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Metadiscourse can be found everywhere, also in Estonian academic text

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Introduction: academic text

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Tegevusuuring kaasavas lasteaiarühmas: eripedagoogilised koolitused ja nõustamine õpetajatele

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Annotatsioon

Erivajadustega lapsed vajavad õppimisel teistest enam toetust ning keskkonnas tehtavad kohandused peaksid kindlustama kvaliteetse alushariduse kõikidele sama rühmaruumi jagavatele lastele (Barton & Smith, 2015; Næsby, 2020). Tegevusuuringu eesmärk oli katsetada eripedagoogiliste koolituste ja nõustamise kombinatsiooni õpetajate toetamisel ning hinnata selle sobilikkust kaasava hariduse edenemiseks lasteaiarühma tasandil. Kahes aia- ja kahes sobitusrühmas kaardistati eelnev olukord. Seejärel said õpetajad osaleda asutuse tellitud eripedagoogilistel koolitustel ja õpetajaid (N = 8) nõustati veebi vahendusel. Järgnes nõustamisel kokkulepitu rakendamine rühmades 6–8 nädala jooksul ja lõpuks hinnati muutust ning pakutud sekkumiste asjakohasust ja kasulikkust. Õpetajad leidsid, et eripedagoogilised koolitused ja nõustamine toetasid kaasava hariduse rakendamist (viiepalliskaalal oli keskmine hinnang 3,6). Uuringu käigus tõusis esile vajadus muuta tõhusamaks koostööd rühmas töötavate täiskasvanute vahel.

Võtmesõnad: kaasav haridus, lasteaiaõpetaja, eripedagoog, tegevusuuring

Sissejuhatus

Riigi tasandil defineeritakse, mis on hariduse roll, ja määratakse kindlaks haridussüsteemi kujundamise, toimimise ning arengu põhimõtted. Sarnaselt muu maailmaga on Eestis pärast taasiseseisvumist liigutud kaasava hariduse põhimõtete rakendamise suunas nii lasteaedades (Koolieelse lasteasutuse seadus, 1999) kui ka koolides (Põhikooli- ja gümnaasiumiseadus, 2010). Mida

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6. Results

Table 1 presents a ranking of the 97 nations based on their *INSI* score (column #6). Compared with the previous ranking based on the *HQSI* (cf. Allik 2013, Allik et al. 2020), the ranking of countries based on the *INSI* looks intuitively more accurate. For example, Panama lost its status as the country with the highest science impact because of a failure to reach the *ESI* in 9 out of the 22 research areas. Due to this, Panama dropped from first place to the 3rd position. The drop of Georgia from the 3rd to the 10th place was also due to a failure to reach the *ESI* in numerous (11) research areas. However, the recession that Armenia experienced was the largest: a failure in 15 research areas dropped Armenia from 18th to 72nd position in the ranking. It is important to note that smaller and economically less developed countries may have problems maintaining a sufficient number researchers to produce papers in all areas to reach the top half of all countries by the number of citations their papers were able to collect.

In a recent study by Allik and colleagues (2020), it was observed that the best predictor of high-quality science as measured by *HQSI* was not economic wealth or research and development expenditure but the quality of governance measured by the World Governance Indicators or WGI, $r = .59$, $N = 97$, $p < .001$. In the present study, the observed correlation between the *INSI* and the WGI increased by about 0.1 points, now $r = .69$ ($N = 97$, $p < .001$). Figure 1 demonstrates a two-dimensional plot

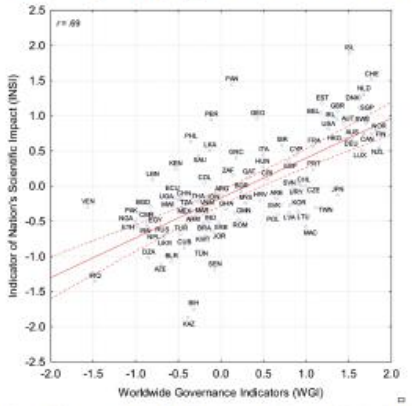

Figure 1. Correlation plot between the Worldwide Governance Indicators (WGI) and the Indicator of a Nation's Scientific Impact (*INSI*): $r = .67$, $N = 97$, $p < .001$. Countries are referred to according to their officially assigned the ISO 3166-1 alpha-3 codes listed also in Table 1, column "Code".

their disciplines, investigating the preferred patterns of expression in different communities. Students can be helped to read rhetorically and to reflect, perhaps through diaries, on the practices they observe and use themselves (e.g., Johns, 1990). What, for example, is an author's purpose in using a personal pronoun here? Why has she chosen to summarise or explicitly mark a topic shift at this point? What is achieved by including a citation here? When do writers typically express their doubt and certainty?

Teachers can also allow sample texts to drive learning more directly by helping students' to explore 'expert' models, asking small groups to count the forms they find and discuss typical collocations in a computer corpus, perhaps comparing those found in articles and theses. Students can also interview faculty experts on their own writing practices or on their reactions to the practices of others in the discipline. These findings are likely to provide a useful basis for group feedback discussions and further consideration on the decisions behind certain forms and the impressions one can make in employing them. Finally, and most importantly, students need opportunities to employ these forms and to experiment with their academic writing. Only by employing these interpersonal features in their texts will students be able to get feedback on their practices to evaluate the impact of their decisions more clearly. In all these ways, introducing students to an awareness of metadiscourse can provide students with important rhetorical knowledge and equip them with ways of making discourse decisions that are socially grounded in the inquiry patterns and knowledge structures of their disciplines.

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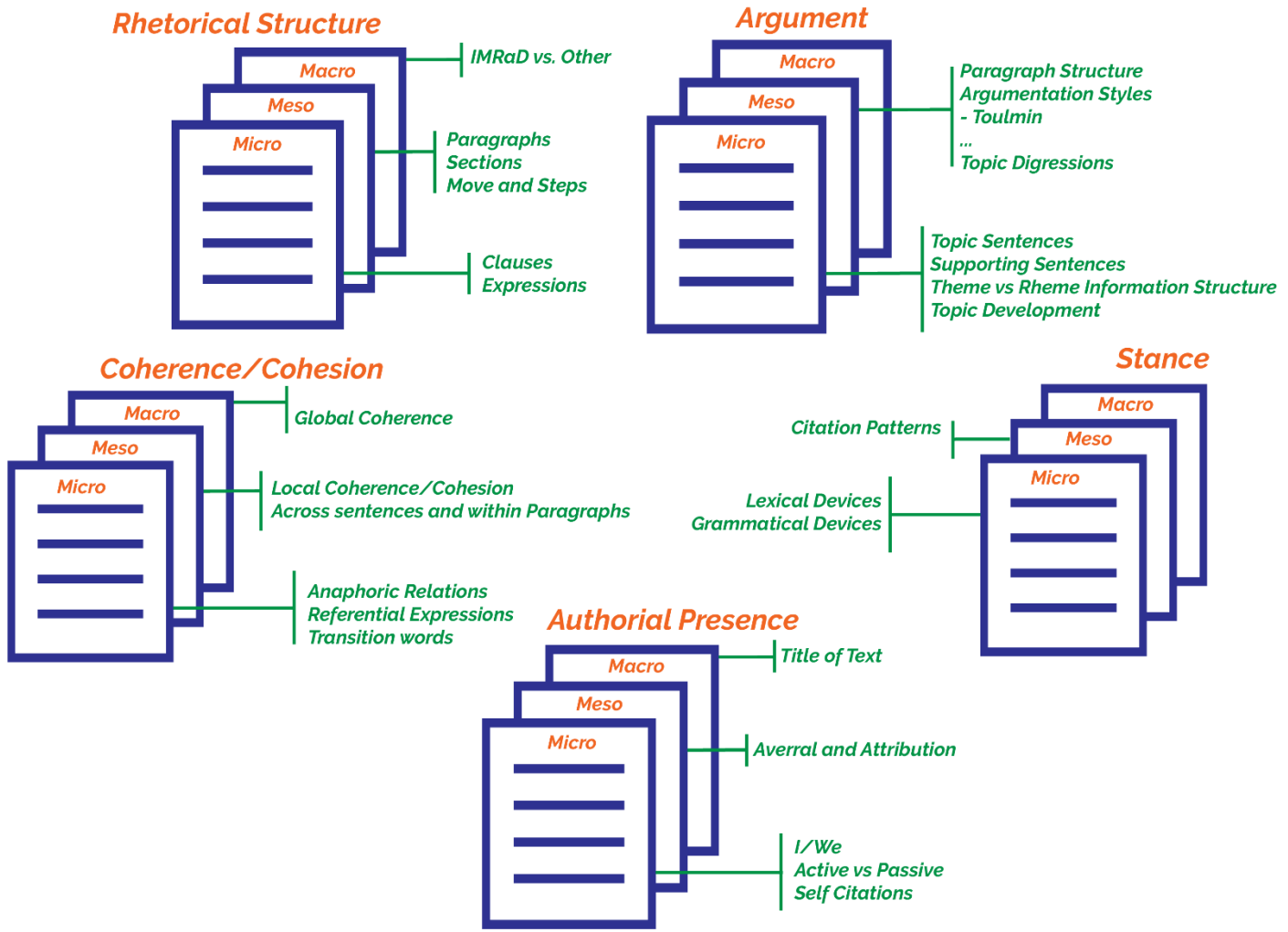
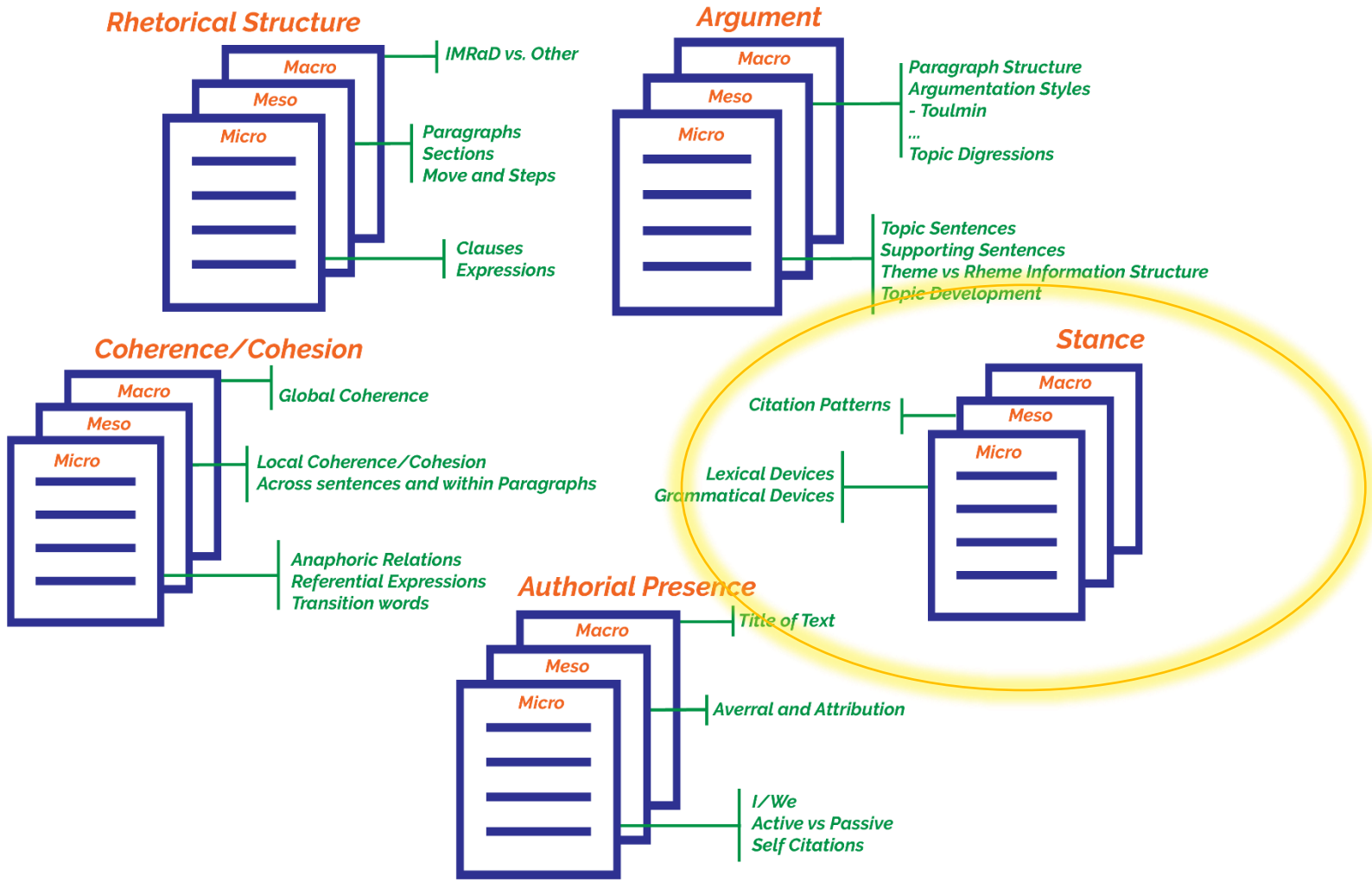
Introduction: bwrite

- English as the current *lingua franca* of science
  - However, research is and should be published in local languages also
- Our aim: enable smaller languages to investigate their own academic writing identity/tradition
  - The way academic texts are written is culture-dependent
- A model which we apply to academic writing in the languages of the Baltic states, Estonian, Latvian, and Lithuanian

Introduction: bwrite



Introduction: bwrite



Stance and metadiscourse

- The ways writers express their arguments, engage with the reader, and portray themselves and their readers
- Function as cues to the reader to understand and accept the propositional content
- Correspond to the norms and expectations of particular cultural and professional communities

Stance and metadiscourse

“Hyland and his … ways of classifying using metadiscourse and so many people following Hyland blindly even in other languages - with the assumption it’s everywhere (even in Estonian texts)”

Metadiscourse (MD) model

- Hyland 2005: An interpersonal model of metadiscourse

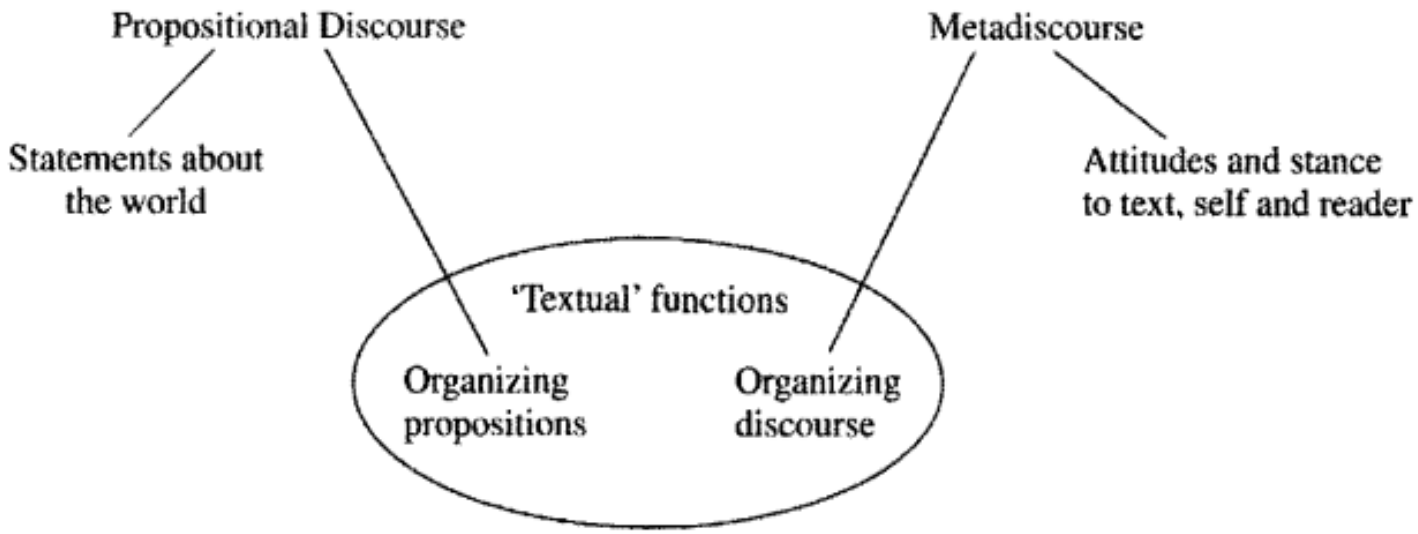


Figure 3.2 *The role of 'textual' devices in texts*

MD model

- Interactive dimension
  - The writer's purpose: *to shape and constrain a text *meet the needs of particular readers *set out arguments so that they will recover the writer's preferred interpretations and goals

  - Transitions: relations between main clauses (*in addition; but; thus*)
  - Frame markers: discourse acts, sequences (*finally; to conclude*)
  - Endophoric markers: other parts of the text (*noted above, see Figure 2*)
  - Evidentials: other texts (*according to X; Y, 2005*)
  - Code glosses: elaborate prop. meanings (*namely; in other words*)

MD model

- Interactional dimension (=stance and engagement)
  - The writer's goal: *to make his or her views explicit *involve readers *allow them to respond to the unfolding text

  - Hedges: withhold commitment, open dialogue (*might; perhaps; possible*)
  - Boosters: emphasize certainty, close dialogue (*definitely, it is clear that*)
  - Attitude markers: express writer’s attitude (*unfortunately; I agree*)
  - Self mentions: explicit reference to author(s) (*I; we; you; the author*)
  - Engagement: build relationship with reader (*note that; consider; compare*)

MD in other languages

Table 2
Metadiscourse in postgraduate dissertations (per 10,000 words)

Category	Masters	Doctoral	All	Category	Masters	Doctoral	All
Transitions	75.8	95.6	89.0	Hedges	86.1	95.6	92.4
Evidentials	40.0	76.2	64.1	Engagement markers	39.7	51.9	47.8
Code glosses	27.4	40.6	36.2	Boosters	31.7	35.3	34.1
Frame markers	20.7	30.3	27.1	Attitude markers	20.4	18.5	19.2
Endophorics	22.3	24.0	23.4	Self-mentions	14.2	40.2	31.5
Interactive	186.1	266.7	239.8	Interactional	192.2	241.5	225.0

MD in other languages

Table 2
Frequency of use of metadiscourse features in the two sub-corpora.

	English sub-corpus		Spanish sub-corpus		
	Raw number	Per 10,000 words	Raw number	Per 10,000 words	p-value
Interactive metadiscourse					
Logical markers	476	60.0	264	45.6	0.003
Code glosses	778	98.1	437	75.4	0.000
Sequencers	73	9.2	41	7.1	0.176
Topicalisers	11	1.4	57	9.8	0.000
Endophoric markers	182	23.9	210	36.3	0.000
Evidentials	813	102.5	366	63.2	0.000
Total	2333	294.2	1375	237.4	0.000
Interactional metadiscourse					
Hedges	1587	200.1	734	126.7	0.000
Boosters	509	64.2	418	72.2	0.075
Attitude markers	646	81.5	452	78.0	0.481
Engagement markers	115	14.5	107	18.5	0.071
Self-mentions	744	93.8	382	65.9	0.000
Total	3601	454.1	2093	361.3	0.000
Overall total	5.934	748.2	3.468	598.6	0.000

MD in Estonian academic writing

- The description of Estonian academic writing has not yet reached a comprehensive understanding
  - no studies about MD in Estonian academic texts
  - (overview about the study of Estonian acad. text: Hint, Leijen, Jürine 2022)
  - students are not taught to pay attention to MD markers in their texts

- No evidence about the suitability of Hyland's model to Estonian
  - MD as a functional concept and should be language dependent
  - need to relabel Hyland's categories

Data and method

Data

- 30 (21) research articles from 3 linguistics journals
  - Keel ja Kirjandus
  - Emakeele Seltsi aastaraamat
  - Eesti Rakenduslingvistika Ühingu aastaraamat
- Published in 2011–2020 (1x3 from each year)
- Single author, native speaker of Estonian
- Noise removed: abstracts, tables, figures, references, quotations, linguistic examples
  - On average, 360 MD markers per article

Data

- Corpus size: 89,660 words
- Identification of MD markers:
  - automatic
  - manual
- Extensive manual coding necessary as a first step
  - Will be used for machine learning in later stages

Coding

Feature	Values	
Interaction dimension	interactive, interactional	
MD marker category	Trans: addition, comparison, consequence	Hedge: verb, adv, adj, other
+ Type within category	Frame: sequence, text stage	Booster: verb, adv, adj, other
	Endo: previewing, reviewing, whole text, visual	Attit: verb, adv, adj, other
	Evid: int_1, int_more, non_int_1, non_int_more	Self: pron, verb_infl, self mention, impl, other
	Code: reformulation, example, elaboration	Engage: reader_ref_w, directive, question, shared knowledge, other
	+ freq, modal, unclear	
Text section	intro, lit_rev, method, results, disc, res/disc, concl, other	
Linguistic form	grammatical, lexical, construction, punctuation	

Coding problems

- An elaborate coding schema developed after provisional coding of 5 articles

- Problems
  - Telling apart propositional and metadiscoursive meaning
  - Inter-coder reliability
  - Automatic detection of **some** metadiscourse devices is possible, but has to be checked manually, produces noise

Results

Preliminary results

Marker category	Count	%
transition	2006	22.9%
frame marker	263	3.0%
endophoric marker	1012	11.6%
evidential	401	4.6%
code gloss	1078	12.3%
hedge	380	4.3%
booster	413	4.7%
attitude	207	2.4%
self mention	533	6.1%
engagement	98	1.1%
frequency	690	7.9%
modal	552	6.3%
unclear	27	0.3%
none	1092	12.5%
Total	**8752**	**100.0%**

interactive 4760 (54.4%)
interactional 1631 (18.6%)
gray area 1269 (14.5%)

Interactive: transition

Transition	2287	Examples
Addition	1030	ka, samuti, lisaks aga kusjuures
Comparison	438	aga kuid kuigi
Consequence	818	seega siiski kuna mistõttu, seetõttu
Other	1	

Lisaks luuakse selliste adjektiividega mulje reklaamitava toote pikaajalisusest ja vastupidavusest.

Seega on emakeelekõneleja ja õppija morfoloogilised valikud erinevad, /---/.

Interactive: endophoric

Endophoric markers	1010	Examples
Previewing	106	järgmises X, järgnevalt, järgnevas, peatükk X, allpool, edaspidi
Reviewing	49	eespool, eelpool, ülal …, vt osa NR
Whole text	167	artikkel käesolev uurimus, siinne kirjutis, Töö
Visual	688	näide NR, tabel NR, joonis NR, lause NR

Järgnevalt toon välja need kõrval-lause subjekti väljajätu kontrollijad, mis uuritavast keele-materjalist esile tulid.

Uurides internet-keelt, mitte ainult normeeritud kirjakeelt, leiti **siinses töös** ka sõnu, /---/.

Interactive: code gloss

Code gloss	1078	Examples
Elaboration	632	– (…) : ehk st s.t
Example	303	näiteks, nt, (nt …), (näiteks …) nagu näiteks nagu
reformulation	143	ehk s.o nn (…)

Korpus on märgendatud mitmel keeletasandil **(**sõna-, hääliku-, silbi-, kõnetakti- ja lausungitasand**)**.

/---/, mille tähendus hõlmab eri tugevusega hinnanguid, **nagu näiteks** süüdistus, hukkamõist või märkus.

/---/, saab fraasilaiendi mõjuväljas olla ainult tema, **ehk teiste sõnadega**, genitiivagendiga fraas käitub nii, /---/.

Interactional: self mention

Self mention	532	Examples
Implicit	349	impersonal passive (V+tud)
1st sg pron	10	*minu eesmärk* *minu teada* *ma käsitlen* *ma ei kirjelda*
Self ref. word	27	*siinkirjutaja* *autor* *uurija*
Verb inflection	146	V+1SG

Siinses artiklis lähtu**takse** just lausetüübist, /---/.

Vaatluse alla **olen** võtnud nii ilukirjandus- kui ka ajakirjandustekstidest /---/ pärit laused ja **ma käsitlen** neid koos.

/---/ oli aga rikkam sõnavara, mis võib **siinkirjutaja** arvates olla seotud /---/.

Interactional: hedges

Hedge	380	Examples
Adjective	23	*võimalik, otsene, tinglik*
Adverb	178	*ilmselt, pigem, suhteliselt, tõenäoliselt, üldiselt*
Verb	36	*(ei) pruugi, (saab) oletada, kaldub (olema), (võib) arvata*
Other	143	*annab alust oletusele, laias laastus;* V+cond

Nimetan seda osalist siin **tinglikult** kasusaajaks.

Järgnev tekst **annab võimaluse oletada** /---/.

Teemat tule**ks** uurida suurema hulga materjali põhjal, /---/.

Interactional: boosters

Boosters	**413**	**Examples**
Adjective	15	*selge, vaieldamatu, otsene*
Adverb	213	*just, isegi, selgelt, täiesti, üldse*
Other	185	*eriti just, eriti aga, tuleb rõhutada,* clitic –ki/-gi

Nagu artiklist selgub, joonistuvad kogutud andmete põhjal teatavad kasutus-tendentsid **selgelt** välja, mistõttu töö õigustab ennast.

/---/ **on selgelt näha**, et ülesanded, mida relatiivadverbid lauses täidavad, kattuvad suurel määral.

Sealjuures leidub verbe, mida saab**ki** seostada vaid kõnealuse konstruktsiooniga.

Discussion

Discussion

- Analysing MD along the principles of **functional linguistics**
  - i.e., MD devices should be language dependent
  - cf. Latvian and Lithuanian

- Possible **variation** across languages, disciplines, sub-genres, …
  - possibly necessary to adapt the coding

- Our aim is **not to compare**
  - is it really informative whether there are more or less MD markers than in other languages

Discussion

- MD markers say something about **text organization** and **writer's attitude**
  - how does it relate to other features in the model (e.g. argument, authorial presence)
  - what about looking them on a larger scale and different text types

- **Text awareness**: expert writers vs. beginner writers
  - implications to teaching academic writing
  - assist students in acquiring discipline-specific writing practices

- Implications
  - what kind of additional information it gives us about the Estonian text
  - writer vs. reader responsible languages (Hinds 1987)
  - communication traditions (compare to e.g. politeness, small talk etc.)

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Questions, perhaps?

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