as past instances of [+punctual] and [+telic] verbs. The significant association of PAST with achievement and accomplishment verbs clearly indicates that punctuality and telicity are important universal aspectual values in the acquisition of tense-aspect morphology. By using PAST morphology to mark achievement and accomplishment verbs, the elementary- and intermediate-level learners refer to “completed action or an endpoint (and perhaps “change of state” as a result of completion) which Andersen and Shirai (1994) maintain is the prototype of the past category. Thus, the prototypical features of past are [+punctual], [+telic], and [+observed end]. These features for the past tense are consistent with the prototype hypothesis of tense-aspect acquisition (see Shirai, 1998). The lexical aspectual classes are generally defined by the following features: states [-punctual], [-telic], and [-dynamic]; activities [-punctual], [-telic], and [+dynamic]; achievements [+punctual], [+telic], and [+dynamic]; accomplishments [-punctual], [+telic], and [+dynamic]. We therefore conclude that both features, [+punctual] and [+telic], contributed to early past marking by adult L2 learners of English as a second language. This conclusion is further reinforced by Andersen (1993), Andersen and Shirai (1994) and Shirai and Kurono (1998), among others.



The evidence for non-prototypical marking can be illustrated by the '-s' and PAST morphemes which were uniformly applied to all aspectual verbs by the lower advanced-level learners in the target tenses present simple and past simple on the GJT and GFT respectively, approximating to the adult NS norm: stative-s (3.4000, 81.3%), activity-s (3.2400, 72.0%), achievement-s (3.2000, 68.0%), and accomplishment-s (3.1600, 66.7%), as well as stative-ed (3.4000, 86.7%), activity-ed (3.3200, 84.0%), achievement-ed (3.4400, 97.3%) and accomplishment-ed (3.5600, 86.7%). This does not mean that the uniform use of correct target tense forms was limited to the present simple and past simple tenses. Rather, it was applied to all other target tenses on all tasks (see Chapter 6 and Appendices B-1 to B-6, C-1 to C-6, and D-1 to D-3). Thus, the learner freed the meaning of the inflection from the array of meanings of the prototypical situations in order to use it for a situation that does not normally have that attribute (see Andersen and Shirai, 1994). Consequently, inflectional markers outnumbered aspectual markers in the lower advanced level (see Appendices E-1 to E-6, F-1 to F-6, and G-1 to G-3). Of interest here is the fact that NSs are not 100% correct in their use of tense forms, which could be attributed to the influence of lexical aspect.

In sum, the results support the prototype hypothesis of tense-aspect acquisition (Shirai, 1998) in that the lower-level learners' use of the present tense marker '-s', the progressive marker '-ing', and PAST is more restricted to the prototypes and more salient than tense distinctions in comparison with higher-level learners, who mark tense in a target-like manner. This would represent an elaboration of the Language Biogram Hypothesis (LBH) posited by Bickerton (1981), supporting and adding to his innate distinctions and claiming that these operate in second as well as first language acquisition (see Robison, 1995). The LBH will be discussed in detail in the following section.



## 6.10 The Language Biogram Hypothesis (LBH)

As already noted, the results of the present work support Bickerton's (1981) Biogram Hypothesis (LBH). According to the LBH, children are genetically equipped with two innate aspectual distinctions: state-process distinction (SPD) and punctual non-punctual distinction (PNPD). The SPD, as Cziko (1989) points out, seems to be concerned with inherent aspectual values rather than tense or grammatical aspect. The SPD tells the child that stative verbs are strange with the '-ing' form, and therefore the child who is programmed with the SPD would not produce stative verbs with the '-ing' whereas the child who is not programmed would produce such forms. How does this account relate to the results of the present study? According to our data, neither the elementary- and intermediate-level learners nor the lower advanced-level learners judged the GJT sentences with the stative-ing form as being more acceptable than activity-, achievement-, or accomplishment-ing. Moreover, neither the elementary- and intermediate-level learners nor the lower advanced level learners produced the stative-ing form significantly in the GFT or the RT. Thus, even allowing for a few instances of stative-ing in this study, these results lend credence to Bickerton's SPD. These overextensions are overgeneralization which is a common phenomenon in both child and adult language acquisition.

The weak association of stative verbs with progressive marking is in line with the universal entailment of stative verbs, in that stative verbs do not co-occur with the progressive marker '-ing'. Stative aspect is, thus, an innate universal value not violated by L1 or L2 learners, in both children and adults (see Chapters 4 and 6).

The second aspectual value in the SPD, i.e., process (P), affiliates with the aspectual value of activity verbs. In other words, the progressive marker '-ing' is compatible with activity aspect rather than with stative verbs. The findings of this study (see Chapter 6) as well as the general findings of L1 and L2 acquisition of



tense and aspect (see Chapter 4) show that activity verbs were the strongest candidate for progressive marking, indicating that dynamicity is an innate aspectual value.

Regarding the PNPD, the data lend strong support to this hypothesis (see, for example, Chapter 6, sections 6.1.2.3, 6.2.1.3, 6.2.2.3, 6.3.1.3, 6.4.2.3, 6.5.1.3, and 6.6.2.3) mainly because PAST marking in this study, unlike many previous studies (e.g., Bardovi-Harlig and Reynolds, 1995; Collins, 1998, to name a few), is not limited to the past simple tense, but includes a wider range of target tenses, namely, present, present perfect, past, past perfect, future, and future perfect. The significant association of PAST marking with achievement and accomplishment verbs in a variety of temporal contexts provides clear evidence that the aspectual values of punctuality and telicity are universal. We conclude therefore that innate distinctions operate in adult L2 acquisition as they do in L1 acquisition.

## 6.11 Conclusion

The findings of the present study have shown that when L2 verb inflections enter the interlanguage of an adult learner, they are not uniformly distributed across all aspectual categories of verb, but, rather as in L1 acquisition, are distributed according to lexical aspect which constrains the use of verb morphology at lower level of proficiency. The results can be summarized as follows:

- (1) For the elementary- and intermediate-level groups, present marking '-s' associated strongly with stative verbs, which also exhibited a significant occurrence of uninflected forms. Progressive marking, either with or without auxiliary 'be', affiliated strongly with activity verbs, but overextended to achievement and accomplishment verbs and remained relatively high in some instances at the lower advanced level. Progressive



marking was also overextended to stative verbs, but minimally. PAST marking affiliated strongly with achievement and accomplishment verbs. Lexical aspect exerted greater control over verb inflections than tense, which appears to be neglected. Consequently, use of aspectual markers outnumbered that of inflectional markers. These results suggest that the adult elementary- and intermediate-level learners, who have a mature L1 grammar, have reactivated their innate knowledge of universal aspectual values (namely, punctuality, telicity, and dynamicity) to acquire English morphology, which they have used as a starting point for the acquisition of tense and grammatical aspect. This is accomplished: the lower advanced-level learners reveal a uniform use of correct target tense forms with all aspectual categories of verb.

- (2) For the lower advanced level and control groups, the data show that there is no distributional bias, but rather, that correct target tense forms were uniformly distributed across all aspectual categories of verb independent of lexical aspect. Tense controls the use of verbal morphology, and its influence was comparable to that of lexical aspect which dominates the attachment of verbal morphemes to a particular verb type at the elementary- and intermediate-levels. In addition, the correlation of inflection with tense, e.g., '-s' with present and PAST with anterior reference, increased with proficiency level. Moreover, the lower advanced level learners showed the weakest dependence of verb morphology upon lexical aspect – a result endorsed by NS behaviour.
- (3) The transfer of the past simple tense from Arabic into present perfect contexts in English was high in the elementary- and intermediate-level groups and remained relatively high at the lower advanced-level group. This phenomenon is so robust that it is confirmed by both the GJT and GFT. The results are also confirmed by other L2 acquisition studies (e.g., Collins, 1998, Jabbari, 1998, and Shirai and Kurono, 1998).



Cognitive operating principles (see (i) to (ii) as well as the prototype model of language acquisition, and Bickerton's (1981) Language Biogram Hypothesis can explain the results:

- (a) the Relevance Principle (guides learners to look for morphological marking relevant to the verb);
- (b) the One to One Principle (causes learners to expect each newly discovered form to have one and only one meaning, function, and distribution);
- (c) access to prototypicality in linguistic form (meaning relations in order to account for how learners discover which meaning to assign to a one-to-one form); and
- (d) the Language Biogram Hypothesis (LBH) (children and adults distinguish aspectual verbs by means of innate aspectual values, i.e., punctuality, telicity, and dynamicity).



# CHAPTER 7

## IMPLICATIONS AND CONCLUSIONS

### 7.0 Introduction

This chapter is divided into two main sections. In the first section, we discuss the implications of the present study within the framework of other studies of L2 acquisition of tense and aspect. The discussion includes an examination of current positions on the availability of UG in L2 acquisition and their bearing on the present work, rejection of the Distributional Bias Hypothesis (DBH), consideration of the overuse of the progressive on stative verbs, conceptual development, learning strategies, and the universality of the Aspect Hypothesis. In the second section, we summarize the main points made in the first section of this and preceding chapters, and conclude with methodological considerations and suggestions for future research.

### 7.1 The Availability of UG in L2 Acquisition

One of the issues currently generating considerable debate in the area of L2 acquisition research is the question of whether or not L2 learners, particularly adults, still have access to same innate mechanisms children use to acquire their L1. This has generally been pursued by looking at the principles and parameters of UG (see Clahsen and Muysken, 1986, 1989; Felix and Weigl, 1991; White, 1990; among others). As we have seen (Chapter 1, section 1.0), several claims have been made on the basis of experimental evidence. Currently, there are three positions regarding the accessibility of UG by adult L2 learners: (i) 'No



access to UG', (ii) 'Direct access to UG', and (iii) 'Indirect access to UG'. According to the 'No Access to UG' position, UG principles are no longer available to adult L2 learners, and adult L2 acquisition proceeds through the use of general problem-solving procedures. The L1 functions as an initial "template" and the L1 settings are transferred directly to the developing L2 grammar (see Bley-Vroman, 1989, 1990; Clahsen, 1990; Clahsen and Muysken, 1986, 1989; Schachter, 1988). The Direct Access to UG position, on the other hand, holds that adult L2 grammars are constrained by UG principles in the same way as child L1 grammars are (Mazurkewich, 1984). According to this view, L1 is ignored and plays no role in the IL grammar. The Indirect Access to UG position, on the other hand, maintains that UG principles are available to adult L2 learners through the mediation of the L1 (Schwartz, 1987; Schwartz and Sprouse, 1994; Vainikka and Young-Scholten, 1994; White, 1985a, 1988a, 1989, 1990), implying that L1 grammar is also part of the initial state.

In what follows, we shall discuss the accessibility of innate knowledge of universal aspectual values by adult L2 learners as demonstrated in the present study, relating the issue to relevant previous research where appropriate.

## **7.2 UG and L2 Acquisition of Tense and Aspect in the Classroom**

All studies reported in the literature (see section 4.2) have looked at L2 learners who live in the L2 country and who may additionally be exposed to varying degrees of formal instruction. In the present study, we deal with a somewhat different situation, namely, learners almost exclusively exposed to L2 through formal instruction in the classroom while living in the L1 country (see section 5.3.1). In this case, input is solely in the form of teacher talk and peer talk as well as from textbooks. The former was produced by non-native speakers (NNS) over a period of 6;0 to 7;6 (years; months), with the exception of the three-



month period immediately preceding the administration of data-elicitation tasks, which was taught by NS. Arabic language is mostly used in the classroom by both teachers and learners, so classroom input is a mix of L2 (English) and L1 (Arabic).

Given this situation, the present study showed that at the elementary and intermediate levels, learners reactivated their innate knowledge of universal aspectual values, namely, punctuality, telicity, and dynamicity. This demonstrates an awareness in two important areas: adherence to universal aspectual values, and by contrast, violations of them. In the area of adherence, these learners have shown significant correlation of aspect markings with particular aspectual categories of verb: present marking '-s' with stative verbs, progressive marking with or without auxiliary 'be' with activity verbs, and PAST marking with achievement and accomplishment verbs (see Chapter 6). These findings are corroborated by previous research on L1 and L2 acquisition of tense and aspect by both children and adults (see Chapter 4, sections 4.1 and 4.2).

Regarding constraints on production, the learners demonstrated: (1) minimal overextension of progressive marking to stative verbs compared with the huge corpora in the study, and (2) minimal tendency to choose stative verbs for past marking. The question now arising is: why did the learners respond in this fashion? Stative verbs, first of all, are quite natural in the present as in the proposition *He loves his wife*, but generally strange with the progressive as in the proposition *\*He is loving his wife*. Moreover, as pointed out earlier (see sections 2.4.2.1 and 2.4.4.1), stative verbs have neither an internal structure nor a well-defined endpoint; they are entirely homogeneous (McClure, 1995; Vendler, 1967) in that every point of a state is identical to every other point. By contrast, the progressive has an internal structure composed of successive stages, and the interval focused on by the progressive is a process; process is [+dynamic] whereas a state is [-dynamic]. Secondly, stative verbs were weakly associated with past marking because past marking is indicative of a tense distinction which



was statistically neglected at this level of proficiency. This implies that past morphology of statives has not yet been acquired. The empirical evidence for this tendency lies in the significantly greater use of aspectual markers compared with inflectional markers on the GFT and RT (see Chapter 6 and Appendices E-1 to E-6, F-1 to F-6, and G-1 to G-3). This supports the Aspect hypothesis which predicts that learners are least likely to inflect states for the past (see Shirai, 1998; Shirai and Kurono, 1998).

In the area of violation of universal aspectual values, the GJT showed that the learners have knowledge of grammaticality versus ungrammaticality, as clearly indicated by their strong rejection of aspectual violations and strong acceptance of sentences observing universal aspectual values of punctuality, telicity, and dynamicity. The learners' acquisition of tense-aspect morphology was constrained by their innate knowledge of universal aspectual values in view of (1) a robust significant correlation between aspect markings and verb types, and (2) an equally robust insignificant correlation between tense and verb types, across a wider range of target tenses and a larger number of elementary- and intermediate-level learners. These learners used aspectual values as the starting point for acquiring the specific yet ontologically related grammatical aspect and tense distinctions of their TL at the lower advanced level. At this level, correct target tense forms were uniformly distributed across all aspectual categories regardless of inherent lexical aspect. In fact, the influence of tense at this stage of acquisition is comparable to that of lexical aspect, which controlled and dominated the association of aspect markings with particular verb types, resulting in the creation of the bias evidenced in the early stages (elementary and intermediate) of language acquisition. Attainment of this kind of complex and subtle knowledge can therefore only be attributed to the access L2 learners have to innate universal value. This claim is further reinforced by previous L2 studies (see, for example, Bardovi-Harlig, 1998; Jabbari, 1998; Robison, 1995 in Chapter 4, section 4.2). The role of instruction seems to be doubtful, but can not be explicitly rejected since there may be certain distributional tendencies in teacher



talk or in the instructional materials which learners pick up in their early interlanguage grammars.

Felix and Weigl (1991), however, who had a similar classroom situation, presented strong evidence against the accessibility of UG by adult L2 learners. These authors studied the acquisition of English as a second language by 77 German high school students who learned and were exposed to English exclusively during classroom hours. The students were grouped as follows:

- (i) 24 students; average age 12.0; 1.8 years of instruction.
- (ii) 26 students; average age 14.2; 3.8 years of instruction.
- (iii) 27 students; average age 17.3; 6.8 years of instruction.

These three groups roughly represented beginning, intermediate and advanced levels. The students were tested for their ability to correctly judge grammaticality contrasts in English that are standardly attributed to UG principles. These contrasts involved ECP-related *wh*-extractions, case filter, and empty operator phenomena. The students did not show any evidence of having UG-access<sup>1</sup>. Felix and Weigl (1991) attribute their findings to the specific classroom environment in which their subjects were exposed to English.

By contrast, strong evidence for UG availability in L2 learners comes from similar studies by Felix (1988) and White (1988b). White (1988b), for example, studied 43 adult and 23 adolescent native speakers of French learning English in a school setting. She presented them with judgement and comprehension tasks involving English sentences which contained specific violations of Subjacency and ECP. The subjects were sensitive to instances of grammatical deviance to varying degrees: strongest were violations of the Complex Noun Phrase

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<sup>1</sup> Out of a total of 60 test sentences none of the students gave more than 15 correct responses.



Constraint and the prohibition against extracting out of subjects. Weakest were sensitivity to *that*-trace violations and to the *Wh*-Island Constraint.

In sum, the present work provides evidence that adult L2 learners reactivated their innate knowledge of universal aspectual values, namely, punctuality, telicity, and dynamicity, in their acquisition of English tense-aspect morphology. They showed they had knowledge of grammaticality in terms of their “interlanguage grammar” constructed with access to U.G. and ungrammaticality in terms of rejection of aspectual violations and acceptance of sentences observing universal aspectual values on the GJT. The results also show a significant correlation between verb types and aspect markings, with tense distinctions being statistically neglected in relation to constraints on production on the GFT and RT.

### **7.3 The Implications of ‘Initial State’ Hypotheses in the SLA of Tense and Aspect**

What is the initial state? According to Schwartz (1998:135), the end state of L1 grammar defines the initial state of L2 acquisition. It is the starting point of L2 acquisition (Hoekstra and Schwartz, 1994; Schwartz and Eubank, 1996). There is an instinct in L2 acquirers to transfer knowledge of their L1 grammar. The L2 instinct can be conceived as:

**L2 instinct = transfer = the L2 initial state** (Schwartz, 1998:134).

This means that transfer is used to define the L2 initial state. In this regard, various explicit proposals on the extent of L1 influence in the L2 initial state have recently appeared (e.g., Vainikka and Young-Scholten, 1994; Schwartz and Sprouse, 1996), all adopting the above schema. We shall first review transfer within the unformalised framework of Contrastive Analysis Hypothesis, and then present and evaluate the innovative view of transfer as proposed by Vainikka and Young-Scholten and Schwartz and Sprouse.



### **7.3.1 The Role of L1 in the Acquisition of Tense and Aspect**

Early studies probing the role of transfer in L2 acquisition were based on the Contrastive Analysis Hypothesis (Lado, 1957). According to this hypothesis, the surface forms of two given languages are compared and contrasted to see what the similarities and differences are between them. The similarities are predicted to facilitate language acquisition and differences are predicted to impede acquisition and result in interference errors. The question of how and why L2 learners move from one state of knowledge to another was generally not the focus (Schwartz, 1996). For example, a contrastive analysis shows that verbs in Arabic are not inflected for third person, while verbs in English are. Thus, the Contrastive Analysis Hypothesis would predict that Arabic learners would use uninflected forms for third person contexts. To the contrary, the findings of the present study do not support this claim. The data show a significant association of third person morpheme *-s* with stative verbs at the elementary and intermediate levels. This tendency points to the accessibility of innate aspectual values to the lower level learners (See section 7.2).

### **7.3.2 The Minimal Trees Hypothesis and the Full Transfer/Full Access Hypothesis**

According to The Minimal Trees Hypothesis of Vainikka and Young-Scholten (1994), what transfers in early stages of L2 acquisition are only lexical categories and their projections but not functional categories. Functional projections are then acquired through VP-IP-CP developmental sequence. In contrast to The Minimal Trees Hypothesis, the Full Transfer/Full Access Hypothesis of Schwartz and Sprouse (1996) claims that what transfers are both lexical and functional categories. Do the present data support these hypotheses?



The data indicate that (at the elementary and intermediate levels) learners significantly use the *-s*, *-ing*, and PAST forms selectively with aspectual categories, with correct tense forms being statistically neglected. They also show a significant use of uninflected forms and insignificant use of modals and auxiliaries. Therefore, aspectual markers outnumber inflectional markers at the lower level. The situation is, however, reversed at the advanced level. Advanced level learners show a uniform use of correct tense forms regardless of lexical aspect (See Appendices B, C, and D.) Furthermore, it was noted earlier (section 4.2) that the lower level learners' use of aspectual markers was based in part on their L1 aspectual values. While native English speakers acquiring their L1 use PAST form with accomplishment aspect at early stages (section 4.1), the elementary and intermediate level learners in this study use the *-ing* morpheme without auxiliary *be* when they use accomplishment verbs without NP objects (See Appendices B, C, and D.) Therefore, the findings of the present study support The Minimal Trees Hypothesis.

Regarding the Full Transfer/Full Access Hypothesis, the implications of this hypothesis would be that lower level learners' use of verb inflections should not be associated with verb type; rather they should use verb inflections to mark correct tense forms. Our findings do not support such claims. As noted earlier, lower level learners show a biased use of aspectual markers with particular verb types, a significant use of uninflected forms and a rare use of modals and auxiliaries, whereas higher level learners show a uniform use of correct tense forms and a high rate of using modals and auxiliaries (See Appendices B, C, and D.)

## **7.4 The DBH and L2 Distributional Patterns**

In this study, there were two groups of subjects: Arabic speakers (AS) as the experimental group and Native Speakers (NS) as the control group. The DBH



(see Chapter 4, section 4.1) claims that the distribution of verbal inflections can be observed in the input. That is to say, it attributes to native speakers a bias in the distribution of verb morphology in the input similar to the skewing in learner speech. How does this description relate to the results of the present study?

The above-cited results clearly indicate that the association of verb inflections with aspectual categories of verb distinguishes two patterns of inflection distribution: (i) distributional bias of aspect markings with particular verb types regardless of temporal reference in the elementary and intermediate levels, and (ii) uniform use of correct target tense forms across all aspectual categories of verb independent of inherent lexical aspect in the NS (control group) – a pattern inconsistent with the DBH claims. The implication of the DBH is that learners would mirror native speakers' use of verb inflections. In our case, therefore, learners should use correct tense forms across all aspectual categories of verb. However, the results do not support this claim. The lower level learners are biased in their use of aspectual markers, resulting in the distributional bias that distinguishes the acquisition of tense and aspect morphology at the elementary and intermediate levels. On the other hand, higher level learners use correct tense forms across all verbs. The few occasional instances of lexical aspect continuity at the lower advanced level are insignificant given the overwhelming evidence of tense influence throughout the experiments, which overrides that of lexical aspect at the lower advanced level (see Chapter 6). Additionally, the proficiency level of the lower advanced-level learners is in fact borderline lower-advanced, according to the Oxford Placement Test (OPT); thus, an entire exclusion of the influence of lexical aspect does not seem feasible (see Chapter 5, section 5.3.1). As a consequence, the DBH is rejected in this study. Relevant in this regard is the finding by Collins (1998) that the effect of lexical aspect is not mediated by the group effect. There is a continued effect of lexical aspect, even at the higher levels of proficiency.



Empirical support for this rejection comes from comparing the responses of Arabic-speaking learners of the elementary and intermediate levels on the GJT and RT with that of the lower advanced level and NS, which were found to be congruent with the Aspect Hypothesis (that elementary- and intermediate-level learners mark inherent lexical aspect regardless of temporal reference, while the lower advanced-level learners mark tense distinctions independently of lexical aspect), and from testing whether the elementary- and intermediate-level learners on the GFT could successfully supply appropriate morphology in obligatory contexts. The latter technique showed that the elementary- and intermediate-level learners had greater difficulty in supplying appropriate morphology with marked combinations (e.g., past with stative or activity verbs) than with unmarked combinations (e.g., past with achievement and accomplishment verbs) (See Appendices B-1 to B-6, C-1 to C-6, and D-1 to D-3.)

## 7.5 Overuse of Progressive on Stative Verbs

As already noted (Chapter 4, section 4.2), one difference between L1 and L2 acquisition of tense and aspect is L2 overuse of the progressive on stative verbs. In the L1 acquisition of English and other languages which mark the progressive, this overuse is rarely observed (Kuczaj, 1978). In the present work, the results indicate a very weak correlation between stative verbs and progressive marking.

The use of progressive marking on stative verbs seems to be, as we argued earlier (Chapter 6, sections 6.5.1.2 and 6.6.1.2), due to the influence of Arabic, the native language of the learners. As we have seen (sections 3.3, 3.5.1 and 3.6.2), the Imperfect form in Arabic denotes progressive meaning, as in (1):

- (1) *yaktubu*                      *risaalatan*  
       write-IMP-3msg            letter-ACC



'He is writing a letter'.

It is plausible, therefore, that Arabic-speaking learners associate the '-ing' marker with the imperfective aspect. Comrie (1976) and Weist et al (1984) point out that imperfective aspect is strongly associated with durativity, and that progressive is part of imperfectivity (Comrie, 1976). Andersen and Shirai (1994), therefore, speculatively attribute this overuse to a possible effect of L1. However, Jabbari (1998) found that his Persian subjects did not mark stative verbs with the '-ing' form despite the fact that some Persian stative verbs are grammaticalized by the imperfective prefix *mi-* attached to the stative verb stem. In fact, the interaction of a learner's L1 tense and aspect system with lexical aspect has been observed in L2 acquisition of tense-aspect morphology (see Chapter 4, section 4.2). Clearly, the influence of the first language, in particular the role of transfer in lexical aspect, needs further investigation.

Nevertheless, the use of the progressive on stative verbs is remarkably low in the present study. This low rate of progressive marking in the three tasks is consistent with that revealed by Bardovi-Harlig and Bergström's (1996), Jabbari (1998), and Robison's (1995) studies of tutored learners. In the GFT, for example, Arabic-speaking learners showed a minimal use of stative-ing across all target tenses, as shown in Table 1 below (see Appendices B-1 to B-6, and D-1 to D-3 for the GJT and RT, respectively).

**Table 1: Progressive Marking on Statives in the GFT.**

Level	Target Tense					
	Present	Present Perfect	Past	Past Perfect	Future	Future Perfect
Elem.	0.8%	0.8%	0.8	0.8%	2.5%	0.8%
Intermed.	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%
Lower Ad.	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



Robison (1995) found that 0.7%, 2.9%, 1.1%, and 1.6% respectively of all state tokens in groups 1, 2, 3, and 4 (group 1 is lowest) were in progressive forms. By contrast, in his study of untutored learners, Robison (1990) found that his subject marked a higher proportion of stative in preference to dynamic verbs (22% as against 13%). It may be that untutored L2 learners, as Wagner-Gough (1978) cited in Shirai and Kurono (1998) claims, tend to overuse progressive marking on stative verbs.

## 7.6 Conceptual-Development

In Chapter 4, section 4.1, some researchers (e.g., Antinucci and Miller, 1976, Bronchart and Sinclair, 1973) appealed to cognitive development to explain their results. They claimed that children are unable to use tense morphology deictically because they have an undeveloped concept of time. Buczawska and Weist (1991), cited in Shirai and Kurono (1998), also claimed that children, because of their cognitive immaturity, start out with what Weist (1986) called a "Speech Time System", bound to here and now, whereas adult L2 learners can start out with a "Reference Time System". This must be true of child L2 learners, too, at least once tense has been acquired by them in their L1. The claim they made, however, rested on a comprehension study.

In the present study, the adult Arabic learners, like other adult L2 learners (see section 4.2), approached the task of learning English language with a well-developed concept of time from their mature L1 grammar though they revealed the same distributional bias shown by children acquiring their first language. Interesting in this regard are Bardovi-Harlig's (1992, 1994) studies which showed that the use of the past perfect (which learners should, as Shirai and Kurono, (1998) argue, be able to use once they have a Reference Time System in their L1) comes very late for most adult L2 learners. Therefore it is difficult to claim that adults start out with a Reference Time System. This suggests that the



relationship between conceptual system and linguistic performance requires further investigation.

## 7.7 Learning Strategies

In L1 acquisition, it is observed that underextension of verb morphology by children (i.e., omission in obligatory contexts) predominates (see Newport, 1990). In L2 acquisition, however, it is overextension (overuse in inappropriate contexts) as in the present study, that is quite frequent (see also Robison, 1995). Shirai and Kurono (1998:269) attribute this behaviour to “a possible tendency on the part of L2 learners to use the lexical item as an unanalyzed chunk, without really knowing the function of morphological marking. Hence, a strong relationship between inherent aspect and morphology could be an artifact of this rote lexical learning”. This means that “the Aspect Hypothesis has to be weighed against competing strategies for mimicking input” (Dietrich, Klein, and Noyau, 1995:271). Relevant in this regard is the Distributional Bias Hypothesis (DBH), proposed by Andersen (1986, 1990) to suggest a possible source of learners’ use of verb morphology as described by the Aspect Hypothesis. According to the DBH, the native speakers in normal interaction with other native speakers tend to use each verb morpheme with a specific class of verb, also following the Aspect Hypothesis. When learners are exposed to this language of native speakers, they initially interpret this skewed distribution of forms as an absolute characteristic of the forms themselves. This hypothesis is examined and rejected in the present work on empirical grounds (see section 7.3 above).

Furthermore, to ensure that the patterns of use compatible with the Aspect Hypothesis rest not only on lexical imitation but also on semantic reorganization of the data available in the input, four steps for coding inherent lexical aspect were adopted (section 5.3.3) and a provision was made for excluding forms resulting from a mimicry of the interlocutor and formulaic utterances (section 5.3.4). Andersen (1992) provided a preliminary finding that learners attend not



just to the form but also to the dimension of meaning. He checked the use of *fue*, which is used in Spanish either for copula or the verb *go*, in learners' speech, and showed that when used as copula, it was less likely to be past-marked. Copula is stative; hence, the learners were not only using the form they heard based on frequency but also attending to inherent aspectual features of the verb form. Huang (1993) also reported that her ESL learners used past marking on achievement verbs more often in reference to single unitary events in the past (i.e., prototypical past) than to repeated habitual past events (non-prototypical past) (see section 5.3.3).

## 7.8 Universality of the Aspect Hypothesis

The results of this study as well as those of other studies on L1 and L2 acquisition of tense and aspect clearly indicate that the developmental sequence of tense and aspect morphology follows a universal pattern (the Aspect Hypothesis; e.g., Robison, 1995; Shirai and Kurono, 1998). Research so far shows that this claim is supported by data from the acquisition of typologically similar languages (English, French and Spanish), but it requires testing against non-Indo-European languages. Interesting in this regard is Shirai and Kurono's (1998) recent study which examined the Aspect Hypothesis using L2 Japanese (JSL) data and showed that JSL learners followed the universal tendency predicted by the Aspect Hypothesis (see section 4.2). The claim for the universality of the Aspect Hypothesis requires further investigation into other non-Indo-European languages.

## 7.9 Conclusion

In the following section, we shall summarize the main points made in this and preceding chapters and conclude by making suggestions for future research in L2 acquisition of tense and aspect in connection with the Aspect Hypothesis.



## 7.9.1 Summary

In Chapter 2, the theoretical underpinnings of aspect in English and Arabic and tense in English were examined. It was argued that it is time rather than tense which is a universal concept, and that there are two kinds of time: notional and grammatical.

Tense is the grammatical expression of a particular temporal meaning. It has been analyzed in terms of Reichenbach's (1947) and Comrie's (1985) theories of tense. Reichenbach analyzes tense in terms of three temporal points: speech time (S), event point (E), and reference point (R). The distinctions between past, present and future result from the different ordering relations that hold between S and R. Comrie (1985), however, presents a different framework in which two time points (time of speech (S) and time of event (E)) and three relations (simultaneity, anteriority and posteriority) are needed to represent the three absolute tenses, as well as one more time (reference (R)) to represent other tenses. Comrie also makes a distinction between absolute and relative tenses, which he treats under tense rather than aspect.

Grammatical aspect vs inherent lexical aspect were examined. Grammatical aspect, or viewpoint aspect in Smith's (1983, 1997) terms, is the way the speaker views the temporal features of a situation independent of its relation to any reference time. It is expressed by grammatical markers such as verb inflections or auxiliaries. The speaker presents the situation in its entirety with a beginning and an end (perfective aspect) or a part of it without an endpoint (imperfective aspect). The main difference between perfective and imperfective aspect is how much of a situation is made visible.

Inherent lexical aspect – 'situational aspect' (Smith, 1983, 1997), and 'semantic aspect' (Comrie, 1976) – refers to chronological features inherent in a



particular conception of a situation as expressed by a morphologically unmarked predicate, independent of any grammatical marking or time frame. Thus, aspectual meaning holds for full verb phrases or predicates rather than verbs in isolation. In Vendler's (1967) framework, there are four aspectual categories of verb: states, activities, achievements and accomplishments. These can be classified according to three features:

(i) *punctual*, which identifies predicates that can be thought of as instantaneous or a single point (*begin to write*) from those with duration (*write a letter*);

(ii) *telic*, which differentiates between predicates with endpoints (*write a letter*) and those without (*write*); and

(iii) *dynamic*, which distinguishes dynamic verbs (e.g., *play, write*) from stative verbs (e.g., *love, seem, know*).

The most familiar division falls between stative, and non-stative or dynamic, predicates (activities, accomplishments, and achievements). This division is captured by the feature [dynamic]. States persist over time without change (e.g., *hate, want, need, etc.*). They are entirely homogeneous, and have neither an internal structure nor a well-defined endpoint or final conclusion. They are incompatible with the progressive, and temporal adverbials and verbs such as *in X minutes, for X years, and take an hour*. Activities are processes that have an internal structure of successive stages with an arbitrary endpoint. They have the part-whole relation of cumulative events. Activities are compatible with the progressive, and with adverbials and verbs of simple duration such as *for an hour, stop, and spend*, but strange with *in an hour* or *take an hour*. Activities have inherent duration in that they involve a span of time (e.g., *sleep* and *snow*). Additional examples of activity verbs include *read, walk, and swim*. Achievements are instantaneous events that result in a change. They have



inherent endpoints, and are compatible with an *in*-phrase and *take* an hour, but strange with *spend* an hour, and *for* phrases. They are distinguished from other dynamic verbs by the feature [punctual]. They capture the beginning or the end of an action (Mourelatos, 1981) as in *The race began*; examples of achievement verbs include *reach*, *die*, and *notice*. Accomplishment verbs share features with activity verbs [-punctual] and achievement verbs [+telic]. Like activity verbs, they have inherent duration, as in *write a letter* or *build a house*. Like achievement verbs, they have a goal or endpoint, as in *build a house*, where the endpoint is the completion of the house.

Finally, lexical aspectual categories of verb in Modern Standard Arabic (MSA) have been examined in terms of McCarus's (1976) discussion of verbs in MSA. It has been shown that Arabic verbs behave in much the same way as their English counterparts. The aspectual classes of Vendler (1967) are found in MSA, with similar sets of verb falling into each class. McCarus's classification is based on potential progressive meaning in the Imperfect and the range of possible meanings of the active participle. It was concluded that states and activities in Arabic are analogous to those in English (see page 309). However, achievements in Arabic can accept the progressive meaning, while achievements in English are incompatible with the progressive as in the following example, given in English together with its equivalent in Arabic:

- (1) *yaksiru*                      *al zujaja*                      \*He is breaking the glass.  
       break-IMP-3msg            the-glass-ACC  
       'He is breaking the glass'.

Lastly, accomplishments are analogous in both languages in that they are processes that have an outcome or a change of state. They have inherent endpoints and are therefore compatible with the *in*-phrase, *take* and *spend*, but strange with *for* and ambiguous with *almost*.



In Chapter 3, we have noted that Arabic verbs are built on a framework of consonants called radical consonants or radicals, and short vowels. Verbs are divided into two types: basic and derived. The basic verb may consist of three or four consonants, and all other verbal forms are derived from the basic.

Time in connection with the verbal forms is divided into past, present and future. The past is assigned to the Perfect, traditionally known as *al-maadi*, and the present and future to the Imperfect, *al-muddari*. It was explained that the Perfect, the Imperfect, and the active participle can all indicate and express temporal relations by means of auxiliaries, particles, temporal adverbials, etc. These devices qualify and enable the two verbal forms and the active participle to express specific tenses and aspects. Tense is a contextual function which is not always associated with a particular verbal form, and which requires appropriate TASS devices as required by context to express temporal and aspectual relations that are distinguishable by these devices and features. The Arabic verbal system is highly aspectual, with the focus on the action as completed (perfective) or incomplete (imperfective).

Tense in MSA was analyzed in terms of eight verbal forms: present simple, past simple, past continuous and emphatic past continuous, recent past, remote past, future simple, future continuous and future perfect. The functions of the Perfect and Imperfect forms were examined and tense and aspect in Arabic and English were contrasted from the perspective of functional equivalence. It has been noted that there is no one-to-one relationship between forms expressing tense and aspect in English and Arabic. Arabic uses at least two equivalent verbal forms to express a verbal form in English.

In Chapter 4, relevant research literature on L1 and L2 acquisition of tense-aspect morphology was reviewed. It was argued that the Aspect Hypothesis is supported in both L1 and L2 acquisition crosslinguistically. The Aspect Hypothesis claims that:



- (i) learners use past or perfective marking on achievement/accomplishment verbs, eventually extending use to activity and state verbs;
- (ii) in languages that encode the perfective/imperfective distinction morphologically, imperfective past appears later than perfective past, and imperfect past marking begins with stative and activity (atelic) verbs, and then extends to accomplishment and achievement (telic) verbs;
- (iii) in languages that have progressive aspect, progressive marking begins with activity, then extends to accomplishment/achievement verbs; and
- (iv) progressive marking is rarely incorrectly overextended to stative verbs (in L1 acquisition).

The Aspect Hypothesis is supported by L1 and L2 data. L1 data come from French (Bronchart and Sinclair, 1973), Italian (Antinucci and Miller, 1976), Greek (Stephany, 1981), and English (Bloom et al 1980; Shirai and Andersen, 1995). However, conflicting findings are presented by Weist et al (1984) in the acquisition of Polish and by Eisenberg (1982) in the acquisition of Spanish. The same tendency has been observed in SLA: French (Kaplan, 1987), English (Bardovi-Harlig, 1998; Bardovi-Harlig and Reynolds, 1995; Collins, 1998; Jabbari, 1998; Robison, 1990, 1995), Spanish (Andersen, 1991; Ramsay, 1990), and Japanese (Shirai and Kurono, 1998). Potential counterexamples to the Aspect Hypothesis are presented by Kumpf (1984) and Bardovi-Harlig (1992) in the acquisition of English and Meisel (1987) in the acquisition of German. However, these counterexamples are amenable to explanation (see Chapter 4, section 4.2).

Chapter 5 describes in detail the purpose of the present work, as well as methodology and materials used. It indicates that the main purpose of this cross-sectional study was to investigate the acquisition of tense-aspect morphology by



90 classroom adult Arabic-speaking learners of English as a second language (AS) grouped into three levels of proficiency: 40 elementary, 25 intermediate, and 25 lower advanced as the experimental group, and 25 NS as the control group. The experimental subjects were high school graduates aged between 19 and 27, and were exclusively exposed to English in the classroom for 6;0 to 7;6 (years; months). The study also attempted to examine how AS used verb inflection with aspectual categories of verb in the early stages of their language acquisition, clarifying how developing verb morphology aligns with inherent lexical aspect rather than tense or grammatical aspect.

The Research Questions and Hypotheses were stated in Vendler's (1967) four-way classification of aspectual categories (stative, activity, achievement, and accomplishment) and formulated to test the Aspect Hypothesis. They also addressed the role of L1 transfer in the process of the acquisition of tense-aspect morphology in English.

The study employed three data elicitation tasks: (i) grammaticality judgement task (GJT), (ii) gap-filling task (GFT), and (iii) story retelling task (RT), and a larger array of target tenses (present, present perfect, past, past perfect, future, and future perfect). The GJT consisted of 108 experimental sentences. Within the 108 experimental sentences, 88 were targets and 20 distractors. The number of sentences were in accordance with the number of aspect markings in each target tense. The aspect markings '-s', '-ing', 'PAST' were attached to the verbs in such a way that adherence to and violations of the universal aspectual values were created. Additionally, a 4-point scale was used to measure learners' intuitions of the acceptability of the items in terms of absolutely unacceptable (1), possibly unacceptable (2), possibly acceptable (3), and absolutely acceptable (4).

The GFT consisted of 72 experimental sentences, three tokens per aspectual category of verb (stative, activity, achievement, accomplishment), with



six target tenses (present, present perfect, past, past perfect, future, future perfect) that provided obligatory contexts for students to supply correct target tense forms. The temporal reference for these tenses was provided by context or by a temporal adverbial. All target items were targeted for the third person singular.

The RT was performed using a 13-minute excerpt for the elicitation of the three target times (present, past, and future). The subjects were asked to watch a silent segment of the film which was then stopped and they were asked to describe what had happened (to shift them to 'past time'). Then, while watching the next segment of the film, they had to describe what was happening at that instant to shift them to 'present time'. Finally, the film was switched off again and the subjects were asked to guess what would happen 'next' so as to shift them to 'future time'.

Lexical aspects were classified from two perspectives: semantic and syntactic. Semantically, the predicates were classified as state, activity, achievement, or accomplishment. Syntactically, four steps were adopted to determine the categories of lexical aspect, including five operational tests.

Finally, the data on the three tasks were coded and analyzed by the statistical package SPSS for Windows. Null hypothesis tests were applied to the data to see whether the association of verb type with aspect marking was significant. These statistical tests included a repeated measures MANOVA, Tukey test and chi square tests.

In Chapter 6, the results were discussed which indicated that when L2 verb inflections appear in the interlanguage of an adult learner, they are not uniformly distributed across all aspectual categories of verb, but rather, as in L1 acquisition, are distributed according to lexical aspect. The results can be summarized as follows:



- (1) For the elementary- and intermediate-level groups, present marking '-s' associated strongly with stative verbs which exhibited also a significant occurrence of uninflected forms. Progressive marking, both with and without the auxiliary 'be', affiliated strongly with activity verbs, but overextended to achievement and accomplishment verbs and remained relatively high at the lower advanced level. Progressive marking was also overextended to stative verbs minimally. PAST marking aligned significantly with achievement and accomplishment verbs. Lexical aspect exerted greater control over verb inflections than tense, which appears to be statistically neglected and consequently the use of aspectual markers outnumbered inflectional markers (i.e., correct target tense forms). These results suggest that the adult elementary- and intermediate-level learners, who have a mature L1 grammar, have reactivated their innate knowledge of universal aspectual values, namely, punctuality, telicity, and dynamicity, to acquire English morphology. They have used this as a starting point for the acquisition of tense and grammatical aspect in the lower advanced level.
- (2) For the lower advanced level and control groups, the data show that there is no distributional bias of aspect marking, but rather that correct target tense forms were uniformly distributed across all aspectual categories of verb independent of lexical aspect. Tense controlled the use of verbal morphology, and its influence was comparable to that of lexical aspect in the elementary and intermediate levels. In addition, the correlation of inflection with tense, e.g., '-s' with present, and PAST with anterior reference, increased with proficiency level. Moreover, the lower advanced-level learners showed the weakest dependence of verb morphology on lexical aspect - a result endorsed by NS behaviour.



- (3) The transfer of the past simple tense from Arabic into present perfect contexts in English was high in the elementary- and intermediate-level groups and remained relatively high in the lower advanced-level group.

The results were explained in terms of the Relevance Principle and the One-to-One Principle as well as the prototype model of language acquisition, and Bickerton's (1981) Language Biogram Hypothesis.

In this chapter (Chapter 7), the implications of the study were discussed in the context of three positions on the availability of UG in second language acquisition. The accessibility of innate knowledge of universal aspectual values was also examined, and it was concluded that the learners have reactivated their innate knowledge of universal aspectual values to acquire tense-aspect morphology and used it as a starting point for their acquisition of tense distinctions at a later stage of acquisition.

The Distributional Bias Hypothesis (DBH) and the claim for cognitive limitation were rejected. Moreover, the implications of the 'initial state' hypotheses were considered, the overextension of progressive marking to stative verbs was speculatively attributed to L1, and the universality of the Aspect Hypothesis was noted. In the remaining part of this Chapter, some methodological considerations relating to the present study will be discussed, and a suggestion made for future research.

## **7.9.2 Methodological Considerations**

There were several methodological problems and limitations involved in the analysis of language learners' data that may detract from the validity of a study.



### **7.9.2.1 Circularity of Analysis and Subjectivity in Coding Inherent Lexical Aspect**

The first problem concerns the researcher's subjectivity in assigning verb tokens to aspectual categories of state, activity, achievement, and accomplishment. Ideally, the coding should be independent of morphological marking so as to avoid circularity of analysis. In practice, however, this problem has proved difficult to circumvent. To reduce the risk of circularity in definitions and subjectivity in classifying lexical aspect, a set of four steps including operational tests was adopted in the present study (see section 5.3.3). A certain degree of subjectivity may well be inevitable, given the inherent vagueness of aspectual categories. As Housen (1994:282) points out, "categories like "stative-dynamic" represent semantic continua, not dichotomous categories, in that verbs or the situations they denote are more or less stative or dynamic". This vagueness is compounded when dealing with contextualised language, where the linguistic, para-linguistic and extra-linguistic context often significantly modify the inherent aspectual nature of a verb or predicate.

### **7.9.2.2 Importance of Clear Instructions**

Another important issue is providing students doing elicitation tasks with clear instructions. In this study, it has been demonstrated that clear instructions are essential for conducting the tasks – particularly the GJT due to the nature and novelty of this task. Without adequate instructions, native and non-native speakers appeared to perform inconsistently. However, when the instruction sheet (see Appendix A-4) was added, performance improved considerably. The use of similar instructions would improve comparability across studies (see section 3.5.2.1). Bley-Vroman, Felix, and Ioup (1988), among others, used a similar instrument.



### 7.9.2.3 Targeting 3<sup>rd</sup> Person Singular Contexts

Research literature on L1 and L2 acquisition shows that L1 and L2 learners, both children and adults, tend to supply uninflected forms, which may be an attempt at present tense (e.g., Bardovi-Harlig and Reynolds, 1995, Housen, 1994; Robison, 1995). It is important, therefore, to test all verbs for the third person singular. This technique would ensure that it is the inflected form - present and not merely the uninflected base, that is consistently supplied as an alternative for stative verbs (see Appendices A-3 and A-7).

## 7.10 Future Research

In sections 7.4 and 7.5, we highlighted the need for further investigation into the influence of L1, in particular the role of transfer in lexical aspect, and of the relationship between a conceptual system and linguistic competence.

In addition to these areas of discussion, a topic for future research relating to the present work could centre on whether Arabic-speaking learners of English become indistinguishable from native speakers.

It is observed that highly proficient Arabic speakers of English somehow do not seem to have **completely** mastered grammatical aspect in English. Despite their high level of competence in controlling tense use and grammatical aspect, they continue to show a puzzling bias in the distribution of verb inflections with a particular class of verb, not unlike that exhibited by children or adults of lesser proficiency acquiring an L1 or an L2. Furthermore, although they have a fully-developed system of tense and aspect in their L1, the influence of lexical aspect is apparent in their linguistic performance. What prevents these learners from going all the way and completing mastery of grammatical aspect in English? Is it transfer? The answer to this question requires investigation involving three



groups at three levels of proficiency: lower advanced, advanced, and upper advanced as experimental groups, and another group of native speakers (NS) as the control group. The experimental groups should divide into those who (i) share characteristics/environment, and (ii) do not share these characteristics, with the three groups in the present study, in order to account for their better performance.



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## **APPENDIX A: TABLES AND TEST VERSIONS FOR CHAPTER 5**

- A – 1** GRAMMATICALITY JUDGEMENT TASK (GJT) KEY
- A – 2** TYPES OF VERB FOR ALL TARGET TENSES IN THE GJT AND GFT
- A – 3** VERSIONS OF GRAMMATICALITY JUDGEMENT TEST
- A – 4** GJT INSTRUCTION SHEET
- A – 5** GJT ENGLISH-ARABIC VOCABULARY LIST
- A – 6** GFT KEY
- A – 7** GFT TEST VERSIONS
- A – 8** GFT ENGLISH-ARABIC VOCABULARY LIST
- A – 9** OXFORD PLACEMENT TEST (OPT) LEVELS CHART



# APPENDIX A – 1: GRAMMATICALITY JUDGEMENT TASK (GJT) KEY

## GJT KEY<sup>1</sup>

### Target Tenses

### Test Item Numbers

Aspect	Present	Present Perfect	Past	Past Perfect	Future	Future Perfect
<b>Stative</b>	79 4 57	33 40 82 88	63 70 73	14 77 80 98	6 58 101 107	9 54 81 91
<b>Activity</b>	23 35  39	10 42 59 67	28 51 76	3 27 36 102	2 48 100 104	20 22 66 93
<b>Achievement</b>	1 25 46	13 19 53 71	11 84 92	65 74 103 108	34 64 69 97	17 18 30 75
<b>Accomplishment</b>	44 60 49	15 32 85 86	41 87 89	8 29 94 106	7 50 61 96	24 38 45 55

**Distractors:** 5, 12, 16, 21, 26, 31, 37, 43, 47, 52, 56, 62, 68, 72, 78, 83, 90, 95, 99, 105.

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<sup>1</sup> The test items refer to the real GJ test items: the test consisted of 88 target items. Distractors (i.e., 20 items) are not included in this table but appear in the three versions of the GJT given in Appendix A – 3.



## APPENDIX A – 2: TYPES OF VERB FOR ALL TARGET TENSES IN THE GJT AND GFT

### Aspectual Categories (GJT AND GFT)

Stative	Activity	Achievement	Accomplishment
believe belong dislike enjoy forget has hate hear know like live look like love need prefer promise resume see show suggest surprise think want	chat cry dance drink drive eat exercise grow look at paint play pull push rain run sleep smile speak study swim talk teach walk	arrest arrive begin break cease die enter escape finish get graduate jump kick kill leave lose meet melt reach recognize shut start stop win	build a house catch the ball check four patients clean his room climb a mountain complete six sentences decorate his room do his homework draw a picture drink a cup of coffee eat a sandwich fix a car look up a word mail a letter operate on four patients post a letter publish an article pull a box record their progress run two miles send some flowers sign five letters sing a song steal a car take a test type a letter walk to school wash a dish watch a film write a composition write a letter write two tests



# APPENDIX A – 3: GRAMMATICALITY JUDGEMENT TEST VERSIONS

## VERSION 1

Read the following sentences and circle one number (1, 2, 3, or 4) to indicate whether a sentence is: *absolutely unacceptable* (1), *possibly unacceptable* (2), *possibly acceptable* (3), or *absolutely acceptable* (4). Target sentences are boldfaced.

اقرأ الجمل التاليه واختار الرقم (١، ٢، ٣، ٤) الذي يدل على ان الجمل: غير مقبوله تماما (١) محتمل انها غير مقبوله (٢) محتمل انها مقبوله (٣) او مقبوله تماما (٤) . تم تغميق الجمل المراد الحكم عليها .

1. Majid is a great football player. He **kicked** the ball powerfully.

1    2    3    4

2. I think Fahd **smiling a lot** when he watches Abdullah Al Sadhaan next week.

1    2    3    4

3. When I arrived at the pool, Ali was leaving. He already **swam**.

1    2    3    4

4. Ahmad: How many languages does Saud know?

Omar: He **knows two languages now**.

1    2    3    4

5. Khalid **likes to play tennis** in the afternoon.

1    2    3    4

6. Next week Khalid **hears some good news**.

1    2    3    4

7. Next week Abdullah **decorates his room**.

1    2    3    4

8. He already **singing a beautiful song** by the time I got there.

1    2    3    4

9. He's belonged to this club for a long time. Soon he **belonging** longer than his father did.

1    2    3    4

10. Ali has stomachache. He **eats too much today**.

1    2    3    4

11. Ali **finishing writing his letter** last night because he had to post it today.

1    2    3    4

12. I was looking for a job while I was **studying at the university**.

1    2    3    4



13. **The policeman has arrested two people** in the last two hours.  
1    2        3    4
14. Majid heard a funny noise. It was not the first time. He **hears it several times before**.  
1    2        3    4
15. This is the first time Mjid **has looked up a new word** in his dictionary.  
1    2        3    4
16. He **did not like to not stay at home**.  
1    2        3    4
17. Omar: Is Majid going to finish his homework tomorrow morning?  
Ahmad: No, he **finished it** by 12 o'clock tonight.  
1    2        3    4
18. Ahmad: Is Majid going to leave his room at 12 o'clock tonight?  
Omar: No, he **leaving it by 11 o'clock**.  
1    2        3    4
19. Ali is sure to reach the top of Jabal Al Rahma again this year. He **reached it three times before**.  
1    2        3    4
20. If Ali pushes at the same time, he **pushed as hard as he possibly can**.  
1    2        3    4
21. I **prefer red apples to green ones**.  
1    2        3    4
22. Omar has been studying hard today. By 3 o'clock he **studying for the tests**.  
1    2        3    4
23. When Dr. Al Bazi comes to inspect the students, he **looking at their books**.  
1    2        3    4
24. Omar is going to join the race. When he reaches Al Malaz, he **will have run 5 kilometers**.  
1    2        3    4
25. When Dr. Al Bazi comes to inspect the students, he **recognizing their efforts**.  
1    2        3    4
26. Yesterday I studied three hours I slept.  
1    2        3    4
27. Ahmad: Was Khalid eating at the party when you arrived?  
Omar: No, he **had already eaten before he came**.  
1    2        3    4
28. The weather was very nice last weekend and Khalid **played football for an hour**.  
1    2        3    4
29. The thief was arrested after he **had stolen a second car**.  
1    2        3    4
30. Ahmad is going to start his studies this week. Abdulrahman is going to start his studies next week. When Abduirahman starts his studies, Ahmad **already starts**.



- 1    2    3    4
31. The Saudi Arabia **is a big country**. It is bigger than Iraq and Jordan.
- 1    2    3    4
32. The doctor **checked four patients since 4 o'clock**.
- 1    2    3    4
33. For the last five years Mohamed **knew a lot about this company**.
- 1    2    3    4
34. It is getting very warm. I'm **sure the snow melts in a few hours**.
- 1    2    3    4
35. Majid is a great football player. He **ran very fast and shoots accurately**.
- 1    2    3    4
36. My daughter smiled after getting the toy, but she **crying before**.
- 1    2    3    4
37. That new balls **is cheaper** than those old ones.
- 1    2    3    4
38. Ali is building a house. He **built it** by next summer.
- 1    2    3    4
39. The play begins and the music stops:  
"Ahmad **walks into the center of the room**".
- 1    2    3    4
40. For the last three months, Mohamed **has loved to play football**.
- 1    2    3    4
41. Ahmad: What did Saud do yesterday?  
Omar: He **posts a letter to his friend**.
- 1    2    3    4
42. Saad **studying in England and America in the last five years**.
- 1    2    3    4
43. This **is a book grammar not a book history**.
- 1    2    3    4
44. When Dr. Al Bazi comes to inspect the students, he **recording their progress**.
- 1    2    3    4
45. Abdullah is going to clean his desk at 8 o'clock this evening but Khalid cleaning his desk  
o'clock.
- 1    2    3    4
46. The play begins and the music stops:  
" Then a short man **enters**"
- 1    2    3    4
47. Milk **are cheaper than tea**.
- 1    2    3    4
48. A! Khalid, get out of the car! Omar **pushed first then you can get in**.



- 1 2 3 4
49. Dr. Al Shuhri **operated on four patients** every Monday but on Tuesday he goes to Al Kharj.
- 1 2 3 4
50. I think Abdullah **writes a letter to me soon**.
- 1 2 3 4
51. Ahmad: How long did Ali study in the library yesterday?  
Omar: He **studying there for twenty minutes**.
- 1 2 3 4
52. I **read the book which he had written**.
- 1 2 3 4
53. My uncle **starts to build his house** and he hopes to finish it next year.
- 1 2 3 4
54. Now he thinks about the pain of writing his questions. By next month he **will have forgotten it**.
- 1 2 3 4
55. Abdullah can drive us to the party. He **fixes his car by 8 o'clock tonight**.
- 1 2 3 4
56. The secretary who she **typed a letter she left her office**.
- 1 2 3 4
57. Last year Khalid was only interested in tennis but now he **enjoyed** swimming.
- 1 2 3 4
58. Omar is too young to play football but he **will like it when he is older**.
- 1 2 3 4
59. This is the first time Ahmad **danced at a party**.
- 1 2 3 4
60. The play begins and music stops:  
"The curtain **rises**".
- 1 2 3 4
61. Ali's watch is broken. I don't know when he **will fix it**.
- 1 2 3 4
62. Abdullah went to the party last night. He **enjoying it** very much
- 1 2 3 4
63. Last year Ahmad found a good job. He **likes it** very much but he lost it last week.
- 1 2 3 4
64. Ali was badly injured in an accident yesterday. His doctor thinks he **will die** in a few days.
- 1 2 3 4
65. Ahmad never saw his father. He **had just died** before Ahmad was born.
- 1 2 3 4
66. By 9 o'clock Khalid **walks in the park** and enjoyed himself.
- 1 2 3 4



67. In the last three years Ali **has played football in three tournaments** and he's going to play again this year.  
1      2      3      4
68. I **don't know whether Ali goes to school.**  
1      2      3      4
69. It is 5 o'clock and the train has not arrived yet. I **don't know when it arriving here.**  
1      2      3      4
70. Omar: Did Majid have enough money to buy a ticket to London?  
Ahmad: Yes, he **having enough money to buy it.**  
1      2      3      4
71. In the last four years Majid **winning four tournaments**  
1      2      3      4
72. To whom **did you speak to?**  
1      2      3      4
73. Omar was not happy last week. He **wanted to go to Jeddah.**  
1      2      3      4
74. I knew that Ali already **starts building his house.**  
1      2      3      4
75. Majid is going to graduate in 1998 but Ahmad **will have graduated by then.**  
1      2      3      4
76. Yesterday Khalid went to a restaurant. He **eats there.** The he went home.  
1      2      3      4
77. The teacher was angry because Ali was late for class and **forgetting his books.**  
1      2      3      4
78. I **don't like apples green.**  
1      2      3      4
79. Last month Omar went running but now it is hot. **He liking swimming.**  
1      2      3      4
80. Yesterday Saad met one of his old friends. He **did not see him for several years.**  
1      2      3      4
81. Ali has known Saleh for five years. By next year he **knows him for six years.**  
1      2      3      4
82. For the last two years Abdullah **prefers to stay in a big house** rather than a small flat.  
1      2      3      4
83. You and I **are going to play tennis.**  
1      2      3      4
84. It was 1990 when my brother **graduated from high school.** I'll never forget I  
1      2      3      4
85. In the last three weeks Omar **types two papers** and he hopes to type another one this week.



1 2 3 4

86. In the last three hours Omar **painting his bed white** and now he is painting the other rooms.

1 2 3 4

87. It was very late. In fact, it was about midnight when Fahd **cleaning his bedroom**.

1 2 3 4

88. Since he was a child Mohammed **believed in God**.

1 2 3 4

89. Omar **typed a letter** and posted it yesterday.

1 2 3 4

90. **Khalid bought the same book that forgotten**.

1 2 3 4

91. My teacher has always loved this job. By next year he **loved it for six years**.

1 2 3 4

92. Ahmad's plane was very late. It was 12 o'clock when he **arrives**.

1 2 3 4

93. It is raining heavily. By next month **grass will have grown in the desert**.

1 2 3 4

94. He felt happy after he **drew a picture**.

1 2 3 4

95. Ahmad: Where did you go yesterday?

Omar: I **went to school**.

1 2 3 4

96. A: Ali can't move this box!

B: OK, you push and he **pulling it**. I'm sure you can move it.

1 2 3 4

97. I'm sure that Ali **reached the top of Jabal Al Rahma in the near future**.

1 2 3 4

98. This is the first time that Ali had needed my help. **He had needed it** several times before.

1 2 3 4

99. Abdullah said that comes home late tonight.

1 2 3 4

100. Saud has a test next week. I'm sure he **will study hard in the next few days**.

1 2 3 4

101. Abdullah has liked staying in Iskan 2 but I'm sure he **liking Iskan 5**.

1 2 3 4

102. Saud had left the football field when I arrived. He **just plays there**.

1 2 3 4

103. There was shooting at Al Alkaryah last night. The gunman just **killing three people** when the police got there.



- 1 2 3 4
104. Ahmad: What will Ali do after lunch?  
Omar: Oh! I **think he chats with us.**
- 1 2 3 4
105. I **don't know where I should go?**
- 1 2 3 4
106. When I saw Khalid yesterday, he already **runs two miles.**
- 1 2 3 4
107. Ali has passed a lot of exams. I think he **wanted a better job soon.**
- 1 2 3 4
108. Majid did not know that I had arrived in Riyadh, and Ali **arrived there with me.**
- 1 2 3 4

## VERSION 11

Read the following sentences and circle **one** number (1, 2, 3, or 4) to indicate whether the sentence is: *absolutely unacceptable* (1), *possibly unacceptable* (2), *possibly acceptable* (3), or *absolutely acceptable* (4). Target sentences are boldfaced.

اقرأ الجمل التاليه واختار الرقم (١،٢،٣،٤) الذي يدل على ان الجمل: غير مقبوله تماما (١) محتمل انها غير مقبوله (٢) محتمل انها مقبوله (٣) او مقبوله تماما (٤) • تم تغميق الجمل المراد الحكم عليها •

1. When Dr Al Bazi comes to inspect the students, he **recognized their efforts.**
- 1 2 3 4
2. Saud has a test next week. I'm sure he **studying** hard in the next few days.
- 1 2 3 4
3. My daughter smiled after getting the toy, but she **cried** before.
- 1 2 3 4
4. Last year Khalid was only interested in tennis but now he **enjoys swimming.**
- 1 2 3 4
5. Khalid **likes** to play tennis in the afternoon.
- 1 2 3 4
6. Ali has passed a lot of exams. I think he **wants** a better job soon.
- 1 2 3 4
7. I think Abdullah **writes a letter** to me soon.
- 1 2 3 4
8. The thief was arrested after he **stealing a second car.**
- 1 2 3 4
9. Now he thinks about the pain of writing his questions. By next month, he **forgetting it.**



- 1      2      3      4
10. This is the first time Ahmad **dances at a party**.
- 1      2      3      4
11. Ahmad's plane was very late. It was 12 o'clock when he **arriving**.
- 1      2      3      4
12. I **was looking** for a job while I was studying at the university.
- 1      2      3      4
13. My uncle **has started to build his house** and he hopes to finish it next year.
- 1      2      3      4
14. Yesterday Saad met one of his old friends. He **not sees him** several years.
- 1      2      3      4
15. In the last three weeks Omar **has typed two papers** and he hopes to type another one this week.
- 1      2      3      4
16. He **did not like** to stay at home.
- 1      2      3      4
17. Ahmed: Is Majid going to leave his room at 12 o'clock tonight?  
Omar: No, he **left it** by 11 o'clock.
- 1      2      3      4
18. Majid is going to graduate in 1998 but Ahmed **graduating** by then.
- 1      2      3      4
19. In the last four years Majid **won four tournaments**.
- 1      2      3      4
20. Omar has been studying hard today. By 3 o'clock he **studied for the tests**.
- 1      2      3      4
21. I **prefer red apples** to green ones.
- 1      2      3      4
22. It is raining heavily. By next month **grass growing in the desert**.
- 1      2      3      4
23. The play begins and the music stops:  
"Ahmad **walking into the center of the room**".
- 1      2      3      4
24. Abdullah can drive us to the party. He **will have fixed his car** by 8 o'clock tonight.
- 1      2      3      4
25. The play begins and the music stops:  
"A short man **entering**".
- 1      2      3      4
26. Yesterday I **studied three hours I slept**.
- 1      2      3      4
27. Saud had left the football field when I arrived. He **had just played there**.



- 1      2      3      4
28. Ahmad: How long did Ali study in the library yesterday?  
Omar: He **studied there for twenty minutes.**
- 1      2      3      4
29. When I saw Khalid yesterday, he **had already run two miles.**
- 1      2      3      4
30. Omar: Is Majid going to finish his homework tomorrow morning?  
Ahmed: No, he **finishes it** by 12 o'clock tonight.
- 1      2      3      4
31. The Saudi Arabia is a big country. It is bigger than Iraq and Jordan.
- 1      2      3      4
32. In the last three hours Omar **paints his bedroom white** and now he is painting the other rooms.
- 1      2      3      4
33. Since he was a child, Mohamed **believed in God.**
- 1      2      3      4
34. I'm sure that Ali **reaches the top of Jabaal Al Rahma** in the near future.
- 1      2      3      4
35. When Dr. Al Bazi comes to inspect the students, he looked at their books.
- 1      2      3      4
36. Ahmad: Was Khalid eating at the party when you arrived?  
Omar: No, he **already eating** before he came.
- 1      2      3      4
37. That new balls **is cheaper than those old ones.**
- 1      2      3      4
38. Abdullah is going to clean his desk at 8 o'clock this evening but **Khalid cleaned his desk** by 7 o'clock
- 1      2      3      4
39. Majid is a great football player. He **runs very fast** and shoots accurately.
- 1      2      3      4
40. For the last two years Abdullah **has preferred** to stay in a big house rather than a small flat.
- 1      2      3      4
41. Omar **types a letter** and posted it yesterday.
- 1      2      3      4
42. In the last three years Ali **playing football** in three tournaments and he's going to play again this year.
- 1      2      3      4
43. This is a book of grammar **not a book history.**
- 1      2      3      4
44. The play begins and the music stops:



"The curtain **rising**."

1      2      3      4

45. Ali is going to join the race. When he reaches Al Malaz he **running 5 kilometers**.

1      2      3      4

46. When Dr. Al Bazi comes to inspect the students, he **recognized their progress**.

1      2      3      4

47. Milk **are cheaper than tea**.

1      2      3      4

47. I think Fahd **smiled a lot** when he watches Abdullah Al Sadhaan next week.

1      2      3      4

48. When Dr. Al Bazi comes to inspect the students, he **recorded their progress**.

1      2      3      4

50. A: Ali can't move this box.

B: Ok, you push and he **pulled it**. I'm sure we can move it.

1      2      3      4

51. Yesterday Khalid went to a restaurant. He **eating there**. Then he went home.

1      2      3      4

52. I **read the book which he had written**.

1      2      3      4

53. Ali is sure to reach the top of Jabaal Al Rahma again this year. He **reaches it** three times before.

1      2      3      4

54. Ali has known Saleh for five years. By next year he **will have known him for 6 years**.

1      2      3      4

55. He is building a house. He **builds it by next summer**

1      2      3      4

56. The secretary who she **typed a letter she left her office**.

1      2      3      4

57. Last month Omar went running but now it is not hot. He **liked swimming**.

1      2      3      4

58. Next week Khalid **will hear some good news**.

1      2      3      4

59. Saad **studied in England and America** in the last five years.

1      2      3      4

60. Dr. Al Shuhri **operates on four patients** every Monday but on Tuesdays he goes to Al Kharj.

1      2      3      4

61. Next week Abdullah **will decorate his room**.

1      2      3      4

62. Abdullah went to the party last night. He **enjoying it** very much.



- 1      2      3      4
63. Omar was not happy last week. He wants to go to Jeddah.  
1      2      3      4
64. It is getting very warm. I'm sure the snow will melt in a few days.  
1      2      3      4
65. I knew that Ali had already started building his house.  
1      2      3      4
66. If Ali pushes at the same time, he pushes as hard as he possibly can.  
1      2      3      4
67. Ali has stomachache. He has eaten too much today.  
1      2      3      4
68. I don't know whether Ali goes to school.  
1      2      3      4
69. Ali was badly injured in an accident yesterday. His doctor thinks he dying in a few days.  
1      2      3      4
70. Last year Ahmad found a good job. He liking it very much but he lost it last week.  
1      2      3      4
71. The policeman arresting two people in the last two hours.  
1      2      3      4
72. To whom did you speak to?  
1      2      3      4
73. Omar: Did Majid have enough money to buy a ticket to London?  
Ahmad: Yes, he had enough money to buy it.  
1      2      3      4
74. Majid did not know that I had arrived in Riyadh, and Ali arrives there with me.  
1      2      3      4
75. Ahmad is going to start his studies this week. Abdulrahman is going to start his studies next week. When Abdulrahman starts his studies, Ahmad will have started.  
1      2      3      4
76. The weather was very nice last weekend and Khalid plays football for an hour.  
1      2      3      4
77. It was not the first time that Ali had needed my help. He needing it several times before.  
1      2      3      4
78. I don't like apples green.  
1      2      3      4
79. Ahmad: How many languages does Saad know?  
Omar: He knowing two languages now.  
1      2      3      4
80. The teacher was angry because Ali was late for class and he forgot his books.  
1      2      3      4



81. My teacher has always loved this job. By next year he **loves it for six years.**  
 1      2      3      4
82. For the last five years Mohamed **knows a lot about this company.**  
 1      2      3      4
83. You and I **are going to play tennis.**  
 1      2      3      4
84. Ali **finished writing his letter** last night because he had to post it today.  
 1      2      3      4
85. The doctor **checks four patients** since 4 o'clock.  
 1      2      3      4
86. This is the first time Majid **looking up a new word in his dictionary.**  
 1      2      3      4
87. Ahmad: What did Saud do yesterday?  
 Omar: He **posting a letter to his friend.**  
 1      2      3      4
88. For the last three months, Mohamed **loving to play football.**  
 1      2      3      4
89. It was very late. In fact, it was about midnight when Fahd **cleaned his room.**  
 1      2      3      4
90. Khalid bought the same book that forgotten.  
 1      2      3      4
91. He's belonged to this club for a long time. Soon he **belonged longer than his father did.**  
 1      2      3      4
92. It was 1990 when my brother **graduates from high school.** I'll never forget it  
 1      2      3      4
93. By 9 o'clock Khalid **will have walked in the park** and enjoyed himself.  
 1      2      3      4
94. He already **sang a beautiful song** by the time I got there.  
 1      2      3      4
95. Ahmad: Where did you go yesterday?  
 Omar: I went to school.  
 1      2      3      4
96. Ali's watch is broken. I don't know when he **fixing it.**  
 1      2      3      4
96. It is 5 o'clock and the train has not arrived yet. I do not know when it **arrived here.**  
 1      2      3      4
98. Majid heard a funny noise. It was not the first time. He **had heard it several times before.**  
 1      2      3      4
99. Abdullah **said that comes home late tonight.**  
 1      2      3      4



100. Ahmad: What will Ali do after lunch?

Omar: Oh ! I think he **will chat with us**.

1      2      3      4

101. Omar is too young to play football but he **liking it** when he is older

1      2      3      4

102. When I arrived at the pool, Ali was leaving. He **already swims**.

1      2      3      4

103. Ahmad never saw his father. He just **dying** before Ahmad was born.

1      2      3      4

104. Al Khalid, get out of the car! Omar **pushes first** then you can get in.

1      2      3      4

105. I **don't know where I should go?**

1      2      3      4

106. He felt happy after he **draws a picture**.

1      2      3      4

107. Abdullah has liked staying in Iskan 2 but I'm sure he **liked Iskan 5**.

1      2      3      4

108. There was shooting at Al Akaryah last night. The gunman just **killed three people** when the police got there.

1      2      3      4

## VERSION 111

Read the following sentences and circle **one** number (1, 2, 3, or 4) to indicate whether the sentence is: *absolutely unacceptable* (1), *possibly unacceptable* (2) *possibly acceptable* (3), or *absolutely acceptable* (4). Target sentences are boldfaced.

اقرأ الجمل التاليه واختار الرقم (١،٢،٣،٤) الذي يدل على ان الجمل: غير مقبوله تماما (١) محتمل انها غير مقبوله (٢) محتمل انها مقبوله (٣) او مقبوله تماما (٤) . تم تغميق الجمل المراد الحكم عليها .

1. The play begins and music stops:

"Then a short man **entered**".

1    2    3    4

2. Ahmad: What will Ali do after lunch?

Omar: Oh! I think he **chatting** with us.

1    2    3    4

3. Ahmad: Was Khalid eating at the party when you arrived?

Omar: No, he already **ate** before he came.

1    2    3    4



4. Last month Omar went running but now it is hot. He **likes swimming**.  
1 2 3 4
5. **Khalid** likes play tennis in the afternoons.  
1 2 3 4
6. Abdullah has liked staying in Iskan 2 but I'm sure he **likes** Iskan 5.  
1 2 3 4
7. A: Ali can't move this box.  
B: Ok, you push and he **pulls it**. I'm sure we can move it.  
1 2 3 4
8. When I saw Khalid yesterday, he **already running two miles**.  
1 2 3 4
9. Ali has known Saleh for five years. By next year he **knowing** him for six years.  
1 2 3 4
10. Saad **studies in England and America in the last five years**.  
1 2 3 4
11. It was 1990 when **my brother graduating** from high school. I'll never forget it.  
1 2 3 4
12. **I was looking for a job while I was studying at the university**.  
1 2 3 4
13. Ali is sure to reach the top of Jabaal Al Rahma again this year. He **has reached** it three times before.  
1 2 3 4
14. The teacher was angry because Ali was late for class and **he forgets** his books.  
1 2 3 4
15. The doctor **has checked** four patients since 4 o'clock.  
1 2 3 4
16. He **did not like to stay at home**.  
1 2 3 4
17. Majid is going to graduate in 1998 but Ahmad **graduated** by then.  
1 2 3 4
18. Ahmad is going to start his studies this week. Abdulrahman is going to start his studies next week. When Abdulrahman starts his studies, Ahmad already **starting**.  
1 2 3 4
19. The policeman **arrested two people** in the last two hours.  
1 2 3 4
20. It is raining heavily. By next month grass **grew in the desert**.  
1 2 3 4
21. **I prefer red apples to green ones**.  
1 2 3 4
22. By 9 o'clock Khalid **walking in the park** and enjoyed himself.



- 1 2 3 4
23. Majid is a great football player. He **running very fast** and shoots accurately.  
1 2 3 4
24. Ali **is building a house**. He will have built it **by next summer**.  
1 2 3 4
25. Majid is a great football player. He **kicking the ball powerfully**.  
1 2 3 4
26. Yesterday I **studied three hours** I **slept**.  
1 2 3 4
27. When I arrived at the pool, Ali was leaving. He **had already swum**.  
1 2 3 4
28. Yesterday Khalid went to a restaurant. He **ate** there. Then he went home.  
1 2 3 4
29. He felt happy after he **had drawn a picture**.  
1 2 3 4
30. Ahmad: Is Majid going to leave his room at 12 o'clock?  
Omar: No, he **leaves** it by 11 o'clock.  
1 2 3 4
31. The Saudi Arabia is a big country. It is bigger than Iraq and Jordan.  
1 2 3 4
32. This is the first time Majid **looked up a new word** in his dictionary.  
1 2 3 4
33. For the last three months, Mohamed **loved** to play football.  
1 2 3 4
34. It is 5 o'clock and the train has not arrived yet. I do not know when it **arrives** here.  
1 2 3 4
35. The play begins and the music stops:  
"Ahmad **walked into the center of the room**".  
1 2 3 4
36. Saud had left the football field when I arrived. He just **playing there**.  
1 2 3 4
37. That new balls **is cheaper than those old ones**.  
1 2 3 4
38. Ali is going to join the race. When he reaches Al Malaz, he **ran 5 kilometers**.  
1 2 3 4
39. When Dr. Al Bazi comes to inspect the students, he **looks at their books**.  
1 2 3 4
40. For the last five years Mohamed **has known** a lot about this company.  
1 2 3 4
41. It was very late. In fact, it was about midnight when Fahd **cleans his room**.



- 1 2 3 4
42. Ali has stomachache. He **eating** too much today.  
1 2 3 4
43. This is a book grammar not a book history.  
1 2 3 4
44. Dr. Al Shuhri **operating on four patients** every Monday but on Tuesdays he goes to Al Kharj.  
1 2 3 4
45. Abdullah can drive us to the party. He **fixing his car** by 8 o'clock tonight.  
1 2 3 4
46. When Dr Al Bazi comes to inspect the students, he **recognizes their efforts**.  
1 2 3 4
47. Milk **are cheaper than tea**.  
1 2 3 4
48. Saud has a test next week. I'm sure he **studied** hard in the next few days.  
**1 2 3 4**
49. The play begins and the music stops:  
"The curtain **rose**".  
1 2 3 4
50. Ali's watch is broken. I don't know when he **fixed it**.  
1 2 3 4
51. The weather was very nice last weekend and Khalid **playing** football for an hour.  
1 2 3 4
52. I **read book which he had written**.  
1 2 3 4
53. In the last four years Majid **wins four tournaments**.  
1 2 3 4
54. My teacher has always loved this job. By next year he **will have loved** it for 6 years.  
1 2 3 4
55. Abdullah is going to clean his desk at 8 o'clock this evening but Khalid **cleans his desk** by 7 o'clock.  
1 2 3 4
56. The secretary who she **typed a letter she left her office**.  
1 2 3 4
57. Ahmad: How many languages does Saad know?  
Omar: He **knew two languages**.  
1 2 3 4
58. Ali has passed a lot of exams. I think he **will want a better job soon**.  
1 2 3 4



59. In the last three years Ali **played** football in three tournaments and he's going to play again this year.  
1 2 3 4
60. When Dr. Al Bazi comes to inspect the students, he **records their progress**.  
1 2 3 4
61. I think Abdullah **will write a letter** to me soon.  
1 2 3 4
62. Abdullah went to the party last night. He **enjoying** it very much.  
1 2 3 4
63. Omar: Did Majid have enough money to buy a ticket to London?  
Ahma: Yes, he **has** enough money to buy it.  
1 2 3 4
64. I'm sure that Ali **will reach the top of Jabaal Al Rahma in the near future**.  
1 2 3 4
65. Majid did not know that I had arrived in Riyadh, and Ali **had arrived there with me**.  
1 2 3 4
66. Omar has been studying hard today. By 3 o'clock he **studies for the tests**.  
1 2 3 4
67. This is the first time Ahmad **has danced at a party**.  
1 2 3 4
68. I **don't know whether Ali goes to school**.  
1 2 3 4
69. It is getting very warm. I'm sure the snow **melting in a few hours**.  
1 2 3 4
70. Omar was not happy last week. He **wanting** to go to Jeddah.  
1 2 3 4
71. My uncle **starting to build his house** and he hopes to finish it next year.  
1 2 3 4
72. **To whom did you speak to?**  
1 2 3 4
73. Last year Ahmad found a good job. He **liked it very much** but he **lost it last week**.  
1 2 3 4
74. There was a shooting at Al Akaryah last night. **The gunman just kills three people** when the police got there.  
1 2 3 4
75. Omar: Is Majid going to finish his homework tomorrow morning?  
Ahmad: No, he **will have finished it** by 12 o'clock tonight.  
1 2 3 4
76. Ahmad: How long did Ali study in the library yesterday?  
Omar: He **studies there for twenty minutes**.



- 1 2 3 4
77. Majid heard a funny noise. It was not the first time. **He hearing** it several times before.  
1 2 3 4
78. I don't like apples green.  
1 2 3 4
79. Last year Khalid was only interested in tennis but now he **enjoying** swimming.  
**1 2 3 4**
80. It was not the first time that Ali needed my help. He **needed it several times before**.  
1 2 3 4
81. He's belonged to this club for a long time. Soon he **belongs longer than his father did**.  
1 2 3 4
82. Since he was a child Mohamed **believes in God**.  
1 2 3 4
83. You and I **are going to play tennis**.  
1 2 3 4
84. Ahmad's plane was very late. It was 12 o'clock when he **arrived**.  
1 2 3 4
85. In the last three hours Omar **paints his bedroom** white and now he is painting the other rooms.  
1 2 3 4
86. In the last three weeks Omar **typing two papers** and he hopes to type another one this week.  
1 2 3 4
87. Omar **typing a letter** and posted it yesterday.  
1 2 3 4
88. For the last two years Abdullah **preferring** to stay in a big house rather than a small flat.  
1 2 3 4
89. Ahmad: What did Saud do yesterday?  
Omar: He **posted a letter** to his friend  
1 2 3 4
90. Khalid **bought the same book that forgotten**.  
1 2 3 4
91. Now he thinks about the pain of writing his questions. By next month, he **forgot it**.  
1 2 3 4
92. Ali **finishes** writing his letter last night because he had to post it today.  
1 2 3 4
93. If Ali pushes at the same time, he **will have pushed** as hard as he possibly can.  
1 2 3 4
94. The thief was arrested after he **stole a second car**.  
1 2 3 4



95. Ahmad: Where did you go yesterday?

Omar: I **went to school**.

1 2 3 4

96. Next week Abdullah **decorating his room**.

1 2 3 4

97. Ali was badly injured in an accident yesterday. His doctor thinks he **died** in a few days.

1 2 3 4

98. Yesterday Saad met one of his old friends. He **had not seen him** for several years.

1 2 3 4

99. Abdullah said that comes home late tonight.

1 2 3 4

100. A! Khalid, get out of the car! Omar **will push** first then you can get in.

1 2 3 4

101. Next week Khalid **hearing some good news**.

1 2 3 4

102. My daughter smiled after getting the toy, but she **cries before**.

1 2 3 4

103. I knew that Ali already **starting building his house**.

1 2 3 4

104. I think Fahd **smiles a lot** when he watches Abdullah Al Sadhaan next week.

1 2 3 4

105. I **don't know where I should go?**

1 2 3 4

106. He already **sings a beautiful song** by the time I got there.

1 2 3 4

107. Omar is too young to play football but he **liked it** when he is older.

1 2 3 4

108. Ahmad never saw his father. He just **died** before Ahmad was born.

1 2 3 4



# APPENDIX A – 4: GJT INSTRUCTION SHEET

## Instruction Sheet

Speakers of a language seem to develop a 'feel' for what is an acceptable sentence, even in the many cases where they have not been taught any particular rule.

On the following pages is a list of sentences I want you to tell me whether you think sound acceptable in English. Therefore, this test can not determine your level of proficiency in English or affect your placement or progress in the class. I want you to concentrate on how you feel about these sentences.

Please read the following sentences and indicate how you feel regarding their acceptability, as follows:

**absolutely unacceptable** you feel strongly that the sentence is not very good.

**possibly unacceptable** you feel the sentence is somehow not good.

**possibly acceptable** you feel the sentence is good.

**absolutely acceptable** you feel strongly that the sentence is very good.

Read each sentence carefully before you answer. Concentrate on the boldfaced structure of the sentence. Ignore any problems with spelling, punctuation, etc. Please mark only one answer for each sentence. Make sure you have attempted all questions.

### تعليمات

يبدو أنه يتكون لدي متحدثي أي لغة إحساس بالجملة المقبولة حتى في الحالات التي لا يكونوا فيها قد تعلمون فيها قواعد معينة . يوجد على الصفحات التالية قائمة جمل أريد منك أن تخبرني ما إذا كنت تعتقد أنها مقبولة لديك في الإنجليزية . وهذا الاختبار لا يحدد مستواك في اللغة ولا يؤثر على وضعك أو تقدمك في الفصل . أرجو أن تركز على إحساسك بهذه الجمل . أرجو أن تخبرني ما إذا كانت الجمل التالية تبدو غير مقبولة أبدا "محتمل أنها مقبولة " أو مقبولة تماما . ما معنى هذه العبارات؟ " غير مقبولة أبدا " يعني أن لديك إحساس قوي بأن الجملة غير جيدة أبدا "محتمل أنها مقبولة " يعني أن لديك إحساس بأن الجملة غير جيدة . اقرأ الجمل بعناية قبل الإجابة وركز على العبارات المغمقة وتجاهل أخطاء الإملاء والترقيم . . . . الخ . اختر إجابة واحدة لكل جملة وأجب على جميع الأسئلة .



## APPENDIX A - 5 : GJT ENGLISH - ARABIC VOCABULARY LIST

accurately	بدقه
arrest	يقبض
arrive	يصل
beautiful	جميل
believe	يصدق
belong	يتبع
build	يبنى
buy	يشترى
center	مركز
cheaper	رخيص
clean	نظيف
company	شركة
country	بلد
cry	يبكي
curtain	ستارة
daughter	ابنه
decorate	يزين
desert	صحراء
dictionary	قاموس
die	يموت
draw	يرسم
eat	يأكل
effort	جهد
enjoy	يتمتع ب
enter	يدخل
fix	يصلح
forget	ينسى
funny	يضحك
graduate	يتخرج
grammer	قواعد
great	عظيم
grow	يزرع / ينمو
gunman	رجل مسلح



hard	صعب
history	تاريخ
injured	مصاب
inspect	يفتش
interested	مهتم
join	ينضم
kick	يرفس
kill	يقتل
language	لغة
leave	يفادر
library	مكتبة
lock up	يبحث عن
lose	يخسر
need	يحتاج
news	أخبار
next	الثاني
noise	ضوضاء
operate on	يجري عملية على
paper	ورق
party	حفله
pass	يمرر
patients	مرضى
player	لاعب
pool	مسبح
post	يرسل إلى البريد
powerfully	بقوة
prefer	يفضل
pull	يسحب
push	يدفع
reach	يصل
recognize	يتعرف على
record	يسجل
run	يجري
secretary	سكرتير



several	متعدد
shoot	يطلق النار
sing	يوقع
smile	يبتسم
song	أغنية
stay	يبقى
steal	يسرق
stomachache	ألم في المعدة
studies	يدرس
study	يدرس
swimming	سباحة
thief	لص
top	قمة
tournaments	بطولة
warm	دافئ
watch	يشاهد
weather	جو
weekend	عطلة نهاية الأسبوع
whether	ما إذا



## APPENDIX A – 6: GFT KEY

**GFT KEY**  
**Target Tenses**  
**Test Item Numbers**

<b>Aspect</b>	<b>Present</b>	<b>Present Perfect</b>	<b>Past</b>	<b>Past Perfect</b>	<b>Future</b>	<b>Future Perfect</b>
<b>Stative</b>	2 23 49	3 27 53	35 44 60	10 17 50	20 41 67	11 19 51
<b>Activity</b>	12 46 57	15 24 52	26 34 63	29 38 55	1 39 56	16 32 72
<b>Achievement</b>	13 47 58	22 25 66	21 37 65	6 7 62	9 42 69	18 36 68
<b>Accomplishment</b>	14 45 59	30 31 54	4 40 64	33 43 71	8 48 61	5 28 70



# APPENDIX A – 7: GAP-FILLING TEST VERSIONS

## VERSION 1

Read each of the following sentences carefully, and then put the verb in brackets into its correct form.

أقرأ الجمل التالية بعناية ثم صحح الفعل الموجود بين قوسين على نمط الأمثلة الموضحة أدناه

Examples:

- a. Ali (go) ----- **went**----- to Jeddah yesterday.
- b. He (visit) -----**will visit**----- his father next week.
- c. He (sleep) -----**has slept**----- for nine hours every night.

Now you do the same.

1. A: He can't move this box!  
B: OK. You push and he (pull)-----, I'm sure we can move it.
2. Last month Majid went running everyday but now it is hot. He (prefer)-----  
----- to go swimming.
3. For the last three years Ahmad (like) ----- to play football on Friday afternoons.
4. The cleaner was very slow today. It was about 12 o'clock when he (clean) -----  
----- this room.
5. Abdullah can take us to the football match tonight. He (fix)----- his car by then.
6. Majid never saw his father. When he was born, his father (just/die)-----.
7. Ahmad didn't know that Ali (already/reach)----- Taif.
8. I think he (paint) ----- his bedroom next week.
9. I'm sure that Saud (reach)----- the top of Jabal Al Rahma in the near future.
10. Last week Khalid met one of his old friends. He (not see)----- him for several years.
11. Omar has known Khalid for five years. By next year he (know)----- him for six years.
12. Majid is a good runner. He (run)----- very fast.
13. He usually (reach)----- Jeddah early but he is late today.
14. As soon as the goalkeeper (catch)-----the ball, he throws it up the field.
15. For the last three years Majid (play)----- football for Al Nassir and he is going to play again this year.



16. He was not hungry at 1:00 p.m. He (already/eat)----- .
17. Abdullah could remember some of the cartoon films that he (see)----- a long time ago.
18. Omar: Is Ahmad going to finish his homework tomorrow morning?  
Ali: No, he (finish) ----- by 9 o'clock tonight.
19. Ahmad and Nora married five years ago. Next year Ahmad (love)----- Nora for six years.
20. Omar hasn't had any news from his family for a long time. Maybe he (hear)----- from them next week.
21. Saud was very late tonight. He (arrive)----- home at 12 o'clock.
22. Khalid (reach)----- the top of Jabal Al Rahma three times and he's sure to reach there again this year.
23. Ali (promise)----- to help me but then he doesn't do anything.
24. Abdullah (study)----- very hard all day. He should take a rest now.
25. Omar (jump)----- into the pool four times in the last twenty minutes and he's still jumping in and out.
26. The weather was very nice yesterday. So Majid (play)----- in the garden for two hours.
27. Saad (love) ----- his wife for 20 years and he still loves her.
28. Omar: Is Abdullah going to build his own house?  
Ahmad: He (build) ----- it by next year.
29. When I saw Omar, he was playing tennis again. He (not play) ----- for several years. So he wasn't doing very well.
30. In the last 3 hours Abdullah (paint) ----- his bedroom white and he's now painting the other rooms.
31. This is the first time Ahmad (type) ----- three letters in such a short time.
32. By Friday Khalid (walk) ----- in the park every evening this week.
33. Abdullah (just/post) ----- a letter to his brother when his brother arrived to see him.
34. Omar put on his shoes and (play) ----- football for forty five minutes.
35. Last month Saud found a good job. He (like) ----- it very much but he lost it last week.
36. Yousif is going to reach the top of Jabal Al Rahma at 4 o'clock but Omar (reach) ----- there by then.
37. It was about 8 o'clock last night when Abdullah (arrive) ----- in Jeddah.



38. Before Ali arrived, Khalid (play) ----- with his friends.
39. Omar: What will Ahmad do after school?  
Ali: Oh! I think he (run) ----- in the park for one hour.
40. Saud (sign) ----- five letters and then left his office.
41. Ahmad wants to know his test results. He (know) ----- them next week.
42. Fahd has left the door open! Don't worry. Saad (shut) ----- it when he comes in.
43. Ahmad was tired when he came home. He (write) ----- two tests that day.
44. Majid saw his brother's new car last night. He (like) ----- it very much.  
The play begins and the music stops:
45. "The curtain (rise) -----.
46. "And Majid (walk) ----- into the corner".
47. "Then a short man (enter) ----- the room".
48. I think Fahd (type) ----- the letter tomorrow.
49. Ahmad (hate) ----- watching tennis matches but he loves football.
50. Khalid knew the answer. He (know) ----- it before but he had not said anything.
51. Saud hated both his last teacher and this present one. By the time he leaves school, I think he (hate) ----- all the teachers.
52. This is the first time Ahmad (walk) ----- in King Fahd Park.
53. Ali (know) ----- me since he came to live in Riyadh. We met at the airport when we arrived.
54. Mohamed (already/post) ----- two letters this morning and he's writing another one now.
55. Omar: Was Mohsen eating at the restaurant when you arrived?  
Ahmad: No, he (already/eat) ----- and he was just leaving.
56. Omar exercises at the gym every week. So I'm sure he (exercise) ----- next week.
57. When Dr. Al Bazi comes to inspect the students, he (look) ----- at their books,
58. he (recognize) ----- their efforts,
59. and he (record) ----- their progress.
60. Omar: Did Ali enjoy studying in America?  
Ahmad: No, he really (hate) ----- it.
61. Look at all these dirty tables. I think the waiter (clean) ----- them up soon.



62. A thief entered a bank last week. When the police got there, the thief (just/escape) -----.
63. Saud: How (talk) ----- to me for an hour.
64. Omar: What did Ali do when he heard his sister was sick?  
Ahmad: He (send) ----- her some flowers.
65. Ali (meet) ----- Ahmad very early this morning because he had to leave for Jeddah.
66. Fahd (finish) ----- his studies. He is now working in the Hospital.
67. Omar is still interested in children's cartoons but it seems that he (dislike) ----- them as he gets older.
68. Majid is going to count to 5 and then jump into the pool. Ali will count to 10 before he jumps. This means that when Ali jumps, Majid (jump) ----- in before him.
69. It's 15<sup>th</sup> of June and Omar has not got a job yet. I hope that he (get) ----- a job soon.
70. By the time Ahmad does his homework, Abdullah (already/do) ----- his homework.
71. Omar: Did Ali comb his hair before he went to see the supervisor?  
Ahmad: No, he (already/comb) ----- it.
72. Majid is out now. By the time Khalid reaches the park, Majid (walk) ----- there.

## VERSION 11

Read each of the following sentences carefully, then put the verb in brackets into its correct form.

أقرأ الجمل التالية بعناية ثم صحح الفعل الموجود بين قوسين على نمط الأمثلة الموضحة أدناه

Examples:

- a. Ali (go) -----went----- to Jeddah yesterday.
- b. He (visit) -----will visit----- his father next week.
- c. He (sleep) -----has slept----- for nine hours every night.

Now you do the same.

1. Ahmad: What will Zayad do after lunch?  
Omar: Oh! I think he (chat)----- with us.



2. Last month Omar went running but now it is hot. He (like)----- swimming.
3. For the last five years Mohamed (know) ----- a lot about this company.
4. It was very late. In fact it was about midnight when Fahd (clean) ----- his room.
5. Ali is building a house. He (build) ----- it by next summer.
6. I knew that Khalid (start, already)----- building his house.
7. Majid did not know that I had arrived in Riyadh, and Ali (arrive) ----- there with me.
8. Next week he (decorate) ----- his room.
9. It is 5 o'clock and the train has not arrived yet. I do not know when it (arrive) ----- here.
10. The teacher was angry because Ali was late for class and he (forget) ----- his books.
11. Now he thinks about the pain of writing his questions. By next month, he (forget) ----- it.
12. Majid is a good football player. He (run) ----- fast and shoots accurately.
13. Al Helal is a good team. It often (win) ----- the cup final.
14. Dr. Al Shuhri (operate) ----- on five patients every Monday but on Tuesday he goes to Al Kharj.
15. Ali has stomachache. He (eat) ----- too much today.
16. It is raining heavily. By next month grass (grow) ----- in the desert.
17. Nora heard a funny noise. It was not the first time. He (hear) ----- it several times before.
18. Majid is going to graduate in 1999 but Ahmad (graduate) ----- by then.
19. My teacher has always loved this job. By next year he (love) ----- it for six years.
20. Next week Khalid (hear) ----- some good news.
21. It was 1990 when my brother (graduate) ----- from high school. I'll never forget it.
22. My uncle (start) ----- to build his house and he hopes to finish it next year.
23. Last year Khalid was only interested in tennis but now he (enjoy) ----- swimming.
24. Saad (study) ----- in England and America in the last five years.
25. The policeman (arrest) ----- two people in the last two days.
26. Ahmad: How long did Ali study in the library yesterday?  
Omar: He (study) ----- there for twenty minutes.
27. For the last three months Mohamed (love) ----- to play.



28. Omar is going to join the race. When he reaches Al Malaz, he (run)-----5 kilometers.
29. Ahmad: Was Khalid eating at the party when you arrived?  
Omar: No, he (eat,already) ----- before.
30. This is the first time Majid (look up) ----- a new word in his dictionary.
31. The doctor (check) ----- four patients since 4 o'clock.
32. Omar has been studying hard today. By 3 o'clock he (study) ----- for the tests.
33. The thief was arrested after he (steal) ----- the car .
34. Yesterday Khalid went to a restaurant. He (eat) ----- there.  
Then he went home.
35. Omar was not happy last week. He (want) ----- to go to Jeddah.
36. Ahmad: Is Majid going to leave his room at 12 o'clock tonight?  
Omar: No, he (leave) ----- it by 11 o'clock.
37. Ahmad's plane was very late. It was 12 o'clock when he (arrive) -----.
38. My daughter smiled after getting the toy, but she (cry) ----- before.
39. Saud has a test next week. I'm sure he (study) ----- hard in the next few days.
40. Ahmad: What did Saud do yesterday?  
Omar: He (post) ----- a letter to his friend.
41. Ali has passed a lot of exams. I think he (want) ----- a better job soon.
42. It is getting very warm. I'm sure the snow (melt) ----- in a few days.
43. He (sing,already) ----- a beautiful song by the time I got there.
44. Last night she (hear) ----- a strange noise in the house around 1:00 A.M.
45. Saud's writing is improving. He (write) ----- a composition every week.
46. Khalid (speak) ----- Arabic. It is his native language.
47. Majid is a great football player. He (kick)----- the ball powerfully.
48. I think Abdullah (write) ----- a letter to me soon.
49. Ahmad: How many languages does Saud know?  
Omar: He (know) ----- two languages now.
50. Yesterday Saad met one of his old friends. He (not see) ----- him for several years.
51. He's belonged to this club for a long time. Soon he (belong) ----- longer than his father did.
52. This is the first time Ahmad (dance) ----- at a party.
53. Since he was a child, Mohammed (believe) ----- in God.
54. In the last three weeks Omar (type) -----two papers and he hopes to type another one this week.



55. When I arrived at the pool, Ali was leaving. He (swim, already) -----.
56. I think Fahd (smile) -----a lot when he watches Abdullah Al Sadhaan next week.
57. He usually (drink) ----- coffee in the morning.
58. Ahmad is a careless student. He always (lose) ----- his books.
59. Ahmad does not drink coffee, but Saud (drink) ----- six cups everyday.
60. Omar: Did Majid have enough money to buy a ticket to London?  
Ahmad: Yes, he (have) enough money.
61. A: Ali can't move this box.  
B: OK, you push and he (pull)-----it. I'm sure we can move it.
62. There was shooting at Al Akaryah last night. The gunman (kill, just) ----- three people.
63. Last night Omar had a good night's sleep. He (sleep) ----- nine hours.
64. Omar (type) ----- a letter and posted it yesterday.
65. Ali (finish) ----- writing his letter last night because he had to post it today.
66. In the last four weeks Majid (win) ----- four tournaments.
67. Ahmad has liked Iskan 2 but I'm sure he (like) ----- Iskan 5.
68. Omar: Is Majid going to finish his homework tomorrow morning?  
Ahmad: No, he (finish) ----- it by 12 o'clock tonight.
69. Zayad is going to leave in an hour. He (finish) ----- all of his work before he leaves.
70. Abdullah can drive us to the party. He (fix) ----- his car by 8 o'clock tonight.
71. When I saw Khalid, he (run,already) ----- two miles.
72. If Zayad pushes at the same time, he (push)----- as hard as he possibly can.

## VERSION 111

Read each of the following sentences carefully, then put the verb in brackets into its correct form.

أقرأ الجمل التالية بعناية ثم صحح الفعل الموجود بين قوسين على نمط الأمثلة الموضحة أدناه

Examples:

- a. Ali (go) -----**went**----- to Jeddah yesterday.
- b. He (visit) -----**will visit**----- his father next week.
- c. He (sleep) -----**has slept**----- for nine hours every night.

Now you do the same.



1. Khalid, get out of the car! Omar (push) ----- first then you can get in
2. This pen does not belong to me. It (belong) ----- to Ahmad.
3. For the last two years Abdullah (prefer) -----to stay in a big house rather than a small flat.
4. He (drink) ----- a cup of coffee before class this morning.
5. Zayd is going to clean his desk at 8 o'clock this evening but Khalid (clean) -----his desk by 7 o'clock.
6. By the time the class was over this morning, the rain (stop) --, so I did not need my umbrella any more.
7. At first I did not recognize Abdullah because he (lose) ----- at least 17 kilos.
8. Ali's watch is broken. I do not know when he (fix) ----- it.
9. Zayd was badly injured in an accident yesterday. His doctor thinks he (die) -----in a few days.
10. It was not the first time that Khalid had needed my help. He (need) -----it several times before.
11. He has known Saleh for five years. By next year he (know) -----him for six years.
12. Ali is a good painter. He (paint) ----- well.
13. English class always (start) ----- at 7.30 A.M.
14. Zayd does not have a car. He (walk) ----- to school every day.
15. In the last three years Ahmad (play) ----- football in three tournaments and he's going to play again this year.
16. By 9 o'clock Khalid (walk) ----- in the park and enjoy himself.
17. Last week Ahmad left Abha where he (live) ----- for ten years.
18. Ahmad is going to start his studies this week. AbdulRahman is going to start his studies next week. When AbdulRahman starts his studies, Ahmad (start, already)-----.
19. Saleh has lived in Riyadh for three years. By next year he (like) -----to live there for four years.
20. Ahmad (surprise) ----- everyone tomorrow.
21. A: What time did class begin this morning?  
B: It (begin) ----- 8 o'clock.
22. He (meet) ----- his uncle two times this week and he hopes to meet him again today.
23. She (think) ----- it is going to rain but I don't think so.
24. He is not hungry now. He (eat, already) -----.
25. Omar (start) ----- writing his letter in the last 5 minutes and he's still writing it.
26. The weather was nice yesterday and Ali (walk) ----- in the park for an hour.



27. He learned to read and write French when he was a child, but now he (forget) -----  
----- almost everything he learned.
28. Fahd is going to start up the mountain at 7 o'clock but Omar (climb) -----it by 8  
o'clock.
29. Saud had left the football field when I arrived. He (play,just) -----  
there.
29. In the last three hours Omar (paint) -----his bedroom white and now he is painting the  
other one.
30. Since he started doing this exercise, he (complete) ----- six sentences.
31. By the time he arrives Jeddah, he (drive) ----- for 9 hours.
32. He felt happy after he (draw) ----- a picture.
33. He went to the desert and (drive) ----- there for an hour.
34. A: Ali took a trip to Abha. Did he like it?  
B: Yes, he (like) ----- it very much.
35. This traffic is terrible. We're going to be late. By the time we get to the airport, Ali's plane  
(arrive,already) ----- .
36. Zayd (leave) ----- his house in a hurry this morning because he was late for  
school.
37. Ali was not hungry at 1:00 p.m. He (eat, already) ----- .
38. It is not raining today, and according to the weather report, it (not rain) -----tomorrow  
either.
39. Ahmad (draw) ----- a picture of his friend in art class yesterday.
40. He (resume) ----- his work tomorrow.
41. He (leave) ----- at nine tomorrow morning.
42. By the time Nora came, Hind (wash,already) ----- five dishes.
43. Last year Ahmad (think) ----- that he could not learn to speak English but he can  
speak it very well now.
44. Abdullah (take) ----- a test every Monday.
45. He always (eat) ----- dinner with his parents.
46. Our English programme always (finish) ----- in June.
47. She walked to school this morning, and she (walk) ----- to school tomorrow  
too.
48. Your son (look) ----- like you.
49. It was not the first time Omar suggested this. He (suggest) -----this several times  
before.
50. He's only got five hours in Jeddah; he is leaving at six; but he's sure that he (see) -----  
----- every thing of importance by then.



51. It (snow) ----- all day. I wonder when it will stop.
52. She likes to work with Ali. She (know) ----- him for six years.
53. A: Is Ahmad taking English 201 this semester?  
B: No, he (take,already) ----- it.
54. When I saw Omar he was playing basketball again. He (not play) -----basketball for several years.
55. Zayd walked in the park today, and he (walk) ----- there tomorrow.
56. Fahd always (walk) ----- in the park in the morning.
57. Ahmad is on time. He usually (leave) ----- his house early.
58. Ahmad likes watching TV. He (watch) ----- a film every night.
59. Last month Ahmad met one of his old friends. He (see) -----him in Al Akaryah.
60. A: Has Ali mailed his letter?  
B: Not yet. He (mail) ----- it tomorrow.
61. By the time I got to class, it (begin,already) ----- .
62. A: How long did Zayd swim in the pool yesterday?  
B: He (swim) ----- there for an hour.
63. He (publish) ----- an interesting article in Al Jazera newspaper yesterday.
64. She slipped last night and (break) -----her leg.
65. He (cease) ----- all contacts with her since 1995.
66. Jim (show) ----- the results to the students tomorrow.
67. I (finish) ----- my homework by the time I go out on a date tonight.
68. The taxi (arrive) ----- in less than ten minutes.
69. Ahmad is going to type two letters at 11 o'clock today but Omar (type) -----  
three letters by 12 o'clock.
70. He wads not hungry. He (eat, already) ----- two sandwiches.
71. When Jim retires next month, he (teach) ----- for forty years.



## APPENDIX A - 8 : GFT ENGLISH - ARABIC VOCABULARY LIST

arrive	يصل
assume	يقترض
cleaner	عامل نظافه
comb	يمشط
curtain	ستارة
dirty	وسخ
dislike	يكره
early	مبكرا
escape	يهرب
exercises	تمارين
find	يجد
flowers	زهور
garden	حديقة
goalkeeper	حارس مرمى
hate	يكره
inspect	يفتش
interested	مهتم
jump	يقفز
know	يعرف
look like	يشبه
lose	يخسر
married	متزوج
match	مباراة
move	يتحرك
park	منتزه
pool	مسبح
post	يرسل بالبريد
prefer	يفضل
promise	يعد



reach	يصل
recognize	يتعرف على
record	يسجل
remeber	يتذكر
results	نتائج
runner	عداء
see	يرى
several	عديد
should	يجب
sign	يوقع
sleep	ينام
slow	بطيء
study	يدرس
swimming	سباحة
throw	يرمي
top	قمة
visit	يزور
waiter	قرسون
weather	الطقس



## APPENDIX A – 9: OPT LEVELS CHART

Band	Level	OPT Score
9	Native speaker: functionally bilingual Near-native speaker: expert user	190
8	Professional user Very advanced: highly proficient user	180
7	Advanced: proficient user	170
6	Post-intermediate: competent user	150
5	Upper intermediate	145
	Mid-intermediate: independent user	140
4	Lower intermediate	135
	Pre-intermediate: adequate user	130
3	Post-elementary: Threshold Level	120
	Elementary: limited user	110
2	Foundation: Way stage Level	100
	Basic: very limited user	90
	False beginner: minimal user	80
	Absolute beginner: non-user	0



## APPENDICES FOR CHAPTER 6

### APPENDIX B: ASSOCIATION OF VERB TYPES WITH ASPECT MARKINGS ACROSS LEVELS OF PROFICIENCY IN THE GJT – TUKEY TEST RESULTS

**B – 1** TARGET TENSE: PRESENT

**B – 2** TARGET TENSE: PRESENT PERFECT

**B – 3** TARGET TENSE: PAST

**B – 4** TARGET TENSE: PAST PERFECT

**B – 5** TARGET TENSE: FUTURE

**B – 6** TARGET TENSE: FUTURE PERFECT

### APPENDIX C: ASSOCIATION OF VERB TYPES WITH ASPECT MARKINGS ACROSS LEVELS OF PROFICIENCY IN THE GFT

**C – 1** TARGET TENSE: PRESENT

**C – 2** TARGET TENSE: PRESENT PERFECT

**C – 3** TARGET TENSE: PAST

**C – 4** TARGET TENSE: PAST PERFECT

**C – 5** TARGET TENSE: FUTURE

**C – 6** TARGET TENSE: FUTURE PERFECT

### APPENDIX D: ASSOCIATION OF VERB TYPES WITH ASPECT MARKINGS ACROSS LEVELS OF PROFICIENCY IN THE RT

**D – 1** TARGET TIME: PRESENT

**D – 2** TARGET TIME: PAST



**D – 3** TARGET TIME: FUTURE

**APPENDIX E: ASPECTUAL VS INFLECTIONAL MARKERS IN THE GJT**

**E – 1** TARGET TENSE: PRESENT

**E – 2** TARGET TENSE: PRESENT PERFECT

**E – 3** TARGET TENSE: PAST

**E – 4** TARGET TENSE: PAST PERFECT

**E – 5** TARGET TENSE: FUTURE

**E – 6** TARGET TENSE: FUTURE PERFECT

**APPENDIX F: ASPECTUAL VS INFLECTIONAL MARKERS IN THE GFT**

**F – 1** TARGET TENSE: PRESENT

**F – 2** TARGET TENSE: PRESENT PERFECT

**F – 3** TARGET TENSE: PAST

**F – 4** TARGET TENSE: PAST PERFECT

**F – 5** TARGET TENSE: FUTURE

**F – 6** TARGET TENSE: FUTURE PERFECT

**APPENDIX G: ASPECTUAL VS INFLECTIONAL MARKERS IN THE RT**

**G – 1** TARGET TIME: PRESENT

**G – 2** TARGET TIME: PAST

**G – 3** TARGET TIME: FUTURE



## APPENDIX B: ASSOCIATION OF VERB TYPES WITH ASPECT MARKINGS ACROSS LEVELS OF PROFICIENCY IN THE GJT TUKEY TEST RESULTS

Stars indicate significant differences between the groups as shown in the lower triangle. For example, Table B – 1, stative-s, shows that there are significant differences between level 3 and 1, as well as between level 4 and 1, and between 4 and 2.

### B-1 Target Tense: Present

Stative-s				Stative-ing		Stative-ed	
Mean	LEVEL	GROUP 1 2 3 4		Mean	LEVEL	Mean	LEVEL
2.5250	Grp 1			1.8250	1	1.8250	1
3.0000	Grp 2			1.9600	2	1.7200	2
3.4000	Grp 3	*		1.6000	3	1.800	3
3.8000	Grp 4	**		1.4000	4	1.5600	4
				No two groups are significantly different at the .050 level		No two groups are significantly different at the .050 level	

Activity-s				Activity-ing		Activity-ed	
Mean	LEVEL	GROUP 1 2 3 4		Mean	LEVEL	Mean	LEVEL
1.9500	Grp 1			1.3200	Grp 4	2.1000	1
2.3600	Grp 2			1.6800	Grp 3	2.4400	2
3.2400	Grp 3	**		2.6800	Grp 2	1.9600	3
3.7200	Grp 4	**		2.7750	Grp 1	1.8400	4
				No two groups are significantly different at the .050 level		No two groups are significantly different at the .050 level	

Achievement-s				Achievement-ing		Achievement-ed	
Mean	LEVEL	GROUP 1 2 3 4		Mean	LEVEL	Mean	LEVEL
2.1750	Grp 1			1.2000	Grp 4	1.6400	Grp 4
2.3600	Grp 2			1.8800	Grp 3	2.2800	Grp 3
3.2000	Grp 3	**		2.1000	Grp 1	3.0400	Grp 2
3.9200	Grp 4	***		2.1600	Grp 2	3.1250	Grp 1

Key

- Grp 1 = elementary
- Grp 2 = intermediate
- Grp 3 = lower advanced
- Grp 4 = native speakers (NS)



Accomplishment-s				Accomplishment-ing				Accomplishment-ed			
		GROUP 1 2 3 4				GROUP 4 3 1 2				GROUP 4 3 2 1	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
2.1500	Grp 1			1.4800	Grp 4			1.8000	Grp 4		
2.5200	Grp 2			1.8000	Grp 3			2.0000	Grp 3		
3.1600	Grp 3	*		2.3750	Grp 1	*		2.8000	Grp 2	**	
3.9200	Grp 4	**		2.5600	Grp 2	**		2.8250	Grp 1	**	

## B-2 Target Tense: Present perfect

Stative-s				Stative-ing				Stative-ed	
		GROUP 4 3 2 1				GROUP 4 3 1 2		Mean	LEVEL
Mean	LEVEL			Mean	LEVEL			2.3750	1
1.8800	Grp 4			1.2800	Grp 4			2.4800	2
2.1600	Grp 3			1.7200	Grp 3			2.4800	3
2.9200	Grp 2	*		1.9500	Grp 1			2.4400	4
3.0000	Grp 1	**		2.0400	Grp 2	*		No two groups are significantly different at the .050 level	

Stative-has + ed				Activity-s				Activity-ing			
		GROUP 1 2 3 4				GROUP 4 3 2 1				GROUP 4 3 1 2	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
1.7750	Grp 1			1.4800	Grp 4			1.1600	Grp 4		
2.6400	Grp 2	*		1.9600	Grp 3			1.7200	Grp 3		
3.1200	Grp 3	*		2.1600	Grp 2			2.8250	Grp 1	**	
3.6000	Grp 4	**		2.3000	Grp 1	*		3.0800	Grp 2	**	

Activity-ed				Activity-has + ed				Achievement-s	
		GROUP 3 1 2 4				GROUP 1 2 3 4		Mean	LEVEL
Mean	LEVEL			Mean	LEVEL			2.2500	1
2.3200	Grp 3			2.0750	Grp 1			2.1600	2
2.5250	Grp 1			2.4800	Grp 2			1.8000	3
2.8000	Grp 2			3.2000	Grp 3	*		1.8000	4
3.3600	Grp 4	**		3.8800	Grp 4	**		No two groups are significantly different at the .050 level	



Achievement-ing				Achievement-ed				Achievement-has +ed			
		GROUP 4 3 2 1				GROUP 3 4 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
1.3200	Grp 4			2.5600	Grp 3			2.3250	Grp 1		
1.7200	Grp 3			3.2800	Grp 4	*		2.5600	Grp 2		
2.0800	Grp 2	*		3.4750	Grp 1	*		3.6800	Grp 3	**	
2.2750	Grp 1	*		3.6400	Grp 2	*		3.7600	Grp 4	**	

Accomplishment-s				Accomplishment-ing				Accomplishment-ed			
		GROUP 4 3 2 1				GROUP 4 3 2 1		Mean	LEVEL		
Mean	LEVEL			Mean	LEVEL			3.1250	1		
1.3600	Grp 4			1.1200	Grp 4			2.8800	2		
1.9200	Grp 3			1.8000	Grp 3			2.4800	3		
2.2800	Grp 2	*		2.2800	Grp 2	*		2.8400	4		
2.3000	Grp 1	*		2.3500	Grp 1	*		No two groups are significantly different at the .050 level			

Accomplishment-has + ed			
		GROUP 2 1 3 4	
Mean	LEVEL		
2.4000	Grp 2		
2.4500	Grp 1		
2.8800	Grp 3		
3.8400	Grp 4	***	

### B-3 Target Tense: Past

Stative-s				Stative-ing				Stative-ed			
		GROUP 4 3 1 2				GROUP 4 3 2 1				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
1.8000	Grp 4			1.0800	Grp 4			2.0750	Grp 1		
2.3200	Grp 3			1.2800	Grp 3			2.4400	Grp 2		
3.0250	Grp 1	*		1.4400	Grp 2			3.4000	Grp 3	**	
3.0400	Grp 2	*		1.5750	Grp 1	*		3.9600	Grp 4	**	

Activity-s				Activity-ing				Activity-ed			
Mean	LEVEL					GROUP 4 3 2 1				GROUP 1 2 3 4	
2.0500	1			Mean	LEVEL			Mean	LEVEL		
1.6800	2			1.2800	Grp 4			2.3250	Grp 1		
1.4800	3			1.7200	Grp 3			2.4000	Grp 2		
1.6000	4			2.8000	Grp 2	**		3.3200	Grp 3	**	
No two groups are significantly different at the .050 level				3.0750	Grp 1	**		3.8000	Grp 4	**	

Achievement-s		Achievement-ing		Achievement-ed	
	GROUP 4 3 2 1		GROUP 4 3 2 1		GROUP 1 2 3 4
Mean	LEVEL	Mean	LEVEL	Mean	LEVEL
1.4000	Grp 4	1.3200	Grp 4	2.8750	Grp 1
1.6000	Grp 3	1.9200	Grp 3	3.1600	Grp 2
1.9600	Grp 2	2.0000	Grp 2	3.4400	Grp 3
2.0750	Grp 1 *	2.4000	Grp 1 *	3.9600	Grp 4 **

Accomplishment-s		Accomplishment-ing		Accomplishment-ed	
			GROUP 4 2 3 1		GROUP 1 3 2 4
Mean	LEVEL	Mean	LEVEL	Mean	LEVEL
1.9250	1	1.0800	Grp 4	2.8250	Grp 1
1.9200	2	1.7200	Grp 2	3.5600	Grp 3 *
1.5600	3	1.8400	Grp 3 *	3.6800	Grp 2 *
1.4000	4	1.9750	Grp 1 *	3.9200	Grp 4 *
No two groups are significantly different at the .050 level					

#### B-4 Target Tense: Past perfect

Stative-s		Stative-ing		Stative-ed	
	GROUP 4 3 1 2		GROUP 4 3 2 1	Mean	LEVEL
Mean	LEVEL	Mean	LEVEL	1.7500	1
1.2800	Grp 4	1.1200	Grp 4	2.1600	2
1.8000	Grp 3	1.5200	Grp 3	2.3600	3
2.6000	Grp 1 **	1.9200	Grp 2 *	2.2800	4
2.6000	Grp 2 **	2.0750	Grp 1 *	No two groups are significantly different at the .050 level	

Stative-had + ed		Activity-s		Activity-ing	
	GROUP 1 2 3 4	Mean	LEVEL		GROUP 4 3 2 1
Mean	LEVEL	1.9000	1	Mean	LEVEL
2.2500	Grp 1	1.8400	2	1.3600	Grp 4
2.4800	Grp 2	1.6400	3	1.8000	Grp 3
3.3600	Grp 3 **	1.6000	4	2.8400	Grp 2 **
3.7200	Grp 4 **	No two groups are significantly different at the .050 level		2.9250	Grp 1 **

Activity-ed		Activity- had+ ed		Achievement-s	
			GROUP 1 2 3 4		GROUP 4 2 3 1
Mean	LEVEL	Mean	LEVEL	Mean	LEVEL
2.2000	1	2.3000	Grp 1	1.4400	Grp 4
2.3200	2	2.6800	Grp 2	1.7600	Grp 2
1.9200	3	3.2400	Grp 3 *	2.0400	Grp 3
2.6000	4	3.6800	Grp 4 **	2.1500	Grp 1 *
No two groups are significantly different at the .050 level					



Achievement-ing				Achievement-ed				Achievement- had + ed			
		GROUP 4 3 2 1				GROUP 3 4 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
1.0400	Grp 4			1.8800	Grp 3			2.2000	Grp 1		
1.7600	Grp 3	*		2.8800	Grp 4	*		2.5200	Grp 2		
2.4000	Grp 2	*		2.9250	Grp 1	*		3.3200	Grp 3	*	
2.4750	Grp 1	**		3.2400	Grp 2	*		3.6800	Grp 4	**	

Accomplishment-s				Accomplishment-ing				Accomplishment-ed			
		GROUP 4 3 2 1				GROUP 4 3 1 2				GROUP 4 3 2 1	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
1.2400	Grp 4			1.2000	Grp 4			1.8800	Grp 4		
1.7200	Grp 3			1.7600	Grp 3			2.1200	Grp 3		
2.1200	Grp 2	*		2.2250	Grp 1	*		3.0000	Grp 2	**	
2.1500	Grp 1	*		2.2800	Grp 2	*		3.1500	Grp 1	**	

Accomplishment- had + ed			
		GROUP 1 2 3 4	
Mean	LEVEL		
2.3250	Grp 1		
2.8400	Grp 2		
3.4400	Grp 3	*	
3.9200	Grp 4	**	

### B-5 Target Tense: Future

Stative-s				Stative-ing				Stative-ed			
		GROUP 4 3 2 1				GROUP 4 3 2 1				GROUP 4 2 3 1	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
2.0000	Grp 4			1.2000	Grp 4			1.4800	Grp 4		
2.4400	Grp 3			1.4800	Grp 3			1.9600	Grp 2		
2.8800	Grp 2	*		1.7600	Grp 2			2.0400	Grp 3		
3.2000	Grp 1	*		2.2750	Grp 1	**		2.2250	Grp 1	*	

Stative-will				Activity-s				Activity-ing			
		GROUP 1 2 3 4				GROUP 4 3 2 1				GROUP 4 3 1 2	
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL		
2.3750	Grp 1			1.4800	Grp 4			1.1200	Grp 4		
2.6000	Grp 2			1.9200	Grp 3			1.4000	Grp 3		
2.9200	Grp 3			2.0800	Grp 2			2.9500	Grp 1	**	
3.9200	Grp 4	***		2.4250	Grp 1	*		2.9600	Grp 2	**	

Activity-ed				Activity-will				Achievement-s	
			GROUP 4 3 2 1				GROUP 1 2 3 4	Mean	LEVEL
Mean	LEVEL			Mean	LEVEL			2.1250	1
1.3200	Grp 4			2.3250	Grp 1			2.2400	2
1.4800	Grp 3			2.8000	Grp 2			2.2800	3
1.8000	Grp 2			3.6400	Grp 3	**		1.7200	4
2.1000	Grp 1	**		3.8400	Grp 4	**		No two groups are significantly different at the .050 level	

Achievement-ing				Achievement-ed				Achievement-will						
			GROUP 4 3 2 1				GROUP 4 3 2 1							GROUP 1 2 3 4
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL					
1.6000	Grp 4			1.2000	Grp 4			2.2000	Grp 1					
2.0800	Grp 3			2.1200	Grp 3	*		2.6400	Grp 2					
2.3200	Grp 2			3.0000	Grp 2	**		3.5200	Grp 3	**				
2.4750	Grp 1	*		3.0750	Grp 1	**		3.8800	Grp 4	**				

Accomplishment-s				Accomplishment-ing				Accomplishment-ed						
			GROUP 4 2 3 1				GROUP 4 3 2 1							GROUP 4 3 2 1
Mean	LEVEL			Mean	LEVEL			Mean	LEVEL					
1.7200	Grp 4			1.3200	Grp 4			1.5200	Grp 4					
2.3600	Grp 2			1.8800	Grp 3			1.7600	Grp 3					
2.3600	Grp 3			2.5200	Grp 2	*		2.4000	Grp 2	*				
2.5250	Grp 1	*		2.5500	Grp 1	**		2.8750	Grp 1	**				

Accomplishment-will			
			GROUP 1 2 3 4
Mean	LEVEL		
2.3000	Grp 1		
2.9200	Grp 2		
3.4800	Grp 3	*	
3.8800	Grp 4	**	

## B-6 Target Tense: Future perfect

Stative-s				Stative-ing				Stative-ed	
			GROUP 4 3 1 2				GROUP 4 3 1 2	Mean	LEVEL
Mean	LEVEL			Mean	LEVEL			1.7250	1
1.7600	Grp 4			1.2000	Grp 4			1.8800	2
1.9200	Grp 3			1.6000	Grp 3			1.8400	3
2.7500	Grp 1	**		1.7250	Grp 1			1.3600	4
2.7600	Grp 2	**		2.2800	Grp 2	**		No two groups are significantly different at the .050 level	



Stative- will have			Activity-s			Activity-ing		
		GROUP 1 2 3 4			GROUP 4 3 1 2			GROUP 4 3 2 1
Mean	LEVEL		Mean	LEVEL		Mean	LEVEL	
2.2750	Grp 1		1.5600	Grp 4		1.1600	Grp 4	
2.6400	Grp 2		2.2000	Grp 3		1.6000	Grp 3	
3.1600	Grp 3	*	2.2500	Grp 1		3.0000	Grp 2	**
3.5200	Grp 4	**	2.5600	Grp 2	*	3.0750	Grp 1	**

Activity-ed			Activity-will have			Achievement-s		
		GROUP 4 3 1 2			GROUP 1 2 3 4			GROUP 4 1 2 3
Mean	LEVEL		Mean	LEVEL		Mean	LEVEL	
1.3200	Grp 4		2.0000	Grp 1		1.4400	Grp 4	
1.9200	Grp 3		2.3600	Grp 2		1.9750	Grp 1	
1.9500	Grp 1	*	2.7200	Grp 3	*	2.0400	Grp 2	
2.4000	Grp 2	*	3.6400	Grp 4	***	2.2400	Grp 3	*

Achievement-ing			Achievement-ed			Achievement-will have		
		GROUP 4 3 2 1			GROUP 3 4 1 2			GROUP 2 1 3 4
Mean	LEVEL		Mean	LEVEL		Mean	LEVEL	
1.6400	Grp 4		1.5600	Grp 3		2.0800	Grp 2	
2.0400	Grp 3		2.3200	Grp 4		2.1000	Grp 1	
2.4400	Grp 2	*	2.7000	Grp 1	*	2.8000	Grp 3	*
2.5250	Grp 1	*	2.9600	Grp 2	*	3.8800	Grp 4	***

Accomplishment-s			Accomplishment-ing			Accomplishment-ed		
		GROUP 4 3 1 2			GROUP 4 3 2 1			GROUP 4 3 2 1
Mean	LEVEL		Mean	LEVEL		Mean	LEVEL	
1.4800	Grp 4		1.2400	Grp 4		1.4800	Grp 4	
2.0000	Grp 3		1.8800	Grp 3		1.9200	Grp 3	
2.2000	Grp 1	*	2.2800	Grp 2	*	2.7200	Grp 2	*
2.2400	Grp 2	*	2.3750	Grp 1	*	2.8000	Grp 1	**

Accomplishment-will have		
		GROUP 1 2 3 4
Mean	LEVEL	
1.9250	Grp 1	
2.1200	Grp 2	
2.8400	Grp 3	*
3.7200	Grp 4	***

## APPENDIX C: ASSOCIATION OF VERB TYPES WITH ASPECT MARKINGS ACROSS LEVELS OF PROFICIENCY IN THE GFT

### C – 1 Target Tense: Present

Marker / level	Token Counts				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elementary<sup>a</sup></b>												
s	70	36	42	36	58.3	30	35	30	46	46	46	46
ing	1	54	13	19	0.8	45	10.8	15.8	21.8	21.8	21.8	21.8
PAST	14	15	52	43	11.7	12.5	43.3	35.8	31	31	31	31
will	4	2	2	1	3.3	1.7	1.7	0.8	2.3	2.3	2.3	2.3
pr ing	0	7	0	9	0.0	5.8	0.0	7.5	4	4	4	4
uninfl	31	6	11	12	25.8	5	9.2	10	15	15	15	15
<b>Intermediate<sup>b</sup></b>												
s	45	20	21	25	60	26.7	28	33.3	27.8	27.8	27.8	27.8
ing	0	8	1	3	0.0	10.7	1.3	4	3	3	3	3
PAST	8	8	36	26	10.7	10.7	48	34.7	19.5	19.5	19.5	19.5
has-ed	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
will	1	1	1	1	1.3	1.3	1.3	1.3	1.0	1.0	1.0	1.0
can	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
pr ing	0	27	4	8	0.0	36	5.3	10.7	9.8	9.8	9.8	9.8
p ing	0	1	1	0	0.0	1.3	1.3	0.0	0.5	0.5	0.5	0.5
prp	0	0	0	1	0.0	0.0	0.0	1.3	0.3	0.3	0.3	0.3
be to	0	3	2	1	0.0	4	2.7	1.3	1.5	1.5	1.5	1.5
was-ed	1	0	0	1	1.3	0.0	0.0	1.3	0.5	0.5	0.5	0.5
uninfl	19	6	9	9	25.3	8.0	12	12	10.8	10.8	10.8	10.8
<b>Lower advanced<sup>c</sup></b>												
s	61	54	51	50	81.3	72	68	66.7	54	54	54	54
PAST	12	8	19	18	16	10.7	25.3	24	14.3	14.3	14.3	14.3
has-ed	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
had-ed	1	1	0	0	1.3	1.3	0.0	0.0	0.5	0.5	0.5	0.5
will	0	3	5	1	0.0	4	6.7	1.3	2.3	2.3	2.3	2.3
pr ing	0	7	0	4	0.0	9.3	0.0	5.3	2.8	2.8	2.8	2.8
p ing	0	1	0	1	0.0	1.3	0.0	1.3	0.5	0.5	0.5	0.5
be to	0	1	0	1	0.0	1.3	0.0	1.3	0.5	0.5	0.5	0.5
<b>NS<sup>d</sup></b>												
s	61	60	51	61	81.3	80	68	81.3	58.3	58.3	58.3	58.3
PAST	11	10	23	11	14.7	13.3	30.7	14.7	13.8	13.8	13.8	13.8
will	0	3	1	3	0.0	4	1.3	4	1.8	1.8	1.8	1.8
would	3	0	0	0	4	0.0	0.0	0.0	0.8	0.8	0.8	0.8
can	0	2	0	0	0.0	2.7	0.0	0.0	0.5	0.5	0.5	0.5

<sup>a</sup> $\chi^2$  (15, N = 480) = 167.896, P < 0.000)      <sup>b</sup> $\chi^2$  (33, N = 300) = 126.468, P < 0.000)  
<sup>c</sup> $\chi^2$  (21, N = 300) = 35.229, P < 0.027)      <sup>d</sup> $\chi^2$  (12, N = 300) = 28.417, P < 0.005)

#### Key

St = stative    Act = activity    Ach = achievement    Acc = accomplishment  
pr ing = present continuous    p ing = past continuous    prp = present perfect  
be to = be going to    uninfl = uninflected    elem = elementary    NS = native speaker



## C – 2 Target Tense: Present Perfect

Marker/ level	Token Count				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
Elem <sup>a</sup>												
s	50	17	27	28	41.7	14.2	22.5	23.3	30.5	30.5	30.5	30.5
ing	0	48	8	11	0.0	40	6.7	9.2	16.8	16.8	16.8	16.8
PAST	40	37	67	61	33.3	30.8	55.8	50.8	51.3	51.3	51.3	51.3
has-ed	11	4	8	8	9.2	3.3	6.7	6.7	7.8	7.8	7.8	7.8
will	1	1	1	1	0.8	0.8	0.8	0.8	1	1	1	1
pr ing	1	8	1	4	0.8	6.7	0.8	3.3	3.5	3.5	3.5	3.5
p ing	0	2	1	0	0.0	1.7	0.8	0.0	0.8	0.8	0.8	0.8
be to	1	0	1	0	0.8	0.0	0.8	0.0	0.5	0.5	0.5	0.5
uninfl	16	3	6	7	13.3	2.5	5	5.8	8	8	8	8
Intermediate <sup>b</sup>												
s	31	4	5	14	41.3	5.3	6.7	18.7	13.5	13.5	13.5	13.5
ing	0	1	0	1	0.0	1.3	0.0	1.3	0.5	0.5	0.5	0.5
PAST	25	27	53	40	33.3	36	70.7	53.3	36.3	36.3	36.3	36.3
has-ed	14	5	10	10	18.7	6.7	13.3	13.3	9.8	9.8	9.8	9.8
had-ed	1	0	0	3	1.3	0.0	0.0	4	1	1	1	1
pr ing	0	30	4	1	0.0	40	5.3	1.3	8.8	8.8	8.8	8.8
p ing	0	5	1	2	0.0	6.7	1.3	2.7	2	2	2	2
prpcon	0	1	1	0	0.0	1.3	1.3	0.0	0.5	0.5	0.5	0.5
ppcon	0	1	0	1	0.0	1.3	0.0	1.3	0.5	0.5	0.5	0.5
uninfl	4	1	1	3	5.3	1.3	1.3	4	2.3	2.3	2.3	2.3
Lower advanced <sup>c</sup>												
s	21	11	0	10	28	14.7	0.0	13.3	10.5	10.5	10.5	10.5
PAST	21	23	16	18	28	30.7	21.3	24	19.5	19.5	19.5	19.5
has-ed	32	24	52	37	42.7	32	69.3	49.3	36.3	36.3	36.3	36.3
had-ed	0	3	6	5	0.0	4	8	6.7	3.5	3.5	3.5	3.5
would	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
pr ing	0	5	0	0	0.0	6.7	0.0	0.0	1.3	1.3	1.3	1.3
p ing	0	1	0	3	0.0	1.3	0.0	4	1	1	1	1
prpcon	0	8	1	2	0.0	10.7	1.3	2.7	2.8	2.8	2.8	2.8
NS <sup>d</sup>												
s	7	8	1	0	9.3	10.7	1.3	0.0	4	4	4	4
PAST	31	41	46	43	41.3	54.7	61.3	57.3	40.3	40.3	40.3	40.3
has-ed	36	22	26	28	48	29.3	34.7	37.3	28	28	28	28
had-ed	1	1	2	4	1.3	1.3	2.7	5.3	2	2	2	2
will	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
fpp	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
p ing	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3

<sup>a</sup>X<sup>2</sup> (24, N = 480) = 143.812, P < 0.000)    <sup>b</sup>X<sup>2</sup> (27, N = 300) = 144.700, P < 0.000)

<sup>c</sup>X<sup>2</sup> (21, N = 300) = 78.122, P < 0.000)    <sup>d</sup>X<sup>2</sup> (18, N = 300) = 31.363, P < 0.026)

### Key

pr ing = present continuous    uninfl = uninflected    prpcon = present perfect continuous  
 ppcon = past perfect continuous    prp = present perfect    be to = be going to

### C – 3 Target Tense: Past

Marker / level	Token Count				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	54	7	13	20	45	5.8	10.8	16.7	23.5	23.5	23.5	23.5
ing	1	51	11	14	0.8	42.5	9.2	11.7	19.3	19.3	19.3	19.3
PAST	40	46	89	65	33.3	38.3	74.2	54.2	60	60	60	60
has-ed	4	5	0	1	3.3	4.2	0.0	0.8	2.5	2.5	2.5	2.5
will	1	1	0	2	0.8	0.8	0.0	1.7	1	1	1	1
pr ing	0	3	3	1	0.0	2.5	2.5	0.8	1.8	1.8	1.8	1.8
p ing	0	0	0	2	0.0	0.0	0.0	1.7	0.5	0.5	0.5	0.5
be to	0	0	1	0	0.0	0.0	0.8	0.0	0.3	0.3	0.3	0.3
was-ed	0	0	0	1	0.0	0.0	0.0	0.8	0.3	0.3	0.3	0.3
uninfl	20	7	3	14	16.7	5.8	2.5	11.7	11	11	11	11
<b>Intermediate<sup>b</sup></b>												
s	38	4	3	1	50.7	5.3	4	1.3	11.5	11.5	11.5	11.5
ing	0	5	0	2	0.0	6.7	0.0	2.7	1.8	1.8	1.8	1.8
PAST	25	26	63	57	33.3	34.7	84	76	42.8	42.8	42.8	42.8
has-ed	1	1	1	0	1.3	1.3	1.3	0.0	0.8	0.8	0.8	0.8
had-ed	2	5	2	3	2.7	6.7	2.7	4	3	3	3	3
will	0	0	1	3	0.0	0.0	1.3	4	1	1	1	1
pr ing	0	29	3	1	0.0	38.7	4	1.3	8.3	8.3	8.3	8.3
p ing	0	2	2	2	0.0	2.7	2.7	2.7	1.5	1.5	1.5	1.5
uninfl	9	3	0	6	12	4	0.0	8	4.5	4.5	4.5	4.5
<b>Lower advanced<sup>c</sup></b>												
s	9	3	1	1	12	4	1.3	1.3	3.5	3.5	3.5	3.5
PAST	65	63	73	65	86.7	84	97.3	86.7	66.5	66.5	66.5	66.5
has-ed	1	1	1	2	1.3	1.3	1.3	2.7	1.3	1.3	1.3	1.3
had-ed	0	0	0	3	0.0	0.0	0.0	4	0.8	0.8	0.8	0.8
pring	0	2	0	1	0.0	2.7	0.0	1.3	0.8	0.8	0.8	0.8
p ing	0	4	0	3	0.0	5.3	0.0	4	1.8	1.8	1.8	1.8
prpcon	0	2	0	0	0.0	2.7	0.0	0.0	0.5	0.5	0.5	0.5
<b>NS<sup>d</sup></b>												
s	8	0	0	1	10.7	0.0	0.0	1.3	2.3	2.3	2.3	2.3
PAST	65	73	74	73	86.7	97.3	98.7	97.3	71.3	71.3	71.3	71.3
has-ed	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
had-ed	1	0	1	0	1.3	0.0	1.3	0.0	0.5	0.5	0.5	0.5
will	0	0	0	1	0.0	0.0	0.0	1.3	0.3	0.3	0.3	0.3
would	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
p ing	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3

<sup>a</sup>X<sup>2</sup> (27, N = 480) = 195.498, P < 0.000)    <sup>b</sup>X<sup>2</sup> (24, N = 300) = 210.824, P < 0.000)

<sup>c</sup>X<sup>2</sup> (18, N = 300) = 39.725, P < 0.002)    <sup>d</sup>X<sup>2</sup> (18, N = 300) = 34.629, P < 0.11)

#### Key

pr ing = present continuous    uninfl = uninflected    prpcon = present perfect continuous  
 ppcon = past perfect continuous    prp = present perfect    be to = be going to  
 p ing = past continuous



## C – 4 Target Tense: Past Perfect

Marker / level	Token Count				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	51	12	10	19	42.5	10	8.3	15.8	23	23	23	23
ing	0	47	6	8	0.0	39.2	5	6.7	15.3	15.3	15.3	15.3
PAST	26	23	70	60	21.7	19.2	58.3	50	44.8	44.8	44.8	44.8
has-ed	3	7	4	8	2.5	5.8	3.3	6.7	5.5	5.5	5.5	5.5
had-ed	7	6	11	8	5.8	5	9.2	6.7	8	8	8	8
will	7	0	3	1	5.8	0.0	2.5	0.8	2.8	2.8	2.8	2.8
should	1	0	0	0	0.8	0.0	0.0	0.0	0.3	0.3	0.3	0.3
can	1	0	0	0	0.8	0.0	0.0	0.0	0.3	0.3	0.3	0.3
pr ing	1	3	0	2	0.8	2.5	0.0	1.7	1.5	1.5	1.5	1.5
p ing	0	6	1	0	0.0	5	0.8	0.0	1.8	1.8	1.8	1.8
was-ed	1	1	0	0	0.8	0.8	0.0	0.0	0.5	0.5	0.5	0.5
uninfl	22	15	15	14	18.3	12.5	12.5	11.7	16.5	16.5	16.5	16.5
<b>Intermediate<sup>b</sup></b>												
s	33	0	3	4	44	0.0	4	5.3	10	10	10	10
ing	0	2	1	1	0.0	2.7	1.3	1.3	1	1	1	1
PAST	16	13	39	28	21.3	17.3	52	37.3	24	24	24	24
has-ed	8	13	16	17	10.7	17.3	21.3	22.7	13.5	13.5	13.5	13.5
had-ed	8	9	8	11	10.7	12	10	14.7	9	9	9	9
will	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
pr ing	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
p ing	0	33	3	5	0.0	44	4	6.7	10.3	10.3	10.3	10.3
prpcon	0	0	0	2	0.0	0.0	0.0	2.7	0.5	0.5	0.5	0.5
prpp	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
was-ed	0	0	2	2	0.0	0.0	2.7	2.7	1	1	1	1
uninfl	7	5	3	5	9.3	6.7	4	6.7	5	5	5	5
<b>Lower advanced<sup>c</sup></b>												
s	8	1	0	1	10.7	1.3	0.0	1.3	2.5	2.5	2.5	2.5
PAST	16	9	14	19	21.3	12	18.7	25.3	14.5	14.5	14.5	14.5
has-ed	15	9	11	11	20	12	14.7	14.7	11.5	11.5	11.5	11.5
had-ed	36	37	48	40	48	49.3	64	53.3	40.3	40.3	40.3	40.3
will	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
would have	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
p ing	0	16	0	2	0.0	21.3	0.0	2.7	4.5	4.5	4.5	4.5
ppcon	0	0	0	1	0.0	0.0	0.0	1.3	0.3	0.3	0.3	0.3
was-ed	0	1	2	1	0.0	1.3	2.7	1.3	1	1	1	1
<b>NS<sup>d</sup></b>												
PAST	21	18	20	24	28	24	27	32	20.8	20.8	20.8	20.8
has-ed	6	19	0	0	8	25.3	0.0	0.0	6.3	6.3	6.3	6.3
had-ed	48	36	54	51	64	48	73	68	47.5	47.5	47.5	47.5
ping	0	2	0	0	0.0	2.7	0.0	0.0	0.5	0.5	0.5	0.5

$$^a\chi^2 (33, N = 480) = 218.929, P < 0.000$$

$$^c\chi^2 (24, N = 300) = 74.690, P < 0.000$$

$$^b\chi^2 (33, N = 300) = 184.607, P < 0.000$$

$$^d\chi^2 (12, N = 300) = 50.029, P < 0.000$$

### Key

pr ing = present continuous      uninfl = uninflected      prpcon = present perfect continuous  
 ppcon = past perfect continuous      prp = present perfect      be to = be going to  
 p ing = past continuous

## C – 5 Target Tense: Future

Marker / level	Token Count				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	59	28	20	23	49.2	23.3	16.7	19.2	32.5	32.5	32.5	32.5
ing	3	42	16	18	2.5	35	13.3	15	19.8	19.8	19.8	19.8
PAST	12	9	49	42	10	7.5	40.8	35	28	28	28	28
has-ed	0	3	3	1	0.0	2.5	2.5	0.8	1.8	1.8	1.8	1.8
will	18	10	16	19	15	8.3	13.3	15.8	15.8	15.8	15.8	15.8
pr ing	0	8	3	4	0.0	6.7	2.5	3.3	3.8	3.8	3.8	3.8
prp	0	0	0	1	0.0	0.0	0.0	0.8	0.3	0.3	0.3	0.3
be to	4	6	4	4	3.3	5	3.3	3.3	4.5	4.5	4.5	4.5
uninfl	24	14	9	8	20	11.7	7.5	6.7	13.8	13.8	13.8	13.8
<b>Intermediate<sup>b</sup></b>												
s	39	9	7	12	52	12	9.3	16	16.8	16.8	16.8	16.8
ing	0	6	0	1	0.0	8	0.0	1.3	1.8	1.8	1.8	1.8
PAST	2	1	40	23	2.7	1.3	53.3	30.7	16.5	16.5	16.5	16.5
has-ed	0	0	1	2	0.0	0.0	1.3	2.7	0.8	0.8	0.8	0.8
will	26	17	16	29	34.7	22.7	21.3	38.7	22	22	22	22
pr ing	0	34	5	5	0.0	45.3	6.7	6.7	11	11	11	11
p ing	0	2	1	0	0.0	2.7	1.3	0.0	0.8	0.8	0.8	0.8
be to	2	2	2	1	2.7	2.7	2.7	1.3	1.8	1.8	1.8	1.8
fpp	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.3	0.3	0.3
uninfl	5	4	3	2	6.7	5.3	4	2.7	3.5	3.5	3.5	3.5
<b>Lower advanced<sup>c</sup></b>												
s	17	15	8	0	22.7	20	10.7	0.0	10	10	10	10
PAST	1	1	5	13	1.3	1.3	6.7	17.3	5	5	5	5
has-ed	0	1	1	1	0.0	1.3	1.3	1.3	0.8	0.8	0.8	0.8
had-ed	0	0	1	1	0.0	0.0	1.3	1.3	0.5	0.5	0.5	0.5
will	52	47	53	55	69.3	62.7	70.7	73.3	51.8	51.8	51.8	51.8
should	0	0	1	3	0.0	0.0	1.3	4	1	1	1	1
pr ing	0	5	0	0	0.0	6.7	0.0	0.0	1.3	1.3	1.3	1.3
p ing	0	0	1	0	0.0	0.0	1.3	0.0	0.3	0.3	0.3	0.3
be to	5	6	5	2	6.7	8	6.7	2.7	4.5	4.5	4.5	4.5
<b>NS<sup>d</sup></b>												
s	21	20	18	5	28	26.7	24	6.7	16	16	16	16
PAST	1	3	4	7	1.3	4	5.3	9.3	3.8	3.8	3.8	3.8
will	53	48	53	60	70.7	64	70.7	80	53.5	53.5	53.5	53.5
would	0	0	0	1	0.0	0.0	0.0	1.3	0.3	0.3	0.3	0.3
should	0	0	0	2	0.0	0.0	0.0	2.7	0.5	0.5	0.5	0.5
can	0	4	0	0	0.0	5.3	0.0	0.0	1	1	1	1

<sup>a</sup>X<sup>2</sup> (24, N = 480) = 145.784, P < 0.000)

<sup>b</sup>X<sup>2</sup> (27, N = 300) = 201.194, P < 0.000)

<sup>c</sup>X<sup>2</sup> (24, N = 300) = 66.671, P < 0.000)

<sup>d</sup>X<sup>2</sup> (15, N = 300) = 37.739, P < 0.001)

### Key

pr ing = present continuous  
 ppcon = past perfect continuous  
 p ing = past continuous

uninfl = uninflected  
 prp = present perfect  
 fpp = future perfect passive  
 prpcon = present perfect continuous  
 be to = be going to



## C – 6 Target Tense: Future Perfect

Marker / level	Token Count				Percentage of Distributuion				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	54	24	17	25	45	20	14.2	20.8	30	30	30	30
ing	0	51	3	7	0.0	42.5	2.5	5.8	15.3	15.3	15.3	15.3
PAST	11	7	52	33	9.2	5.3	43.3	27.5	25.8	25.8	25.8	25.8
has-ed	16	5	4	8	13.3	4.2	3.3	6.7	8.3	8.3	8.3	8.3
had-ed	2	0	2	0	1.7	0.0	1.7	0.0	1	1	1	1
will	14	11	14	22	11.7	9.2	11.7	18.3	15.3	15.3	15.3	15.3
will have	2	4	3	4	1.7	3.3	2.5	3.3	3.3	3.3	3.3	3.3
can	1	0	0	0	0.8	0.0	0.0	0.0	0.3	0.3	0.3	0.3
pr ing	1	12	3	7	0.8	10	2.5	5.8	5.8	5.8	5.8	5.8
p ing	0	3	3	1	0.0	2.5	2.5	0.8	1.8	1.8	1.8	1.8
be to	3	0	11	5	2.5	0.0	9.2	4.2	4.8	4.8	4.8	4.8
was-ed	0	1	0	0	0.0	0.8	0.0	0.0	0.3	0.3	0.3	0.3
uninfl	16	2	8	8	13.3	1.7	6.7	6.7	8.5	8.5	8.5	8.5
<b>Intermediate<sup>b</sup></b>												
s	35	13	5	5	46.7	17.3	6.7	6.7	14.5	14.5	14.5	14.5
ing	0	0	0	1	0.0	0.0	0.0	1.3	0.3	0.3	0.3	0.3
PAST	2	5	40	21	2.7	6.7	53.3	28	17	17	17	17
has-ed	8	2	3	9	10.7	2.7	4	12	5.5	5.5	5.5	5.5
had-ed	3	1	6	1	4	1.3	8	1.3	2.8	2.8	2.8	2.8
will	13	3	4	14	17.3	4	5.3	18.7	8.5	8.5	8.5	8.5
will have	6	4	4	8	8	5.3	5.3	10.7	5.5	5.5	5.5	5.5
would	0	0	1	0	0.0	0.0	1.3	0.0	0.3	0.3	0.3	0.3
pr ing	0	29	2	4	0.0	38.7	2.7	5.3	8.8	8.8	8.8	8.8
p ing	0	12	0	2	0.0	16	0.0	2.7	3.5	3.5	3.5	3.5
be to	3	3	8	8	4	4	10.7	10.7	5.5	5.5	5.5	5.5
was-ed	0	0	2	1	0.0	0.0	2.7	1.3	0.8	0.8	0.8	0.8
uninfl	5	3	0	1	6.7	4	0.0	1.3	2.3	2.3	2.3	2.3
<b>Lower advanced<sup>c</sup></b>												
s	13	3	0	1	17.3	4	0	1	17.3	4	0.0	1.3
PAST	0	1	11	13	0.0	1.3	14.7	17.3	6.3	6.3	6.3	6.3
has-ed	2	6	4	6	2.7	8	5.3	8	4.5	4.5	4.5	4.5
had-ed	0	0	1	1	0.0	0.0	1.3	1.3	0.5	0.5	0.5	0.5
will	11	11	8	9	14.7	14.7	10.7	12	9.8	9.8	9.8	9.8
will have	48	40	47	39	64	53.3	62.7	52	43.5	43.5	43.5	43.5
would have	1	0	0	1	1.3	0.0	1.3	0.0	0.5	0.5	0.5	0.5
should	0	0	1	0	0.0	0.0	1.3	0.0	0.3	0.3	0.3	0.3
pr ing	0	2	0	0	0.0	2.7	0.0	0.0	0.5	0.5	0.5	0.5
p ing	0	2	0	0	0.0	2.7	0.0	0.0	0.5	0.5	0.5	0.5
be to	0	3	2	4	0.0	4	2.7	5.3	2.3	2.3	2.3	2.3
prpcon	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3
fpp	0	0	1	0	0.0	0.0	1.3	0.0	0.3	0.3	0.3	0.3
<b>NS<sup>c</sup></b>												
s	6	3	0	0	8	4	0.0	0.0	2.3	2.3	2.3	2.3
PAST	2	6	15	5	2.7	8	20	6.7	7	7	7	7
has-ed	3	2	2	12	4	2.7	2.7	16	4.8	4.8	4.8	4.8
had-ed	0	3	1	1	0.0	4	1.3	1.3	1.3	1.3	1.3	1.3
will	11	8	13	14	14.7	10.7	17.3	18.7	11.5	11.5	11.5	11.5
will have	51	50	44	42	68	66.7	58.7	56	46.8	46.8	46.8	46.8
would have	2	0	0	1	2.7	0.0	0.0	1.3	0.8	0.8	0.8	0.8
p ing	0	2	0	0	0.0	2.7	0.0	0.0	0.5	0.5	0.5	0.5
will be-ing	0	1	0	0	0.0	1.3	0.0	0.0	0.3	0.3	0.3	0.3

<sup>a</sup>X<sup>2</sup> (36, N = 480) = 258.551, P < 0.000)    <sup>b</sup>X<sup>2</sup> (36, N = 300) = 234.505, P < 0.000)  
<sup>c</sup>X<sup>2</sup> (39, N = 300) = 94.340, P < 0.000)    <sup>d</sup>X<sup>2</sup> (24, N = 300) = 58.873, P < 0.000)

### Key

pr ing = present continuous    uninfl = uninflected    prpcon = present perfect continuous    ppcon = past perfect continuous    prp = present perfect    be to = be going to    p ing = past continuous    fpp = future perfect passive

## APPENDIX D: ASSOCIATION OF ASPECT MARKINGS WITH VERB TYPES ACROSS LEVELS OF PROFICIENCY IN THE RT

### D – 1 Target Time: Present

Marker / level	Token Count				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	64	2	2	4	62.7	1.2	2	4	15.5	26.2	14.9	15.4
ing	1	78	14	17	1	45.3	14.3	16.8	23.7	40	22.8	23.5
PAST	11	9	53	39	10.8	5.2	54.1	38.6	24.2	40.7	23.2	23.9
has-ed	0	0	0	1	0.0	0.0	0.0	1	0.2	0.4	0.2	0.2
will	0	0	1	0	0.0	0.0	1	0.0	0.2	0.4	0.2	0.2
can	1	0	0	0	1	0.0	0.0	0.0	0.2	0.4	0.2	0.2
pr ing	0	65	16	18	0.0	37.8	16.3	17.8	21.3	36	20.5	21.1
prp	0	1	1	0	0.0	0.6	1	0.0	0.4	0.7	0.4	0.4
pp	0	0	0	1	0.0	0.0	0.0	1	0.2	0.4	0.2	0.2
uninfl	25	17	11	21	24.5	9.9	11.2	20.8	16	26.9	15.3	15.8
<b>Intermediate<sup>b</sup></b>												
s	45	2	3	1	54.9	2.1	4	1.3	12.6	14.9	11.6	11.9
ing	0	33	4	16	0.0	34	5.3	20.8	13.1	15.5	12	12.3
PAST	13	9	32	22	15.9	9.3	42.7	28.6	18.8	22.3	17.2	17.7
has-ed	1	0	2	1	1.2	0.0	2.7	1.3	1	1.2	0.9	0.9
had-ed	0	0	0	1	0.0	0.0	0.0	1.3	0.2	0.3	0.2	0.2
will	0	0	1	0	0.0	0.0	1.3	0.0	0.2	0.3	0.2	0.2
pr ing	3	38	12	20	3.7	39.2	16	26	18.1	21.4	16.5	17
p ing	0	2	0	0	0.0	2.1	0.0	0.0	0.5	0.6	0.5	0.5
prp	0	0	0	1	0.0	0.0	0.0	1.3	0.2	0.3	0.2	0.2
be to	0	0	3	0	0.0	0.0	4	0.0	0.7	0.9	0.7	0.7
uninfl	20	13	18	15	24.4	13.4	24	19.5	16.4	19.3	15	15.4
<b>Lower advanced<sup>c</sup></b>												
s	27	21	11	8	64.3	21	18.3	10.5	10.1	24.1	14.5	18.3
ing	1	4	1	2	2.4	4	1.7	2.6	1.2	2.9	1.7	2.2
PAST	7	1	15	13	16.7	1	25	17.1	5.4	12.9	7.8	9.8
has-ed	0	0	0	1	0.0	0.0	0.0	1.3	0.2	0.4	0.2	0.3
will	1	0	0	0	2.4	0.0	0.0	0.0	0.2	0.4	0.2	0.3
can	1	0	0	0	2.4	0.0	0.0	0.0	0.2	0.4	0.2	0.3
pr ing	0	65	26	46	0.0	65	43.3	60.5	20.7	49.3	29.6	37.5
be to	0	0	0	1	0.0	0.0	0.0	1.3	0.2	0.4	0.2	0.3
uninfl	5	8	7	5	11.9	8	11.7	6.6	3.8	9	5.4	6.8
<b>NS<sup>d</sup></b>												
s	45	27	13	13	93.8	37	31	39.4	24	36.5	21	16.5
ing	0	1	0	0	0.0	1.4	0.0	0.0	0.2	0.4	0.2	0.2
PAST	1	0	1	0	2.1	0.0	2.4	0.0	0.5	0.7	0.4	0.3
has-ed	0	2	1	0	0.0	2.7	2.4	0.0	0.7	1.1	0.6	0.5
pr ing	0	42	26	19	0.0	57.5	61.9	57.6	21.3	32.4	18.6	14.6
be to	0	0	1	1	0.0	0.0	2.4	3	0.5	0.7	0.4	0.3
uninfl	2	1	0	0	4.2	1.4	0.0	0.0	0.7	1.1	0.6	0.5

<sup>a</sup> $\chi^2(27, N = 480) = 410.459, P < 0.000$     <sup>b</sup> $\chi^2(30, N = 300) = 231.422, P < 0.000$   
<sup>c</sup> $\chi^2(27, N = 300) = 103.093, P < 0.000$     <sup>d</sup> $\chi^2(18, N = 300) = 65.820, P < 0.000$

#### Key

pr ing = present continuous    prp = present perfect    pp = past perfect    be to = be going to



## D – 2 Target Time: Past

Marker / level	Token Count				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	45	0	6	3	66.2	0.0	4.4	3.6	11	7.9	21.8	13.4
ing	0	31	13	19	0.0	63.3	9.6	22.9	12.8	9.2	25.4	15.6
PAST	5	4	75	35	7.4	8.2	55.6	42.2	24.2	17.4	48	29.5
has-ed	0	2	13	8	0.0	4.1	9.6	9.6	4.7	3.4	9.3	5.7
will	0	0	2	1	0.0	0.0	1.5	1.2	0.6	0.4	1.2	0.7
can	1	0	0	0	1.5	0.0	0.0	0.0	0.2	0.1	0.4	0.2
pr ing	0	5	8	3	0.0	10.2	5.9	3.6	3.2	2.3	6.4	4
prp	0	0	4	1	0.0	0.0	3	1.2	1	0.7	2	1.2
be to	0	0	0	1	0.0	0.0	0.0	1.2	0.2	0.1	0.4	0.2
pp	0	0	1	0	0.0	0.0	0.7	0.0	0.2	0.1	0.4	0.2
uninfl	17	7	13	12	25	14.3	9.6	14.5	9.9	7.2	19.7	12.1
<b>Intermediate<sup>b</sup></b>												
s	24	1	1	3	58.5	2.9	1.1	5.7	5.4	4.5	12.2	7
ing	0	15	7	6	0.0	44.1	7.5	11.3	5.2	4.3	11.8	6.7
PAST	9	6	42	26	22	17.6	45.2	49.1	15.4	12.8	34.9	19.9
has-ed	0	0	15	4	0.0	0.0	16.1	7.5	3.5	2.9	8	4.6
had-ed	0	0	1	0	0.0	0.0	1.1	0.0	0.2	0.2	0.4	0.2
will	0	0	3	0	0.0	0.0	3.2	0.0	0.6	0.5	1.3	0.7
can	0	0	1	0	0.0	0.0	1.1	0.0	0.2	0.2	0.4	0.2
pr ing	0	9	9	10	0.0	26.5	9.7	18.9	5.2	4.3	11.8	6.7
p ing	0	2	0	0	0.0	5.9	0.0	0.0	0.4	0.3	0.8	0.5
be to	0	0	0	1	0.0	0.0	0.0	1.9	0.2	0.2	0.4	0.2
prpp	0	0	1	0	0.0	0.0	1.1	0.0	0.2	0.2	0.4	0.2
pp	0	0	2	0	0.0	0.0	2.2	0.0	0.4	0.3	0.8	0.5
uninfl	8	1	11	3	19.5	2.9	11.8	5.7	4.3	3.5	9.7	5.5
<b>Lower advanced<sup>c</sup></b>												
s	12	1	0	1	41.4	3.4	0.0	3.2	2.5	2.5	6.3	2.7
ing	0	2	0	0	0.0	6.9	0.0	0.0	0.4	0.4	0.9	0.4
PAST	15	15	28	16	51.7	51.7	38.4	51.6	13.2	13.2	33.3	14.2
has-ed	0	1	29	10	0.0	3.4	39.7	32.3	7.2	7.2	18	7.7
will	0	0	1	0	0.0	0.0	1.4	0.0	0.2	0.2	0.5	0.2
can	1	0	0	0	3.4	0.0	0.0	0.0	0.2	0.2	0.5	0.2
pr ing	0	4	9	3	0.0	13.8	12.3	9.7	2.9	2.9	7.2	3.1
p ing	0	6	0	0	0.0	20.7	0.0	0.0	1.1	1.1	2.7	1.1
be to	0	0	1	0	0.0	0.0	1.4	0.0	0.2	0.2	0.5	0.2
prpp	0	0	2	0	0.0	0.0	2.7	0.0	0.4	0.4	0.9	0.4
uninfl	1	0	3	1	3.4	0.0	4.1	3.2	0.9	0.9	2.3	1
<b>NS<sup>d</sup></b>												
s	12	1	0	0	30.8	2.6	0.0	0.0	2.9	2.9	3.6	3.5
PAST	23	24	24	20	59	61.5	50	42.6	20.5	20.5	25.2	24.7
has-ed	2	12	22	25	5.1	30.8	45.8	53.2	13.8	13.8	16.9	16.6
would	0	0	0	1	0.0	0.0	0.0	2.1	0.2	0.2	0.3	0.3
can	1	0	0	0	2.6	0.0	0.0	0.0	0.2	0.2	0.3	0.3
pr ing	0	2	1	0	0.0	5.1	2.1	0.0	0.7	0.7	0.8	0.8
be to	0	0	1	0	0.0	0.0	2.1	0.0	0.2	0.2	0.3	0.3
uninfl	1	0	0	1	2.6	0.0	0.0	2.1	0.5	0.5	0.6	0.5

<sup>a</sup>X<sup>2</sup> (30, N = 480) = 281.632, P < 0.000    <sup>b</sup>X<sup>2</sup> (36, N = 300) = 179.777, P < 0.000  
<sup>c</sup>X<sup>2</sup> (30, N = 300) = 116.723, P < 0.000    <sup>d</sup>X<sup>2</sup> (21, N = 300) = 69.303, P < 0.000

### Key

pr ing = present continuous    prp = present perfect    pp = past perfect    be to = be going to  
prpp = present perfect passive    p ing = past continuous    uninfl = uninflected

### D – 3 Target Time: Future

Marker / level	Token Counts				Percentage of Distribution				Expected Value			
	St	Act	Ach	Acc	St	Act	Ach	Acc	St	Act	Ach	Acc
<b>Elem<sup>a</sup></b>												
s	62	0	5	2	56.4	0.0	3.9	1.7	18.6	9.3	21.5	19.5
ing	0	29	9	7	0.0	52.7	7.1	6.1	12.2	6.1	14	12.7
PAST	10	5	57	43	9.1	9.1	44.9	37.4	31.1	15.5	35.9	32.5
has-ed	0	0	1	0	0.0	0.0	0.8	0.0	0.3	0.1	0.3	0.3
will	3	1	8	10	2.7	1.8	6.3	8.7	5.9	3	6.9	6.2
can	0	0	0	1	0.0	0.0	0.0	0.9	0.3	0.1	0.3	0.3
pr ing	0	7	7	9	0.0	12.7	5.5	7.8	6.2	3.1	7.2	6.5
prp	0	0	2	0	0.0	0.0	1.6	0.0	0.5	0.3	0.6	0.6
be to	3	0	12	18	2.7	0.0	9.4	15.7	8.9	4.5	10.3	9.3
uninfl	32	13	26	25	29.1	23.6	20.5	21.7	25.9	13	30	27.1
<b>Intermediate<sup>b</sup></b>												
s	41	0	2	3	52.6	0.0	2	4.1	13	4.3	16.5	12.2
Ing	0	12	4	3	0.0	46.2	4	4.1	5.4	1.8	6.8	5
PAST	12	0	40	25	15.4	0.0	40.4	34.2	21.8	7.3	27.6	20.4
has-ed	0	1	0	1	0.0	3.8	0.0	1.4	0.6	0.2	0.7	0.5
had-ed	1	0	0	0	1.3	0.0	0.0	0.0	0.3	0.1	0.4	0.3
will	1	0	8	14	1.3	0.0	8.1	19.2	6.5	2.2	8.3	6.1
pr ing	0	9	7	4	0.0	34.6	7.1	5.5	5.7	1.9	7.2	5.3
p ing	0	1	0	0	0.0	3.8	0.0	0.0	0.3	0.1	0.4	0.3
be to	3	2	17	10	3.8	7.7	17.2	13.7	0.9	3	11.5	8.5
uninfl	20	1	21	13	25.6	3.8	21.2	17.8	15.5	5.2	19.7	14.5
<b>Lower advanced<sup>c</sup></b>												
s	8	5	1	0	20	14.3	1.3	0.0	2.6	2.3	5	4.1
ing	0	1	0	0	0.0	2.9	0.0	0.0	0.2	0.2	0.4	0.3
PAST	2	0	12	9	5	0.0	15.8	14.5	4.3	3.8	8.2	6.7
has-ed	0	0	1	1	0.0	0.0	1.3	1.6	0.4	0.3	0.7	0.6
will	5	9	15	16	12.5	25.7	19.7	25.8	8.5	7.4	16.1	13.1
can	0	0	1	0	0.0	0.0	1.3	0.0	0.2	0.2	0.4	0.3
pring	0	3	7	4	0.0	8.6	9.2	6.5	2.6	2.3	5	4.1
be to	17	15	29	17	42.5	42.9	38.2	27.4	14.6	12.8	27.8	22.7
uninfl	8	2	10	15	20	5.7	13.2	24.2	6.6	5.8	12.5	10.2
<b>NS<sup>d</sup></b>												
s	10	4	0	4	31.3	9.8	0.0	6.8	3.2	4.1	4.8	5.9
PAST	0	1	3	3	0.0	2.4	6.3	5.1	1.2	1.6	1.9	2.3
has-ed	0	1	1	3	0.0	2.4	2.1	5.1	0.9	1.1	1.3	1.6
had-ed	1	0	0	0	3.1	0.0	0.0	0.0	0.2	0.2	0.3	0.3
will	16	8	9	15	50	19.5	18.8	25.4	8.5	10.9	12.8	15.7
be to	5	23	22	26	15.6	56.1	45.8	44.1	13.5	17.3	20.3	24.9
pring	0	3	10	1	0.0	7.3	20.8	1.7	2.5	3.2	3.7	4.6
ppcon	0	1	0	0	0.0	2.4	0.0	0.0	0.2	0.2	0.3	0.3
uninfl	0	0	3	7	0.0	0.0	6.3	11.9	1.8	2.3	2.7	3.3

<sup>a</sup>X<sup>2</sup> (27, N = 480) = 323.996, P < 0.000)

<sup>b</sup>X<sup>2</sup> (27, N = 300) = 247.661, P < 0.000)

<sup>c</sup>X<sup>2</sup> (24, N = 300) = 50.864, P < 0.000)

<sup>d</sup>X<sup>2</sup> (24, N = 300) = 72.430, P < 0.000)

#### Key

pr ing = present continuous    prp = present passive    be to = be going to    p ing = past continuous  
 ppcon = past perfect continuous



## APPENDIX E: ASPECTUAL VS INFLECTIONAL MARKERS IN THE GJT

Aspectual vs inflectional markers were calculated in the GJT by Tukey's honestly significant difference (HSD) test with significance level .050.

Stars indicate significant differences between the groups as shown in the lower triangle. For example, in Table E – 1, aspectual markers, there are significant differences between group 1 and 4, and between 1 and 3, as well as between group 2 and 4, and between 2 and 3.

### E-1 Target Tense: Present

Aspectual Markers				Inflectional Markers			
		GROUP 4 3 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	Level		
8.5600	Grp 4			8.8000	Grp 1		
9.3600	Grp 3			10.2400	Grp 2		
11.2500	Grp 1	**		13.0000	Grp 3	**	
11.5200	Grp 2	**		15.3600	Grp 4	***	

### E-2 Target Tense: Present perfect

Aspectual Markers				Inflectional Markers			
		GROUP 3 4 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL		
8.9200	Grp 3			8.6250	Grp 1		
9.1600	Grp 4			10.0800	Grp 2	*	
12.4250	Grp 1	**		12.8800	Grp 3	**	
12.5200	Grp 2	**		15.0800	Grp 4	***	

### E-3 Target Tense: Past

Aspectual Markers				Inflectional Markers			
		GROUP 4 3 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL		
10.9600	Grp 4			10.1000	Grp 1		
11.0400	Grp 3			11.6800	Grp 2	*	
11.8000	Grp 1			13.7200	Grp 3	**	
12.6800	Grp 2	**		15.6400	Grp 4	***	

**E-4 Target Tense: Past perfect**

Aspectual Markers				Inflectional Markers			
		GROUP 4 3 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL		
7.4000	Grp 4			9.0750	Grp 1		
7.6000	Grp 3			10.5200	Grp 2		
11.6000	Grp 1	**		13.3600	Grp 3	**	
11.6800	Grp 2	**		15.0000	Grp 4	**	

**E-5 Target Tense: Future**

Aspectual Markers				Inflectional Markers			
		GROUP 4 3 2 1				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL		
5.8400	Grp 4			9.2000	Grp 1		
7.7200	Grp 3	*		10.9600	Grp 2	*	
11.2400	Grp 2	**		13.5600	Grp 3	**	
12.1000	Grp 1	**		15.5200	Grp 4	***	

**E-6 Target Tense: Future Perfect**

Aspectual Markers				Inflectional Markers			
		GROUP 4 3 1 2				GROUP 1 2 3 4	
Mean	LEVEL			Mean	LEVEL		
6.7200	Grp 4			8.3000	Grp 1		
7.0000	Grp 3			9.2000	Grp 2		
11.3250	Grp 1	**		11.5200	Grp 3	**	
11.4400	Grp 2	**		14.7600	Grp 4	***	



## APPENDIX F: ASPECTUAL VS INFLECTIONAL MARKERS IN THE GFT

### F-1 Target Tense: Present

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	257	117
Intermediate <sup>b</sup>	162	69
Lower advanced <sup>c</sup>	45	222
NS <sup>d</sup>	34	242

<sup>a</sup>X<sup>2</sup> (1, N = 480) = 31.957, P < 0.000      <sup>b</sup>X<sup>2</sup> (1, N = 300) = 15.620, P < 0.000  
<sup>c</sup>X<sup>2</sup> (1, N = 300) = 10.679, P < 0.000      <sup>d</sup>X<sup>2</sup> (1, N = 300) = 159.995, P < 0.000

### F-2 Target Tense: Present Perfect

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	252	31
Intermediate <sup>b</sup>	164	39
Lower advanced <sup>c</sup>	61	145
NS <sup>d</sup>	8	273

<sup>a</sup>X<sup>2</sup> (1, N = 480) = 36.629, P < 0.000      <sup>b</sup>X<sup>2</sup> (1, N = 300) = 54.057, P < 0.000  
<sup>c</sup>X<sup>2</sup> (1, N = 300) = 71.629, P < 0.000      <sup>d</sup>X<sup>2</sup> (1, N = 300) = 83.105, P < 0.000

### F-3 Target Tense: Past

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	282	86
Intermediate <sup>b</sup>	203	51
Lower advanced <sup>c</sup>	15	266
NS <sup>d</sup>	9	285

<sup>a</sup>X<sup>2</sup> (1, N = 480) = 5.811, P < 0.016      <sup>b</sup>X<sup>2</sup> (1, N = 300) = 1.144, P > .05  
<sup>c</sup>X<sup>2</sup> (1, N = 300) = 123.529, P < 0.000      <sup>d</sup>X<sup>2</sup> (1, N = 300) = 176.289, P < 0.000

### F-4 Target Tense: Past Perfect

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	259	32
Intermediate <sup>b</sup>	142	36
Lower advanced <sup>c</sup>	57	161
NS <sup>d</sup>	46	189

<sup>a</sup>X<sup>2</sup> (1, N = 480) = 40.181, P < 0.000      <sup>b</sup>X<sup>2</sup> (1, N = 300) = 36.766, P < 0.000  
<sup>c</sup>X<sup>2</sup> (1, N = 300) = 81.508, P < 0.000      <sup>d</sup>X<sup>2</sup> (1, N = 300) = 93.844, P < 0.000

### F-5 Target Tense: Future

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	224	71
Intermediate <sup>b</sup>	149	91
Lower advanced <sup>c</sup>	40	214
NS <sup>d</sup>	32	218

<sup>a</sup> $\chi^2(1, N = 480) = 72.910, P < 0.000$

<sup>c</sup> $\chi^2(1, N = 300) = 114.848, P < 0.000$

<sup>b</sup> $\chi^2(1, N = 300) = 128.892, P < 0.000$

<sup>d</sup> $\chi^2(1, N = 300) = 95.231, P < 0.000$

### F-6 Target Tense: Future Perfect

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	221	52
Intermediate <sup>b</sup>	142	47
Lower advanced <sup>c</sup>	41	195
NS <sup>d</sup>	28	211

<sup>a</sup> $\chi^2(1, N = 480) = 49.761, P < 0.000$

<sup>c</sup> $\chi^2(1, N = 300) = 88.196, P < 0.000$

<sup>b</sup> $\chi^2(1, N = 300) = 50.088, P < 0.000$

<sup>d</sup> $\chi^2(1, N = 300) = 73.215, P < 0.000$



## APPENDIX G: ASPECTUAL VS INFLECTIONAL MARKERS IN THE RT

### G-1 Target Time: Present

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	324	42
Intermediate <sup>b</sup>	192	38
Lower advanced <sup>c</sup>	37	204
NS <sup>d</sup>	4	185

<sup>a</sup>X<sup>2</sup> (1,N = 473) = 100.229, P < 0.000)    <sup>b</sup>X<sup>2</sup> (1,N = 331) = 59.297, P < 0.000)  
<sup>c</sup>X<sup>2</sup> (1,N = 278) = 117.660, P < 0.000)    <sup>d</sup>X<sup>2</sup> (1,N = 196) = 68.674, P < 0.000)

### G-2 Target Time: Past

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	209	31
Intermediate <sup>b</sup>	126	34
Lower advanced <sup>c</sup>	25	114
NS <sup>d</sup>	15	152

<sup>a</sup>X<sup>2</sup> (1,N = 335) = 56.664, P < 0.000)    <sup>b</sup>X<sup>2</sup> (1,N = 221) = 53.294, P < 0.000)  
<sup>c</sup>X<sup>2</sup> (1,N = 162) = 70.210, P < 0.000)    <sup>d</sup>X<sup>2</sup> (1,N = 173) = 118.879, P < 0.000)

### G-3 Target Time: Future

Level	Aspectual Markers	Inflectional Markers
Elementary <sup>a</sup>	230	70
Intermediate <sup>b</sup>	148	66
Lower advanced <sup>c</sup>	41	137
NS <sup>d</sup>	19	138

<sup>a</sup>X<sup>2</sup> (1,N = 407) = 88.724, P < 0.000)    <sup>b</sup>X<sup>2</sup> (1,N = 276) = 71.745, P < 0.000)  
<sup>c</sup>X<sup>2</sup> (1,N = 213) = 71.886, P < 0.000)    <sup>d</sup>X<sup>2</sup> (1,N = 180) = 44.007, P < 0.000)