**Синтаксические маркеры научного текста**

**в «софт» и «хард» дисциплинах**

First, I compared the use of the syntactic markers of an academic text in the expert corpora. The results of the corpus analysis are presented in Table 1.

As can be seen from the table, not all syntactic constructions recommended in textbooks in academic writing are extensively used by professional authors. For example, both managers and economists hardly ever use it-clefts, pseudo-clefts, th-wh constructions, adverbial clauses of purpose and manner.

The most significant differences in the use of the syntactic markers of an academic text are observed for adverbial clauses of condition, place and result (LL=209.97, 138.30 and 62.95 respectively) which prevail in the papers in economics. Managers use adverbial clauses of time, contrast and concession as well as relative clauses and non-finite clauses significantly more frequently than economists do with the largest log likelihood value of 52.62 detected for relative clauses.

At the next stage of the analysis the learner corpora in the same disciplines were compared with each other. The results of the analysis are given in Table 2.

As can be seen from the table, the most significant difference (LL=25.66) was detected in the total use of adverbial clauses which more frequently occur in the works of economics students. They also use it-clefts, pseudo-clefts and th-wh constructions more often than managers do. This coincides with the pattern in the expert corpora.

Most types of adverbial clauses were more frequently used by economics students; however, the significant difference was detected only for adverbial clauses of place (significant at the 1% level), result (significant at the 1% level), condition (significant at the 1% level) and concession (significant at the 5% level).

The only type of adverbial clauses that was more common in the management corpus was adverbial clauses of result. Management students use them more than three times as frequently as economists whereas in the expert corpora adverbial clauses of result were found to be more common for economists. Relative clauses and non-finite clauses also occur more often in the management corpus. However, log likelihood values for the former showed that the difference was insignificant, but it was significant for the latter at the 5% level.

Finally, the expert corpora were compared with the learner ones (see Tables 3 and 4).

As for academic texts in management (Table 3), the most significant difference (LL=190.73) was found in the total use of adverbial clauses. All types of adverbial clauses under study occur more frequently in the experts’ texts with the largest log likelihood value detected for adverbial clauses of time (111.13). This type of adverbial clauses was found to be the most frequent one in the expert corpus (1270 occurrences). Significant differences were also seen in the use of adverbial clauses of contrast, condition, concession and place which occurred more frequently in the reference corpus. The other types of adverbial clauses were also more often used by professional writers but the differences with the learner corpus were found to be insignificant.

The second most significant difference (LL=178.38) was observed in the use of attitudinal clauses. As normalized frequencies show, learners use them six times as often as professional writers.

The th-wh constructions were much more frequently used in the learner corpus than in the expert one with the LL value of 21.30. It-clefts were not used in the reference corpus and there was only one occurrence of this structure in the learner corpus. Anyway, the difference between the two corpora was found to be insignificant as well as the difference in the use of pseudo-clefts.

Table 4 shows that in the learner corpus there are almost 8 times as many attitudinal as corpus as in the expert one, this difference was found to be the most significant one between the two corpora with LL=184.73. Like in the works in management, in economics professional writers use adverbial clauses significantly more often than students (7.766 occurrences per 1000 words in the expert corpus vs 5.223 in the learner corpus). The only adverbial clause which is more frequently used in the learner corpus is that of reason, however the log likelihood value of 2.34 shows that the difference is insignificant.

Both management and economics students use relative clauses more often than experts, this difference is significant at the 5% level in the papers in management and at the 1% level in economics. Non-finite clauses occur more frequently in the corpora of professional writing but in the case of managers, the difference was found to be insignificant, in the papers in economics it is significant at the 1% level.

**5 Discussion and conclusions**

Overall, the results of the data analysis show that not all syntactic structures recommended in methodical literature are extensively used by experts both in ‘soft’ and ‘hard’ disciplines. They are it-clefts, pseudo-clefts, th-wh constructions, adverbial clauses of purpose and manner. This might imply that under the conditions of limited classroom time EAP teachers may exclude them from courses in academic writing or allocate the constructions for learners’ self-study.

As for discipline-specific syntactic structures, adverbial clause of place, condition and result are apparently more common in ‘hard’ disciplines than in ‘soft’ ones which can be explained by their extensive use in comments for various calculations, models and formulas that abound in academic writing, for instance, in economics (1a, 1b, 1c):

(1) (a) *Thus, the optimization formulation follows Eq. (4),* ***where*** *P and t are the decision variables* (IJPE-2015-2).

 (b) ***If*** *we apply the change of variables r we have that RIo x0; y0 and, therefore, the Russell output measure of inefﬁciency is equivalent to an additive-type measure* (IJPE-2015-4)*.*

 (c) *For convenience, we multiply the Amihud illiquidity measure by −1* ***so that*** *the timing coefficient based on this measure has the same interpretation as that from the Pástor-Stambaugh liquidity measure* (JFE-2013-1).

By contrast, adverbial clauses of time, contrast and concession should be given special attention when teaching EAP to learners studying ‘soft’ disciplines.

Having compared the two learner corpora, I can conclude that, overall, the economics students appear to show more signs of syntactic complexity in their works than managers do with a more extensive use of almost all syntactic constructions under study. However, the comparison of the students’ and experts’ texts showed that both the management and economics students tend to underuse adverbial clauses of almost all types in comparison with professional writers and economics students, preferring to use more simple sentences (2a, 2b).

(2) (a) *Some of enterprises try to make and implement their own business processes models. Others try to use existing analysis and improvements models* (M-2015-21).

 (2) *Logistics appeared in the Roman Empire. Its main task was the distribution of food* (M-2015-44).

The first example (2a) apparently implies a contrast between the two types of enterprises, so it could be easily transformed into a complex sentence with *while/whereas*. Similarly, I believe, 2b would look more coherent with an adverbial clause of place (2c):

(2) (c) *Logistics appeared in the Roman Empire* ***where*** *its main task was the distribution of food.*

It was found that relative clauses marked with *which*, *who* and *whose* are overused by the management students both in comparison with professional writers and the economics students. In some works the relative pronouns are used several times in one sentence:

(3) (a) *As a result, for solution of the existing problems* ***which*** *exists in HRM, it is necessary not only to improve basic competences* ***which*** *are carried out by managers, having certain roles, but also focus on the acquisition of the new, integrated skills* ***which*** *will help HRM to move to a new level* (M-2015-3)*.*

(b) *During the conducted research there can be problems* ***which*** *are connected with the lack of certain information* ***which*** *the company considers a corporate secret and has no right to disclose it* (M-2015-48)*.*

The repetitions of *which* in 3a and 3b not only result in bad style but may also cause difficulties with understanding their meaning.

Another syntactic construction that is overused by the learners of both the disciplines is attitudinal clauses. Despite the fact that they are used in the expert corpora, the students use them several times more frequently than professional writers which might be explained by their relative simplicity, on the one hand, and recommendations of EAP textbooks, on the other.

Non-finite clauses are underused by both the management and economics students in comparison with professional writers. Non-finite clauses, being quite advanced structures (for example, non-finite clauses after *if* or *although* are considered to refer to C2 level of the CEFR, according to the English Grammar Profile (2015), might be difficult for the students to use, so they prefer to employ adverbial clauses of time or condition instead. Therefore, non-finite clauses deserve closer attention of EAP and ESP teachers who should devote some classroom time explaining the rules of their use and providing students with sufficient practice.