

## Implementation of New Teaching Technologies during the Action Research by Experienced Language Teachers

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### ABSTRACT

This paper investigates new technology in teaching foreign language process as well as its implementation in classes of French. In the study, the authors concentrated on the improvement of grammatical competence of students learning French as a foreign language by means of the new technology, which was the ActivInspire software. The research period took four months. The objective of implementation of ActivInspire program was to map the improvement of students' grammatical competence who participated in the research; the objective was fulfilled. The authors have also come to the conclusion that the use of ActivInspire during the lessons of French was appropriate and, considering the results, it was a well-chosen and effective option.

### KEYWORDS

ActivInspire; grammatical competence; improvement; French; motivation


### ARTICLE HISTORY

Received 21 May 2016  
Revised 19 June 2016  
Accepted 29 June 2016

## Introduction

### *Urgency of the problem*

Action research is one of the types of scientific research in which implementers not systematically, but effectively examine their practice with the sole purpose of improving it.

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It has enjoyed immense popularity among practitioners in education, particularly in the field of teachers' continuing professional development. It has become an interesting subject for studies concerned with the improvement and development of professional practice (Burton & Bartlett, 2005). Very often, students but also their parents take part in the research as research participants. Without their views and opinions many questions asked by researchers – teachers would remain unanswered. Action research is the key method for evaluating students' competence improvement. Research activities carried out are based on the individual's own experience, or one of teachers and researchers that responds to some current problems they encounter in the education process. A well-made action research results in personal development, professional practice improvements and the development of the institution where the teacher works (Gutman et al., 2014; Masalimova et al., 2014; Sakhieva et al., 2015a; Sibgatova et al., 2015). Moreover, it is an educational contribution to the society as a whole. Action research is realised:

- in action;
- by the teachers themselves in the classroom.

In our study, we concentrated on the improvement of grammatical competence of students learning French by means of the new technology, which, in this case, was the ActivInspire software.

## Literature Review

### *Software ActivInspire*

ActivInspire is a new type of software designed for the use in the classroom, and it allows teachers to lead the lesson on an interactive whiteboard. It enables the teacher to prepare new lessons with rich, powerful activities, and it supports evaluation by students themselves, groups or whole classes (see Appendice A).

The ActivInspire program gives access to a wealth of teaching activities, tools, images, sounds and templates, or additional resources that are available on the website "Promethean Planet" (Brestenska, Kabatova & Kalas, 2009).

If the teacher (Adamek, Bucko & Engel, 2009; Sakhieva et al., 2015b) decides to create lesson plans, often it is possible to create a variety of teaching materials used for:

- practising and revision of knowledge and skills of students;
- self-education and self-development;
- improvement in learning;
- supporting students' creativity;
- improving presentation skills;
- simplifying the learning process;
- motivating students;
- supporting innovative practices in education etc.

Possibilities of the software may not always cover all the requirements, but due to the very dynamic development and intensive communication of its user base, it will soon cover an even larger variety of teachers' requests.

### *Interactive Teaching*

One of the prerequisites for an effective educational process is without doubt the motivation of students. The school should be an environment which supports students' motivation and creativity and which stimulates their interest. The sheer fact that the themes of lessons are adapted to their interests might even motivate students (Adamek, Bucko & Engel, 2009; Adamek, Baranovic & Brestenska, 2010; Lopatina et al., 2015).

### **Interactive Whiteboards**

Another way of motivating students is the use modern technologies such as interactive whiteboards. It is a means which helps increase the students' motivation and interest in learning. Such boards are easy to operate and they help to bring into the teaching process interactions between students and teachers and interactions between students. They allow integration of a variety of students' learning styles. Through dynamic interpretation, structured games and interactive exercises learners adopt permanent knowledge. The teaching process becomes more understandable as the activities involve all the senses. Interactive teaching / learning inspires, promotes a positive relationship towards the teacher, reduces stress and brings to the class a positive atmosphere. Optimal setting encourages not only students but also the teacher and makes the overall learning process more effective.

Interactivity in the classroom is supported and the ActivVote voting machine also ensures interaction with students, not only the evaluation of their knowledge. The teacher can create questions aimed at lower and higher cognitive processes. This practical and unmistakable assistant takes care of the students' attention, of their active participation in class and, finally, helps the teacher in the evaluation of the activities.

It opens space to "engage" the students during lessons, which brings a number of positive effects (Adamek, Bucko & Engel, 2009; Duchovicova & Gunisova, 2015):

- as the student makes mistakes, the teacher is given precise information about the needs, about what should be retaught or what was not understood;
- students solve problems;
- students have an opportunity to be appreciated. Appreciation makes students self-confident and self-estimated.

The ambition is that the teacher brings more joy in learning and provides new experiences. She/he improves the ability to receive and disseminate information, knowledge. She/he creates an atmosphere of partnership and mutual interest in the students' success. The foreign language teacher cares about the students' development, about what they know and about how they understand the new language. The exciting, interactive course is winning a positive attitude of students who see an opportunity to show their initiative and work on their own while mastering theoretical foundations and hands-on skills (Vasbieva, 2014).

### **Materials and Methods**

The research was held from January to May 2015 in the 7th class of a Slovak primary school (11 students – 3 girls and 8 boys) in order to improve grammatical competence of students learning French as a foreign language,

particularly the past tense, the *Passé composé*. This grammatical item was taught in advance by using the textbook *En français 2* (1<sup>st</sup> and 2<sup>nd</sup> lesson) (Taislova, Baranova & Cluse, 1994).

Students in this group are very talented and their marks during the final summative evaluation were as follows: six pupils A, four B and one student passed with a D (an scale A – E, where E is the worst mark). The test results were obtained from ActiVote – the program automatically generated the voting results in the form of summary tables (see below). These results were then processed into graphs. Students voted with remote controls (clickers) and determined the selected options – test items. The tests were filled out under code names, such as XY1 (the first student) – XY11 (the last student)

### Research question

Will the students of the 7th class learn the assigned French grammar items better by means of the programme ActivInspire?

### Research methods

As the basic method to measure the improvement of the analysed group of students we chose the pedagogical diagnostics by means of an entrance test and posttest, classroom observation, analyses, interpretation and test evaluation. Grammatical items created both tests corps (see Appendice B). Students who participated in this research as a research sample had been exposed to the examined grammar in advance. They passed the entrance test, then they were learning the grammar by means of the software ActivInspire and, finally, they passed the posttest which consisted of the same tasks as the entrance test.

### Research objective

The objective of the research was to determine the didactic effectiveness of the program ActivInspire as well as to determine the improvement of the grammatical competence of the given French learners, particularly, the grammar item *Passé composé* by means of the mentioned program.

### Results and Discussions

The first task (Svarc, 2009) of the entrance test was created by sentences without context where students in which the students were expected to fill in the correct form of the verb in the past tense *Passé composé*. In every test item, they were supposed to choose one of the three proposed answers. According to the results issued from ActiVote, the most frequent mistakes were committed in the items 2, 5, 9.

Student's name	XY1	XY2	XY3	XY4	XY5	XY6	XY7	XY8	XY9	XY10	XY11
Student's ID	1156	1104	1207	1205	1030	1173	1119	1189	1190	1115	1230
Total	10	10	10	10	10	10	10	10	10	10	10
%	70%	90%	60%	80%	70%	50%	100%	40%	50%	70%	50%
Total response duration	112.0	96.1	117.7	123.9	110.2	120.5	110.4	98.9	93.2	100.3	109.7
O1	A	B	B	A	B	B	B	B	B	B	A
O2	A	A	B	A	B	B	A	B	B	B	B
O3	B	B	B	B	B	B	B	B	B	B	B
O4	A	A	A	A	A	A	A	B	A	A	A
O5	A	B	A	A	A	A	C	A	B	A	A
O6	B	B	A	B	B	A	B	A	A	B	A
O7	B	B	B	B	B	B	B	B	B	B	B
O8	C	C	C	C	C	C	C	C	C	C	C
O9	A	B	A	B	A	A	B	A	A	A	A
O10	A	A	A	A	A	C	A	C	C	A	A

Figure 1. Entrance test, task I. Results issued from ActiVote

In this task the group achieved, on average, very poor results, only 66.36 %.

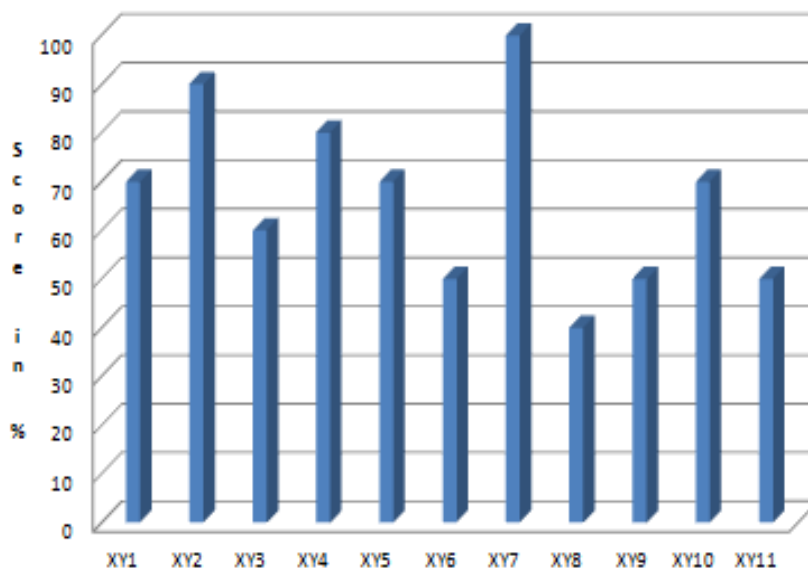
After implementing the innovative technology means (the ActivInspire program) into the learning process, we distributed, four months later, the same test as a posttest. The first task consisted of the same items.

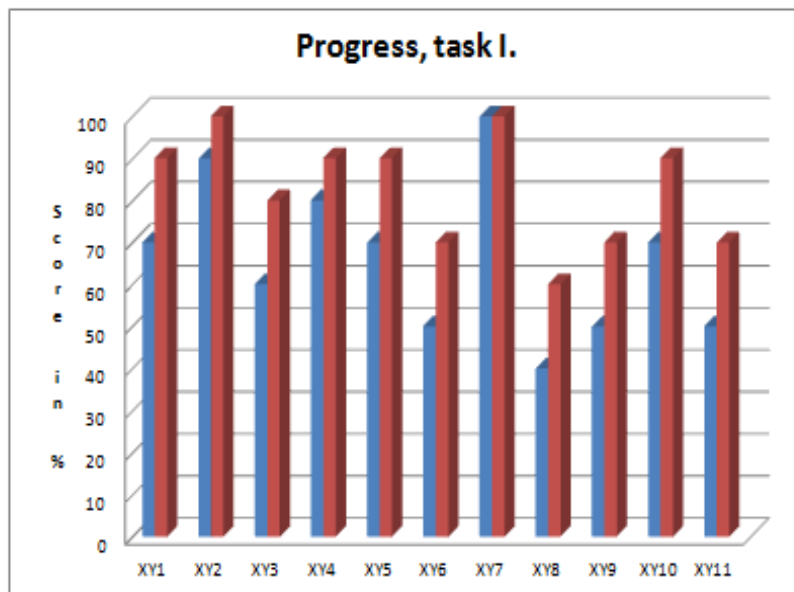
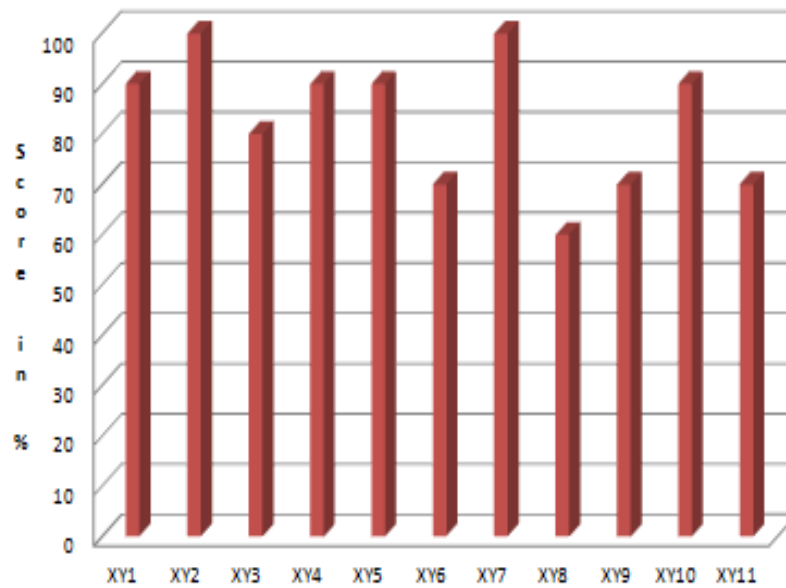
Student's name	XY1	XY2	XY3	XY4	XY5	XY6	XY7	XY8	XY9	XY10	XY11
Student's ID	1156	1104	1207	1205	1030	1173	1119	1189	1190	1115	1230
Total %	90%	100%	80%	90%	90%	70%	100%	60%	70%	90%	70%
Total response duration	112.0	96.1	117.7	123.9	110.2	120.5	110.4	98.9	93.2	100.3	109.7
O1	B	B	B	B	B	C	B	C	B	B	B
O2	A	A	B	A	A	C	A	B	B	A	A
O3	B	B	B	B	B	A	B	A	B	B	B
O4	A	A	A	A	A	A	A	A	A	A	B
O5	C	C	C	C	C	C	C	B	C	B	C
O6	B	B	B	C	B	B	B	B	B	B	C
O7	B	B	B	B	C	B	B	B	A	B	B
O8	C	C	C	C	C	C	C	C	C	C	C
O9	B	B	A	B	B	B	B	B	C	B	B
O10	B	A	A	A	A	A	A	A	A	A	B

Figure 2. Posttest, task I. Results issued from ActiVote

The results of the first task reflect in the result of the group and it is 82.72 %.

The comparison of the results might be done by means of the following graphs, which have significant value.





The progress made by students is on average 16.36% in the first task of the test. In some cases, the results reflected better marks as well.

The second task (see Appendix B) was formed with the sentences in context. The sentences created a story. The students had to choose the appropriate answer out of three possibilities. Only one answer in each task item was correct.

Results show most of the mistakes made in item 6 – form of the past participle of the verb “rentrer” and the modal verb “être”.

Student's name	XY1	XY2	XY3	XY4	XY5	XY6	XY7	XY8	XY9	XY10	XY11
Student's ID	1156	1104	1207	1205	1030	1173	1119	1189	1190	1115	1230
Total	10	10	10	10	10	10	10	10	10	10	10
%	75%	87,5%	62,5%	75%	75%	50%	100%	37,5%	50%	75%	50%
Total response duration	98.9	93.2	100.3	109.7	123.9	110.2	120.5	110.4	112.0	96.1	117.7
O1	B	B	A	B	B	B	B	B	B	B	B
O2	C	C	C	C	B	C	C	C	B	C	C
O3	A	A	A	A	A	A	A	A	A	A	A
O4	B	B	B	B	B	B	B	C	B	C	B
O5	A	A	A	A	A	C	A	C	C	A	C
O6	A	A	A	A	A	A	C	A	A	A	A
O7	B	B	B	B	B	A	B	A	A	B	A
O8	B	A	B	B	A	B	A	B	A	A	B

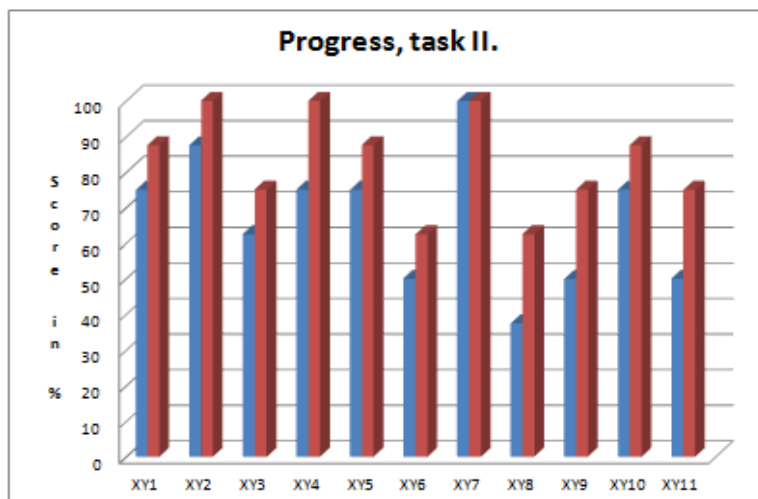
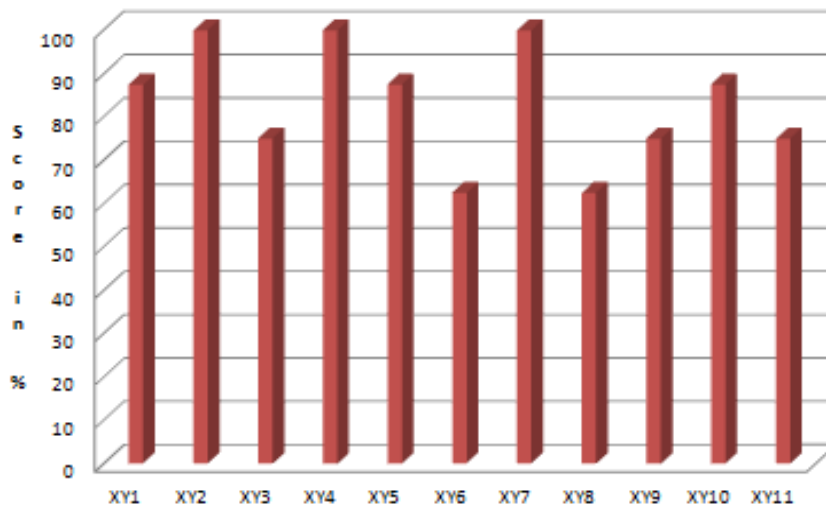
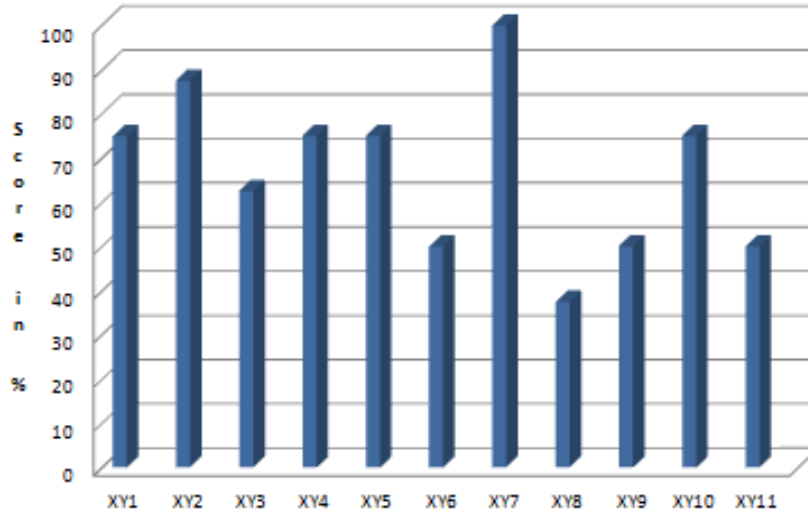
Figure 3. Entrance test, task II. Results issued from ActiVote

Statistical prediction was 67.04%.

Student's name	XY1	XY2	XY3	XY4	XY5	XY6	XY7	XY8	XY9	XY10	XY11
Student's ID	1156	1104	1207	1205	1030	1173	1119	1189	1190	1115	1230
Total	10	10	10	10	10	10	10	10	10	10	10
%	87,5%	100%	75%	100%	87,5%	62,5%	100%	62,5%	75%	87,5%	75%
Total response duration	98.9	93.2	100.3	109.7	123.9	110.2	120.5	110.4	112.0	96.1	117.7
O1	B	B	B	B	B	B	B	A	B	A	B
O2	C	C	B	C	C	C	C	C	B	C	C
O3	A	A	A	A	A	A	A	A	A	A	A
O4	B	B	B	B	B	A	B	A	B	B	A
O5	A	A	A	A	A	A	A	A	A	A	A
O6	A	C	A	C	A	A	C	C	A	C	A
O7	B	B	B	B	B	A	B	A	B	B	B
O8	A	A	A	A	A	A	A	A	A	A	A

Figure 4. Posttest, task II. Results issued from ActiVote

Students obtained higher score, in total 82.95%.





Student's name	XY1	XY2	XY3	XY4	XY5	XY6	XY7	XY8	XY9	XY10	XY11
Student's ID	1156	1104	1207	1205	1030	1173	1119	1189	1190	1115	1230
Total	10	10	10	10	10	10	10	10	10	10	10
%	60%	90%	60%	80%	70%	50%	100%	40%	50%	70%	50%
Total response duration	110.4	98.9	93.2	100.3	109.7	112.0	96.1	117.7	123.9	110.2	120.5
O1	A	A	A	A	B	A	A	A	B	A	B
O2	A	B	A	A	B	A	B	A	B	A	B
O3	A	A	A	A	A	A	A	A	A	A	B
O4	A	A	B	A	B	A	B	A	B	A	B
O5	B	B	B	B	B	B	B	A	A	B	A
O6	A	A	A	A	A	A	A	A	A	A	A
O7	B	B	A	B	A	A	B	A	A	B	A
O8	A	B	A	B	B	A	B	A	A	B	B
O9	A	A	A	A	A	A	A	A	A	A	A
O10	A	B	A	B	A	A	B	A	A	A	A

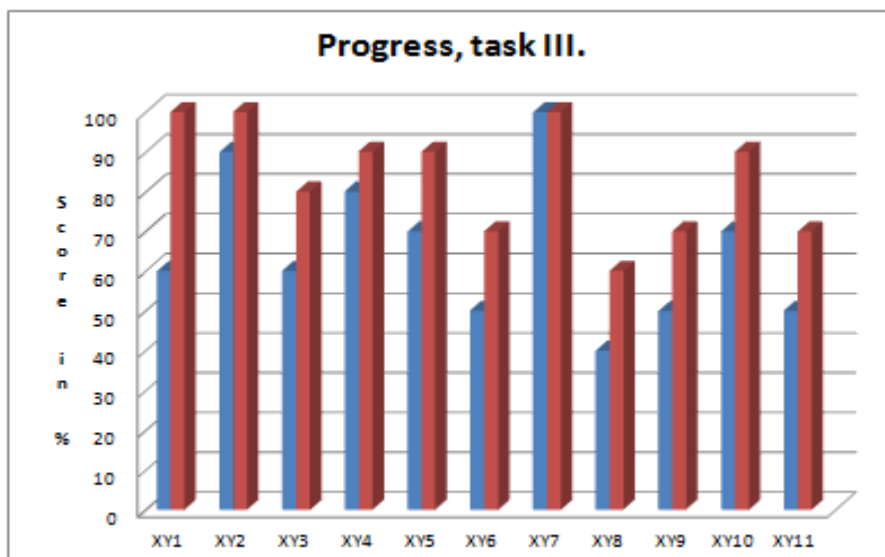
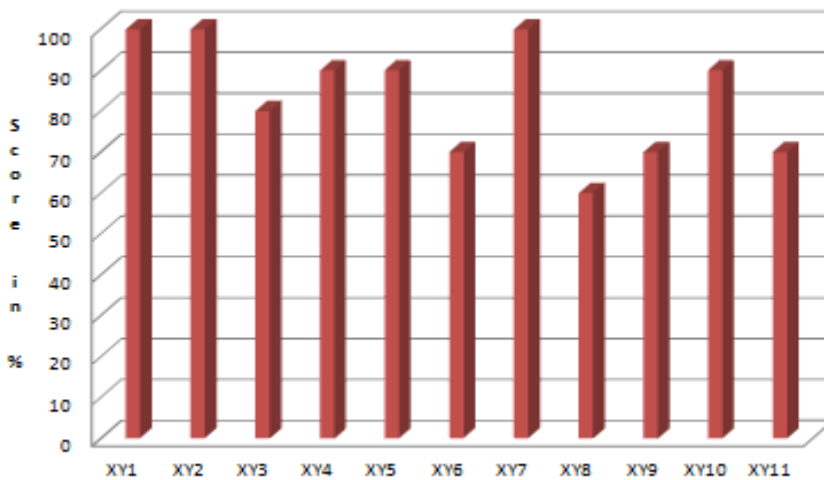
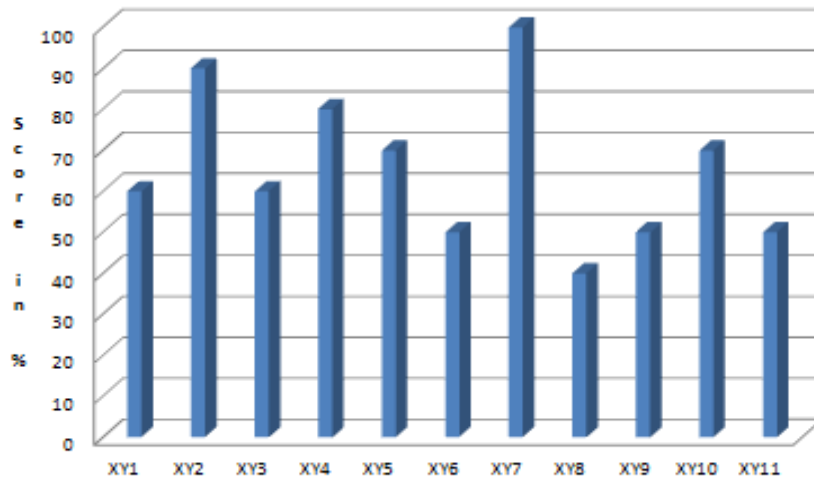
Figure 5. Entrance test, task III. Results issued from ActiVote

The results from this part of the test were the least satisfying and at the same time the lowest: 65.45%.

Student's name	XY1	XY2	XY3	XY4	XY5	XY6	XY7	XY8	XY9	XY10	XY11
Student's ID	1156	1104	1207	1205	1030	1173	1119	1189	1190	1115	1230
Total	10	10	10	10	10	10	10	10	10	10	10
%	100%	100%	80%	90%	90%	70%	100%	60%	70%	90%	70%
Total response duration	110.4	98.9	93.2	100.3	109.7	112.0	96.1	117.7	123.9	110.2	120.5
O1	A	A	A	A	A	A	A	A	A	A	A
O2	B	B	B	B	B	B	B	B	B	B	B
O3	A	A	A	A	A	A	A	A	A	A	A
O4	B	B	B	A	B	A	B	A	A	B	B
O5	B	B	B	B	A	B	B	A	B	A	A
O6	A	A	A	A	A	A	A	A	A	A	A
O7	B	B	A	B	B	A	B	A	A	B	A
O8	B	B	B	B	B	B	B	B	B	B	B
O9	A	A	A	A	A	A	A	A	A	A	A
O10	B	B	A	B	B	A	B	A	A	B	A

Figure 6. Posttest, task III. Results issued from ActiVote

Students in this task achieved the highest percentage of progress 18.18% because of their improvement in posttest – 83.63%.



## Conclusion

To sum up, several conclusions might be stated. Students who were learning the past tense *Passé composé* in French master the tense better by using the program ActivInspire rather than the textbook certified by the Ministry of Education, Science, Research and Sport of Slovak Republic. The progress was measured with the aid of the tests and proved by the improvement of the grammar competence of about 16.81% in total.

We have also come to the conclusion that the use of ActivInspire during the lessons of French was appropriate and, considering the results, it was a well-chosen and effective option. In the future we will try to identify other matters which will streamline the teaching process thus motivate students to learn a foreign language.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Notes on contributors

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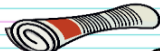


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## Appendices

### Appendix A: Sample lessons


Verbes avec "avoir" + participe passé		
attendre		eu
avoir		vu
écrire		écrit
être		attendu
faire		fait
lire		voulu
pouvoir		été
prendre		pu
savoir		pris
voir		su
vouloir		lu

Notes


Verbes avec "être" + participe passé		
-er	-ir	irreg.
aller	partir	mourir
arriver	sortir	naitre
entrer		venir
monter		
rester	-re	
retourner	descendre	
tomber		
passer		

Notes

Le chat \_\_\_\_\_ dans la cuisine.



**entrer**



A est entré

B a entré

C est entrer

D ?

Appendix B: Entrance test and posttest

**Task I.** Notes Reset

Choisissez la bonne forme du passé composé! (*Choose!*)

1. Hier, vous ..... de Košice.  
A – sont arrivé    B – êtes arrivés    C – sommes arrivés
2. Samedi, tout le monde ..... de Paris.  
A – est revenu    B – a revenu    C – sont revenus
3. Suzanne n'..... pas ..... chez le médecin.  
A – est ... été    B – a ... été    C – est ... être
4. Je (J') ..... chez mon amie une heure.  
A – suis resté    B – es resté    C – est restée
5. Moi, je ne (n') ..... pas ..... à l'école.  
A – ai ... venu    B – suis ... veni    C – suis ... venu
6. Je (J') ..... une année formidable chès mes amis en France.  
A – suis passé    B – ai passé    C – suis passer
7. Il ..... très chaud et beau.

A – est fait    B – a fait    C – a fais

8. Je(J') ..... de la chance d'avoir la famille là.

A – ais eu    B – suis eu    C – ai eu

9. Aujourd'hui, on ..... pour aller au cinéma.

A – a sorti    B – est sorti    C – as sortie

10. Nous ..... monté à Lomnický Štít.

A – sommes montés    B – avons monté    C – sommes démonté

### Task II.

Complétez par la bonne forme du passé composé! (*Fill in!*)

«Marc .....(1)..... de la maison à 16 h. Il .....(2)..... chercher les enfants à l'école. Il .....(3)..... quelques autres parents et il .....(4)..... avec eux. Marc et les enfants .....(5)..... quelques courses, puis ils .....(6)..... à la maison. Les enfants .....(7)..... leurs devoirs et Marc s' .....(8)..... du dîner. Quel père parfait!»

- |                    |                |                  |
|--------------------|----------------|------------------|
| 1. A – a parti     | B – est parti  | C – es partie    |
| 2. A – suis allé   | B – es allé    | C – est allé     |
| 3. A – a vu        | B – est vu     | C – as vu        |
| 4. A – est discuté | B – a discuté  | C – a discutées  |
| 5. A – a fait      | B – est fait   | C – a faire      |
| 6. A – sont rentré | B – est rentré | C – sont rentrés |
| 7. A – ont fais    | B – ont fait   | C – sont faits   |
| 8. A – est occupé  | B – a occupé   | C – est occupées |

### Task III.

La phrase est correcte? Oui ou non? (*Is the sentence correct?*)

**A: OUI    B: NON**

1. Jean et Luc, ils sont allés en train.
2. Le train a tombé en panne.
3. Ils ont téléphoné au service.
4. Il suis venue très vite.
5. Ils sont attendus un autre train.
6. Heureusement, ils sont arrivés au théâtre à l'heure.
7. Ils est devenu acteurs.
8. Après ils s'est arrêtés chez leurs amis.
9. Ils ont pris un menu principal.
10. Pour aller à la maison ils ai pris un taxi.

