Towards a Motivated Annotation Schema of Collocation Errors in Learner Corpora

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The Problem

- The relevance of **collocations** (in the sense of Hausmann, Mel'čuk et al.) in L2 learning is generally acknowledged

  dar un ***paseo****/ faire une* **promenade** '[to] *take a* ***walk***'

  fumador *empedernido / gros* ***fumeur*** '*heavy* ***smoker***'

- It is **collocations** which are difficult to master by the learners! Typical errors:

  hacer un ***paseo****/ donner une* **promenade** **'**[*to*] *take a* ***walk***

  big ***smoker****/ lourd* ***fumeur*** '*heavy* ***smoker***'

- Current learner error annotation schemata tend to group collocation errors into one single subclass of lexical errors

BUT

The Problem

- A look at a learner corpus of Spanish (CEDEL2)

  http://www.uam.es/proyectosinv/woslac/cedel2.htm

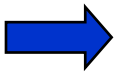
  shows that collocation errors of rather different types can be identified

  salvar dinero 'to save money' (instead of *ahorrar dinero*)

  recibir un llamo 'to receive a call' (instead of *recibir una llamada*)

  asistir la universidad, lit.'to attend university' (instead of *asistir a la universidad*)

  …



- A more detailed collocation error classification is needed!

Outline

1. **Towards a typology of collocation errors (based on a Spanish learner corpus)**

2. **Knowtator: Tool for annotating collocation errors in the corpus**

3. **The framework of our work:The research project COLOCATE**

   3.1. Creation of collocation-oriented content in a web-based learning environment

   3.2. Automatic processing of collocations in a web-based learning environment

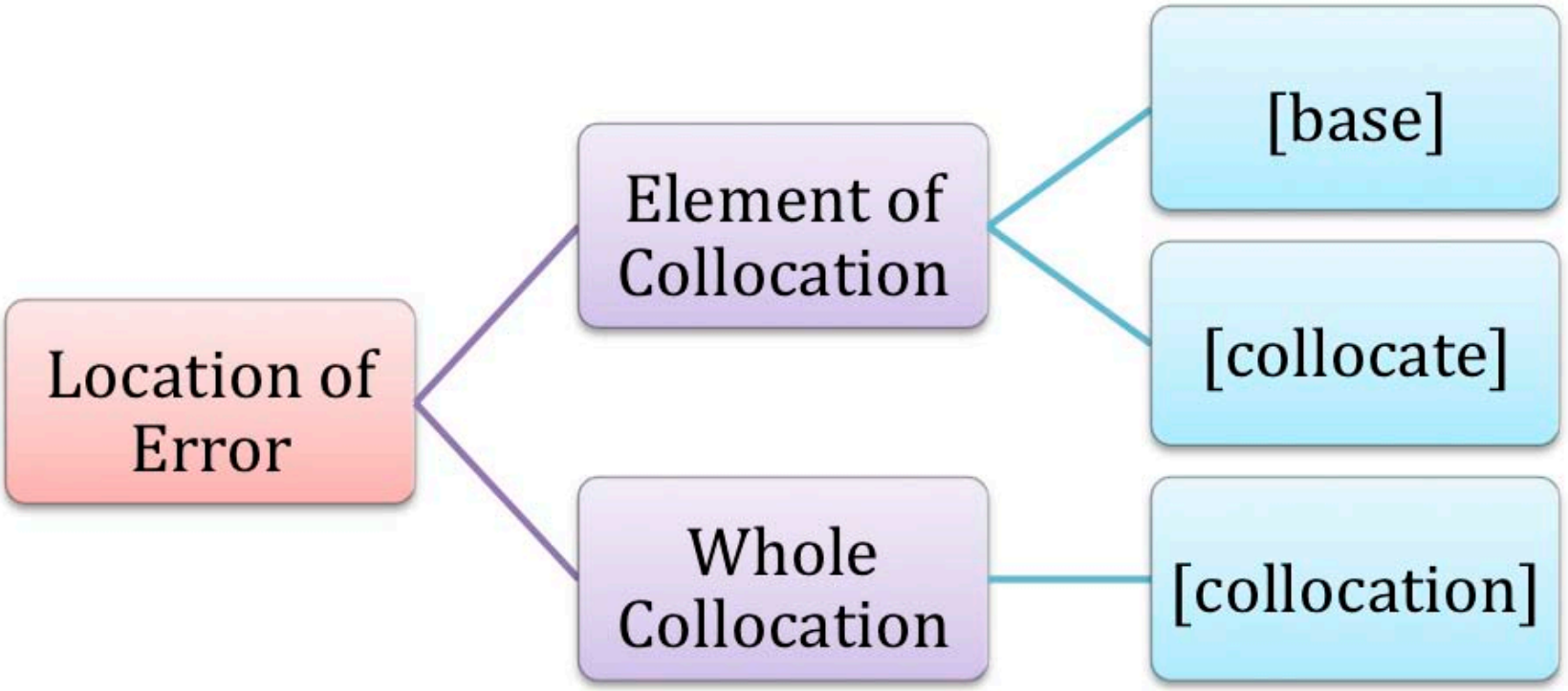
4. **Preliminary findings**

5. **Conclusions and future work**

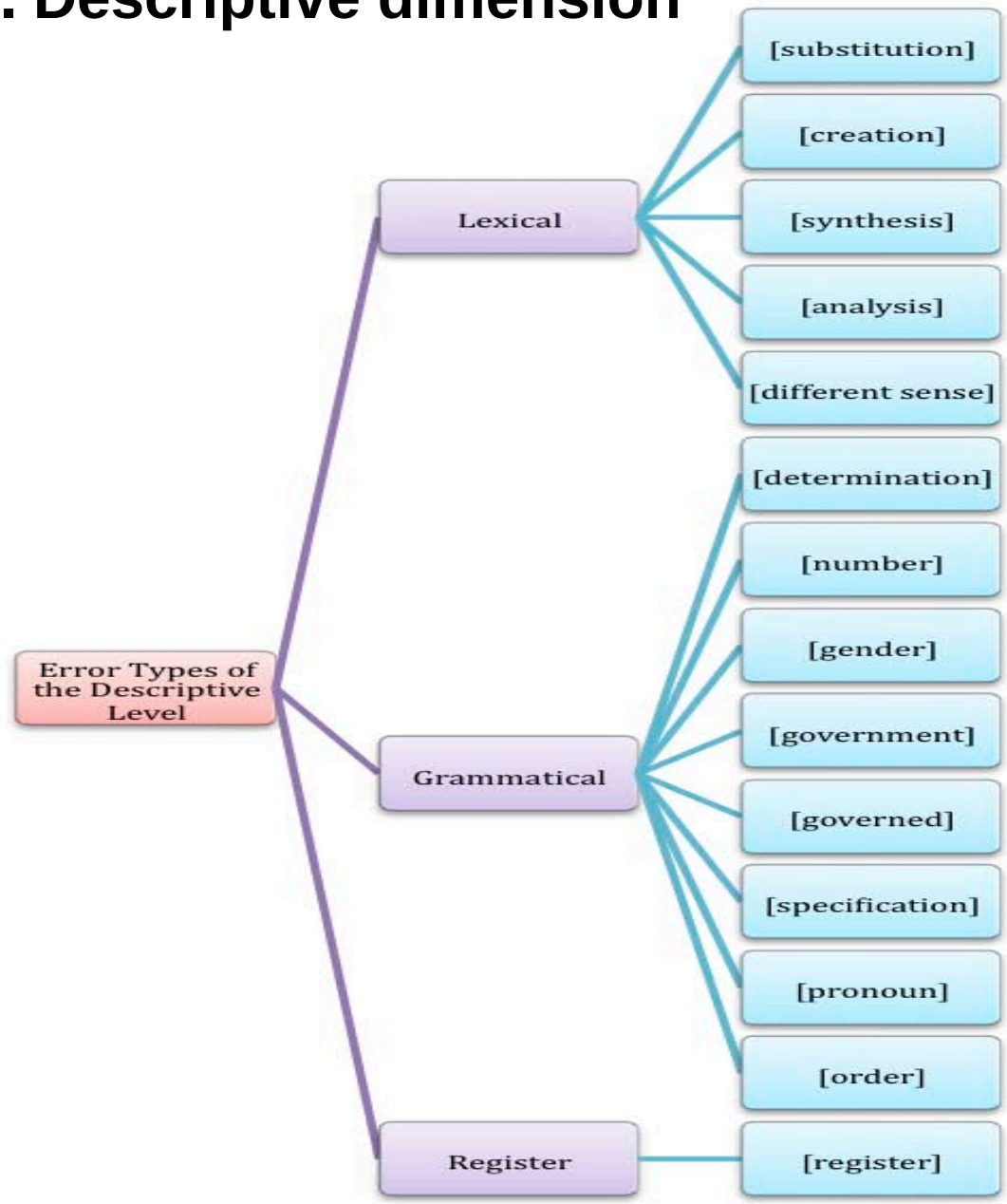
1. Three-dimensional Collocation Error Typology:

(i) location
(ii) descriptive
(iii) explanatory

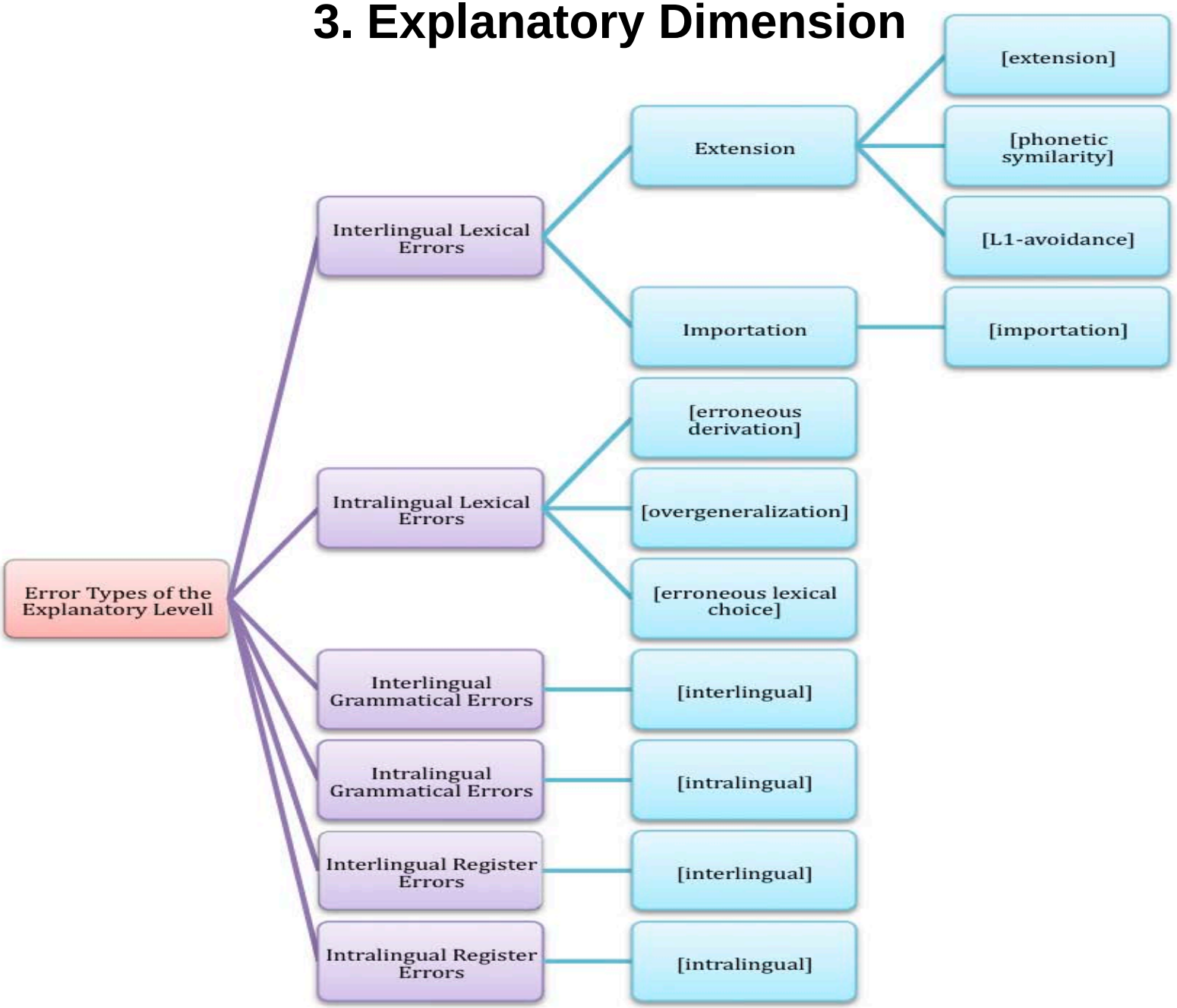
1. Location dimension



2. Descriptive dimension



3. Explanatory Dimension



Ilustration of interlingual lexical errors (affecting the base or the collocate)

LOCATION	DESCRIPTIVE CRITERION	EXPLANATORY CRITERION: Interlingual Errors			
		Importation	Extension		
				Phonetic similarity	L1 avoidance
BASE	Substitution	hicimos wakeboarding	juego de fútbol (from *game*)	Doy una marca (instead of *poner una nota*)	Estado económico (from *economic situation*)
	Creation	recibí un llamo (analogy with *call*)			
COLLOCATE	Substitution		gastar todo el año (from *spend*) tomé examen (from *take*) Doy una marca (from *give*)	lengua maternal (from *maternal language*) capturar la atención (from *capture*)	cambiar a la verdadera religión (Eng. *convert to a religión*) acudir el teléfono (Eng. *attend the telephone*)
	Creation				

Ilustration of interlingual lexical errors (affecting the base or the collocate)

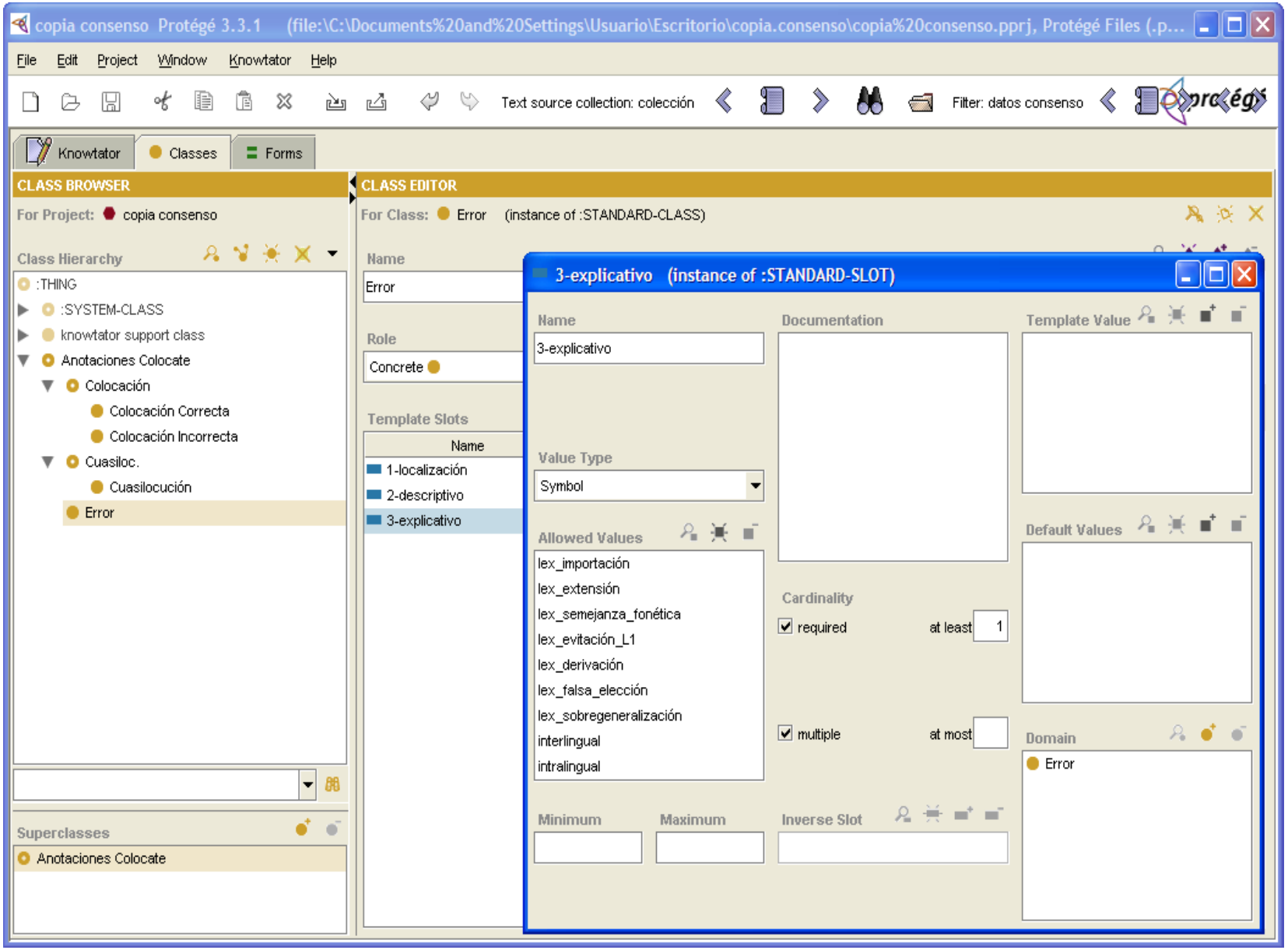
LOCATION	EXPLANATORY CRITERION: Intralingual Errors		
	Erroneous derivation	**Overgeneralization**	**Err. lexical choice**
BASE	recibí un <u>llamo</u> (analogy with *paseo*, *canto, salto..*)		Me da el <u>sentido</u> (instead of *la sensación*)
COLLOCATE	enseñanza <u>segundaria</u> (from *segundo*)	<u>hacer</u> citas (instead of *concertar*) <u>malos</u> efectos (instead of *nocivos*, *dañinos*)	<u>toman</u> puestos (instead of *ocupar puestos*) <u>escribir</u> el examen (instead of *hacer*)

Illustration of interlingual and intralingual grammatical errors (affecting the base or the collocate)

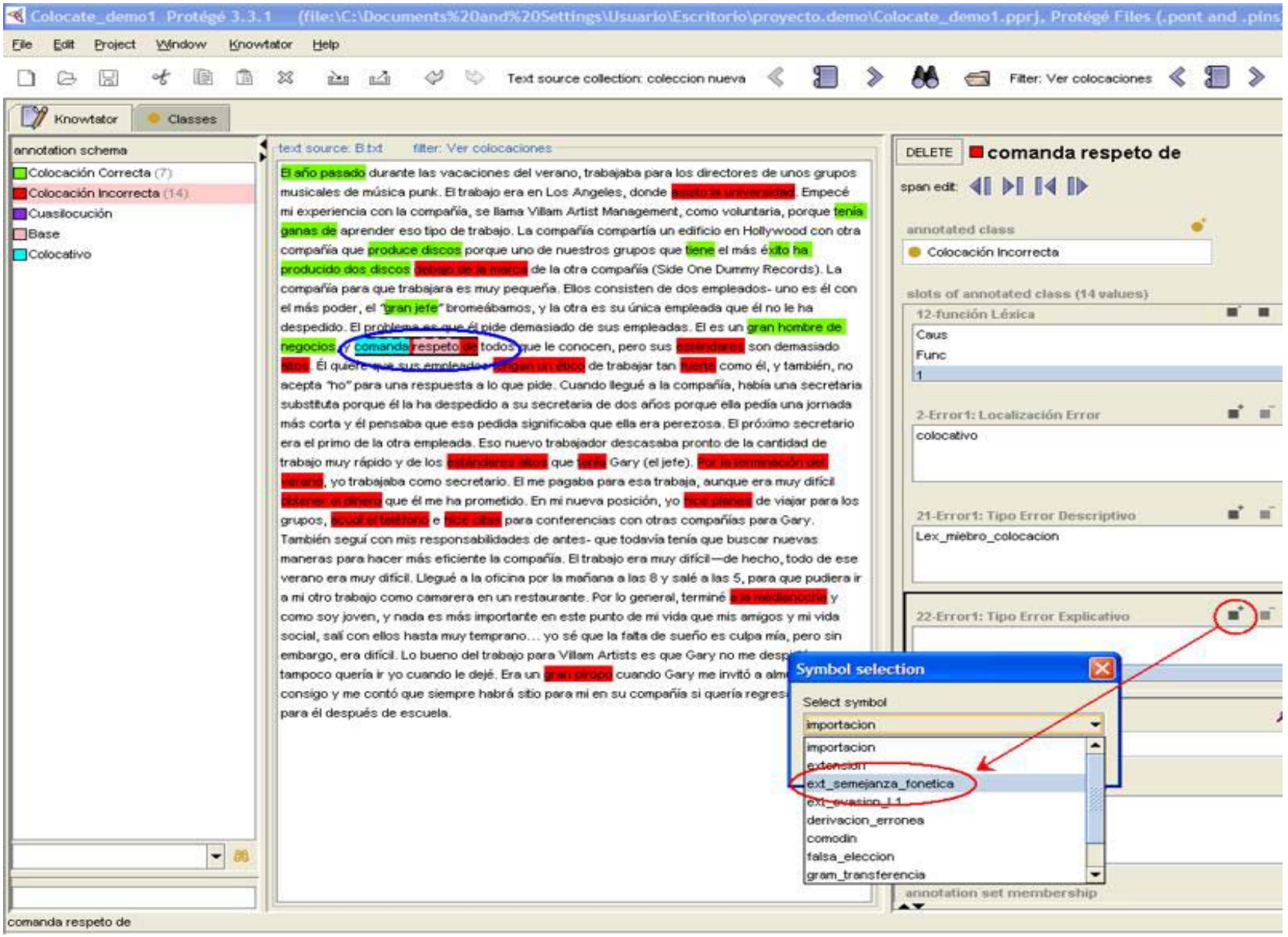
		Explanatory criterion	
Location	**Descriptive criterion**	**Interlingual errors**	**Intralingual errors**
Base	**determination**	• tienen el derecho de (from *to have the right to*) • terminé escuela (from *to finish school*)	• tomé examen (instead of *tomé un examen*)
	number		• hicimos los esquís del agua (instead of *esquí de agua*) • tienen prejuicio (instead of *prejuicios*)
	gender		• días festivas (instead of *días festivos*)
	government	• tengo interés in • tengo razones por	
	specification		• probar comida (an article or an adjective should be used to specify the base, e.g. *probar comida exótica*)
Collocate	**goverment**	• hablando al teléfono (from Italian, the student's L2: *parlare al telefono*) • asisto un juego de fútbol (from *assist a game of…*) • entró la universidad (from *enter university*)	• montó el autobús (instead of *montar en..*)
	pronoun		• muero de ganas (instead of por *me muero de…*) • la película se trata.. (instead of *la pelícla trata*)

2. The corpus annotation tool: Knowtator

The annotation schema in *knowtator*



Tagging collocations with *knowtator*



3. The research project: towards a Learning Environment COLOCATE

The Objectives of COLOCATE

A) Develop didactic means which support

1) interactive learning with collocation error verification and NLP-based error correction

2) data-driven active learning

B) Develop resources such as

1) DiCE *Diccionario de colocaciones del español* (DiCE) http//www.dicesp.com

2) personalized collocation dictionaries

3) collocation-annotated learner corpus

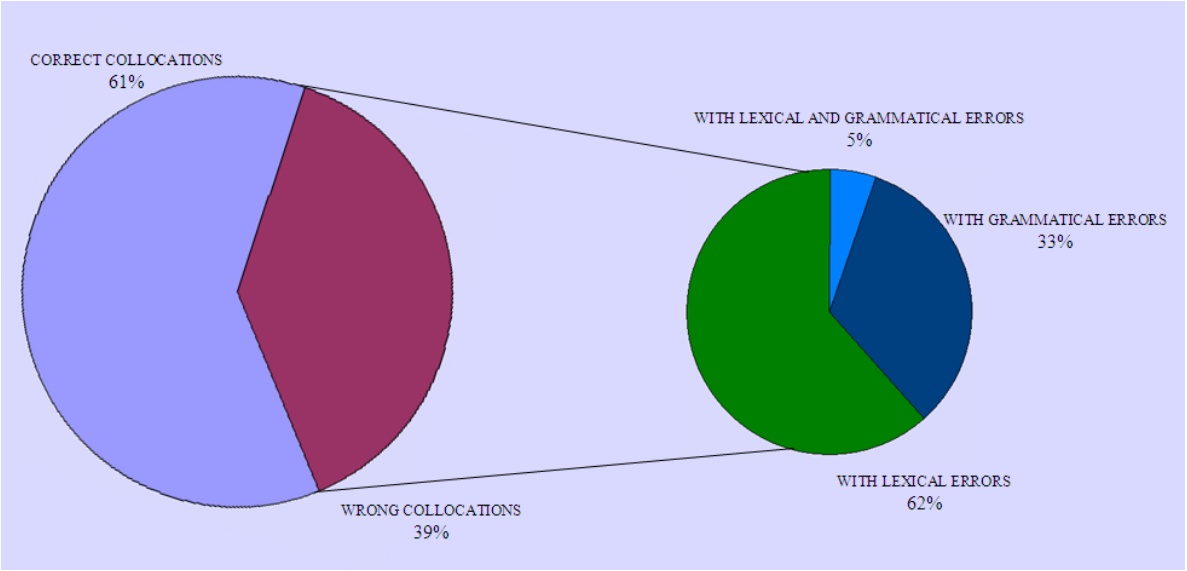
C) Develop NLP-techniques

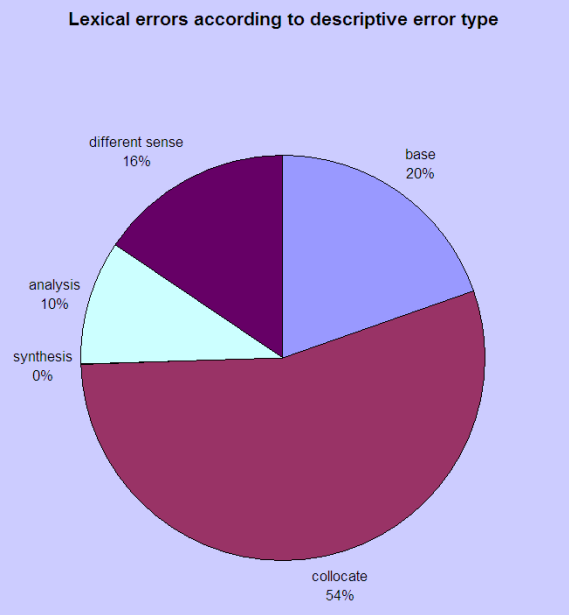
1) For automatic recognition and classification of collocations

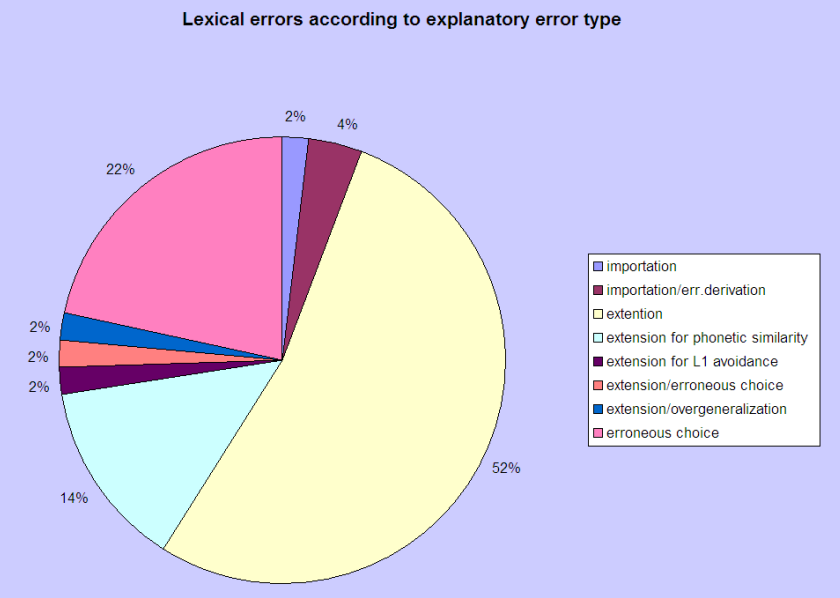
2) For automatic error correction and learning material provision

4. Preliminary Findings

Preliminary findings







5. Conclusions and Future Work

5. Conclusions

1) Collocation errors in learner corpora are far from homogeneous and neither is their distribution!

2) A fine-grained collocation error typology is needed to capture the major error types

3) Targeted exercises and targeted supplementary teaching material (provided by automatic means) are needed to support active language learning

4) COLOCATE is about to address the important issues in L2 learning: (i) adequate didactic tools, (ii) collocation and collocation error resources; (iii) NLP techniques for tracing and classification of collocations and collocation errors

5. Future Work

- ✓ Continue with the annotation of the learner corpus with collocation errors
- ✓ Continue with the annotation of the learner corpus with collocations (Lexical Functions)
- ✓ Extend the DICE
- ✓ Provide resources for didactic material
- ✓ Continue to work on ML-based recognition/ classification of collocations and collocation errors
- ✓ Etc., etc., etc.

Thank you very much for your attention!