SPELLING AND GRAMMAR IN SECONDARY-SCHOOL PUPILS IN FLANDERS AND THE NETHERLANDS: CORRELATING KNOWLEDGE WITH ATTITUDE AND METACOGNITION

F. Devos, P. Kygnée
Ghent University (BELGIUM)

Abstract
A recent longitudinal survey into the learning of grammar and spelling in Flemish and Dutch secondary schools ([1]) has shown that the spelling and grammatical knowledge of Y11-Y12 students (n=362; aged 17-18 years) falls short of the final attainment targets, especially for grammar.

Additional research now focuses on the possible correlation between spelling and grammar results on the one hand, and attitude and metacognition, on the other. Therefore, alongside the spelling and grammar tests, participants were asked to sit a test on attitude (In your opinion, how important is spelling/grammar in the curriculum?) and one on metacognition (How confident are you about your spelling/grammar test?). Participants used a Likert scale, ranging from 1 (not important/not sure) to 5 (very important/very sure).

Four research questions could be answered:

- What is the attitude of Y11-Y12 students towards the importance of spelling and grammar in the curriculum in general?
- What is the correlation between attitude and scores for the spelling and grammar tests?
- What is the metacognition/self-efficacy of Y11-Y12 students in the spelling and grammar tests?
- What is the correlation between metacognition/self-efficacy and scores for the spelling and grammar tests?

In general, the results of this study suggest there is a positive correlation between both knowledge and attitude, and between knowledge and self-efficacy. Moreover, pupils seem to have a more positive attitude towards spelling than towards grammar, and they are also better at assessing their levels of spelling than their levels of grammar. Again, this study does not correlate with the teachers’ beliefs that students cannot assess their own strengths and weaknesses correctly [2].

Keywords: spelling and grammar education, attainment targets, secondary education, attitude, metacognition/self-efficacy, curriculum design.

1 INTRODUCTION
1.1 Background
A recent longitudinal survey into the learning of grammar and spelling in Flemish and Dutch secondary schools ([1]) has shown that the spelling and grammatical knowledge of Y11-Y12 students (n=362; aged 17-18 years) falls short of the final attainment targets, especially for grammar. These targets are briefly-worded descriptions of the knowledge, insights and skills that pupils should have mastered by the end of each school year ([3]. Table 1 shows that, on average, Flemish Y11-Y12 students reach the targets for spelling and word classes. Non-Latin students in athenaeums (as opposed to colleges – see below under ‘Methodology’ for full details), however, struggle with word classes. In general, parsing poses a problem for most groups. Over a period of ten years, the knowledge of parsing, has definitely deteriorated ([1]).
Table 1. Average percentage scores Flanders in 2008 > 2018

<table>
<thead>
<tr>
<th></th>
<th>Athenaeum</th>
<th>College</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latin</td>
<td>Non-Latin</td>
<td>Latin</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Spelling of words</td>
<td>60 &gt; 57</td>
<td>59 &gt; 50</td>
<td>53 &gt; 66</td>
</tr>
<tr>
<td>Spelling of verbs</td>
<td>80 &gt; 78</td>
<td>87 &gt; 63</td>
<td>80 &gt; 68</td>
</tr>
<tr>
<td>Word classes</td>
<td>72 &gt; 67</td>
<td>66 &gt; 38</td>
<td>38 &gt; 74</td>
</tr>
<tr>
<td>Parsing</td>
<td>70 &gt; 67</td>
<td>47 &gt; 42</td>
<td>53 &gt; 80</td>
</tr>
</tbody>
</table>

Table 2 shows that, on average, Dutch Y11-Y12 students reach the targets for spelling, but not for word classes and parsing. As compared to 2008, the scores for word classes and, especially parsing, have dropped drastically.

Table 2. Average percentage scores the Netherlands in 2008 > 2018

<table>
<thead>
<tr>
<th></th>
<th>Athenaeum</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(non-Latin)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Spelling of words</td>
<td>57 &gt; 55</td>
<td>57 &gt; 53</td>
</tr>
<tr>
<td>Spelling of verbs</td>
<td>63 &gt; 66</td>
<td>77 &gt; 70</td>
</tr>
<tr>
<td>Word classes</td>
<td>42 &gt; 38</td>
<td>46 &gt; 35</td>
</tr>
<tr>
<td>Parsing</td>
<td>23 &gt; 10</td>
<td>33 &gt; 12</td>
</tr>
</tbody>
</table>

This replication study over a period of ten years revealed that, in general:

1. Flemish Y11-Y12 students reach the targets for spelling and word classes. In general, parsing poses a serious problem for most groups. Over a period of ten years, the knowledge of parsing has definitely deteriorated. Dutch Y11-Y12 students reach the targets for spelling, but not for word classes and definitely not for parsing. As compared to 2008, the scores for word classes and parsing have diminished drastically;

2. in all four domains (spelling of words, spelling of verbs, word classes and parsing) Flemish students (still) perform better than their Dutch counterparts, female students do better than male students, Latin students outdo non-Latin students, and college students outperform athenaeum students.

As for the different subfields in the Dutch curriculum, traditional grammar, i.e. word classes and parsing, can be considered real problem areas.

1.2 Research questions

Additional research now focuses on the possible correlation between spelling and grammar results on the one hand, and attitude and metacognition, on the other. Therefore, in addition to the spelling and grammar tests, participants were invited to sit a test on attitude (In your opinion, how important is spelling/grammar in the curriculum?) and one on metacognition (How confident are you about your spelling/grammar test?). This study is set within Bandura’s social cognitive theory ([4]) in which the concept of perceived self-efficacy is expressed as the confidence people have in their ability to
adequately fulfil a task at a certain level. In both tests, participants used a Likert scale, ranging from 1 (not important/not sure) to 5 (very important/very sure).

Four research questions could be answered:

- What is the attitude of Y11-Y12 students towards the importance of spelling and grammar in the curriculum in general?
- What is the correlation between attitude and scores for the spelling and grammar tests?
- What is the metacognition/self-efficacy of Y11-Y12 students in the spelling and grammar tests?
- What is the correlation between metacognition/self-efficacy and scores for the spelling and grammar tests?

2 METHODOLOGY

2.1 Informants

Informants were Y11-Y12 pupils (n=268) in two Flemish athenaeums and two Flemish colleges. In general, athenaeums in Flanders are state schools (official education), a neutral form of education, organized and controlled by the Flemish Community, while colleges (private schools) refer to free and subsidized education, mainly Catholic schools. The informants in the Netherlands were Y11-Y12 students in four athenaeums (n=94). This gives us a total of 362 informants.

2.2 Tests on attitude and metacognition

This paper examines the attitude and the self-efficacy of Flemish and Dutch last-year secondary-school pupils (n=362) as a predictor for spelling and grammar performance. Participants were informed about the research and consented to participate. The tests described below were carried out collectively in classroom settings. The informants were asked to sit a test on attitude (In your opinion, how important is spelling/grammar in the curriculum?) and one on metacognition (How confident are you about your spelling/grammar test?):

1. attitude test: the participants judged the importance of spelling and grammar, respectively, from (1) very unimportant, (2) unimportant, (3) neutral, (4) important to (5) very important.

2. metacognitive/self-efficacy test: for each spelling item and grammatical item, the participants indicated their level of self-efficacy: not confident (1), reasonably confident (2) and very confident (3). All results were analysed using linear regression within SPSS.

3 RESULTS

3.1 Correlating knowledge with attitude

Fig. 1 shows that 84.80% of the informants think spelling is important or really important. Only a small minority judges spelling to be (really) unimportant (3.80%).

![Figure 1. Attitude towards spelling](image)
As for grammar, Fig. 2 shows that 46.40% of the informants think it is important or really important, while 12.70% think the subject is (really) unimportant. More than one third (34.30%) have a neutral opinion. In general, Flemish and Dutch final-year secondary-school pupils think spelling is much more important than grammar.

![Pie chart showing attitude towards grammar](image)

**Figure 2. Attitude towards grammar**

The opinion of the participants was divided into three categories: (1) a negative attitude for those informants who think spelling and grammar is (very) unimportant, (2) a neutral attitude, and (3) a positive attitude for those informants who think spelling and grammar is (very) important.

Subsequently, a correlation was made between the average scores for the spelling and grammar tests described in section 1.1. This correlation shows a positive connection between knowledge and attitude: pupils having a positive attitude score significantly higher in all sections of the tests than pupils who have a neutral or negative attitude. In the spelling test, there seems to be no difference in the average score of pupils having a negative or a neutral attitude. In the grammar test, however, the more positive the attitude is, the higher the average score.

### 3.2 Correlating knowledge with metacognition

In this study, metacognition is defined as ‘self-efficacy’, as the confidence a person has in his/her ability to adequately fulfil a task at a certain level.

We define an estimation to be correct if the estimation deviates no more than 1 point from the knowledge score (=±5.00%). For instance, for a score of 12/15 for the knowledge test, estimations of 11/15, 12/15 or 13/15 are considered correct. An overestimation means that pupils give themselves 2 or more points more than they actually did attained. An underestimation means that pupils give themselves 2 or more points less than they did.

When we compare the spelling and grammar scores of the pupils against their estimated results, we notice that, in general, about a third of the participants estimated correctly. There is a positive correlation between knowledge and self-efficacy: pupils who underestimate themselves score the highest, while those who overestimate themselves score the lowest. Fig. 3 shows that for word classes and parsing, the overestimation is the most striking.
4 CONCLUSION

In general, the results of this study suggest there is a positive correlation between both knowledge and attitude, and between knowledge and self-efficacy. Moreover, pupils seem to prefer spelling to grammar, and they are also better at assessing their levels of spelling than their levels of grammar. Again, this study, confirming earlier research ([2], [5], [6]), does not correlate with the teachers’ beliefs that students cannot assess their own strengths and weaknesses correctly [7].

As for the different subfields in the Dutch curriculum, traditional grammar, i.e. word classes and parsing, may be considered real problem areas, not only as far is knowledge is concerned, but also in terms of pupils’ attitude and self-efficacy.

REFERENCES


