



GRUNDTVIG LEARNING PARTNERSHIP PROJECT

THE NATURE OF LEARNING: TAKING LEARNING OUTDOORS

Report: some aspects of the teaching outdoors in Belgium

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1. Introduction

Today's lesson is about "Trees and their leaves". Speaking of the oak tree, the teacher shows his pupils images of the oak, its leaves and its acorns. Outside on the playground there is a big, real oak tree, with real leaves and real acorns.....

This situation is – sadly enough - still too often the case in nowadays education: teaching about nature and environment doesn't necessarily mean going outside to see and experience the nature and/or the environment. Although, this "going outside" bears a lot of chances to increase the profit of one's teaching work, due to multiple reasons.

First of all, the use of real materials as educational tools gives pupils the possibility to see, feel and touch them. It makes the world come alive during the lesson, the subject matter becomes concrete and touchable.

A second and very important reason is the well-proved benefit of Experiential Education (EXE). Experiential Education stands for an innovative project that started in 1976 and is based at the University of Leuven (Belgium). Through practice oriented research, development and dissemination it became one of the most influential educational movements in Flanders and in the Netherlands. Since 1991 EXE has been active on the international scene, not in the least in the U.K. where yearly more than thousand practitioners are introduced in the concepts and instruments through conferences and seminars. The project generated a framework for quality assessment and quality improvement suitable for a wide range of settings: from babies and toddlers in childcare up to professionals in service training. It answers the key question about 'quality' by pointing to indicators that help us to sense if what we are doing (the context) is leading to somewhere (the outcomes). The basic hypothesis is that the most conclusive way to assess the quality of any educational setting is to focus on the degree of 'emotional well-being' and the level of 'involvement' of the children/learners. These are the touchstones to create an effective educational context. That is how Experiential Education brings the process in the child into attention and that is why it appeals to practitioners and empowers them 1. Prof. Dr. Ferre Laevers (Director of the Research and Development Centre for Experiential Education at the Catholic University of Louvain) distinguishes ten action points that favour well-being and involvement, two of them might be important for the project: (1) "*Replace unattractive materials by more appealing ones.*" and (2) "*Introduce new and unconventional materials and activities.*"² In other words: the realisation of a rich learning environment. The "outdoor" is by definition a rich learning environment that offers *appealing materials* and chances for *unconventional learning activities*. The use of the outdoor as a learning environment will consequently benefit the involvement. The concept of involvement refers to a dimension of human activity. Involvement is not linked to specific types of behaviour nor to specific levels of development. Csikszentmihayli (1979) speaks of "the state of flow". One of the most predominant characteristics of this flow state is concentration. An involved person is narrowing his attention to one limited circle. Involvement goes along with strong motivation, fascination and total implication: there is no distance between person and activity, no calculation of the possible benefits. Because of that, time perception is distorted (time passes by rapidly). Furthermore there is an openness to (relevant) stimuli and the perceptual and cognitive functioning has an intensity, lacking in activities of another kind. The meanings of words and ideas are felt more strongly and deeply. Further analysis reveals a manifest feeling of satisfaction and a bodily felt stream of positive energy. The 'state of flow' is sought actively by people. Young children find it most of the time in play. The important point is that the source of satisfaction stems from one basic human need: the exploratory drive, the need to get a better grip on reality, the intrinsic interest in how things and people are, the urge to experience and figure out. Only when we succeed in activating the exploratory drive do we get the intrinsic type of involvement and not just involvement of an emotional or functional kind. Involvement is not the state of arousal easily

¹ www.cego.be.

² LAEVERS, F. *The project Experiential Education: Well-being and Involvement make the Difference*. Leuven, 1998.

obtained by the entertainer. To conclude: involvement means that there is intense mental activity, that a person is functioning at the very limits of his or her capabilities, with an energy flow that comes from intrinsic sources. One couldn't think of any condition that would be more favourable to real development or deep level learning. If we want deep level learning, we cannot do without involvement.³

The third and last element that pleads for "outdoor learning" is the fact that children get the chance to do and discover things by themselves. This so-called "self-discovering learning" gives an answer to the natural urge of children to explore, to experiment and to experience. A well-organised activity, based on clearly determined instructions that lead pupils step-by-step through the experiment and a concluding question that stimulates a thinking process and links the experiment with reality, can only result in success. Because: if you experience something yourself, you'll understand it better and learn more!

The ideas lined out above have found a lot of approval in nowadays formal education in Flanders. Teachers are convinced of the benefit of this approach, however they experience difficulties in applying them in daily classroom-reality: the implementation takes a lot of time, a certain knowledge and experience is essential, the organisation of an "excursion" is complex, etc.

The idea of the project "The Nature of Learning: Take Learning Outdoors" is to encourage outdoor education by development of teachers' competence. For this purpose it is planned to prepare a methodical guide based on examples of pedagogical experience. At first it was necessary to find out, whether there is any experience in the countries participating in the project. Other important question - whether pedagogues want to share the experience with other colleagues?

³ LAEVERS, F. *The project Experiential Education: Well-being and Involvement make the Difference*. Leuven, 1998.

2. Methodology of research

The main methods of the given research are questionnaire and descriptive statistics. The questionnaire has been made from 21 questions in four blocks: the demographic block, the block of experience, the block of competence and the block of distribution of experience (Annex 1).

The demographic block has been made from 4 questions: 3 of them were the closed type and 1 question – the open type:

- 1) *How long have you been teaching?* Answers were presented in scale of intervals: a) Up to 5 years; b) 5-10 years and c) More than 10 years.
- 2) *What is your main teaching subject?* Answers were presented in nominal scale: a) Science; b) Maths; c) Language; d) Social sciences; e) Art; f) Other.
- 3) *What kind of school or organisation do you work for?* Answers were presented in nominal scale: a) Primary School; b) High School; c) Vocational School; d) Further education (post compulsory); e) Adult/informal education; f) Other .
- 4) Fourth question was open: *If you would be happy to be contacted by us for further informatikon, please provide us with your contact details (telephone, fax, SMS, e-mail ect.)*

The block of experience has been made from 10 questions: 3 of them were the closed type and 7 questions – the open type:

- 1) *Do you teach outside of your school or organisation in the natural environment?* Answers were presented in dichotomical scale „Yes/No“ with a note „ If yes, please continue with the rest of the questions (If no, please return this questionnaire)“;
- 2) *Why do you prefer to teach outside of your school or organisation?* Answers were presented in nominal scale: a) because it is different from traditional teaching; b) because it is different from traditional learning; c) because students learning through experiences; d) Other reasons;
- 3) *Which teaching methods do you use which involve nature?* Answers were presented in nominal scale: a) Experimentation/Investigation; b) Excursions; c) Worksheets; d) Games/puzzles; e) Drama; f) Sports/adventure type activities; g) Other (please explain);
- 4) *In which kinds of places do you prefer to teach outside?* Answers were presented in nominal scale: a) Forests; b) Wetlands; c) Parks; d) Outdoor training centres; e) Other (please explain);
- 5) *How often do you teach in the outdoor natural environment on average?* Answers were presented in scale of ranks: a) Every day; b) Once a week; c) Once a month; d) Once a year; e) Other ;
- 6) *What are the subjects you teach outside?* Answers were presented in nominal scale: a) Science; b) Sport; c) Art; d) Rural activities; e) Nature conservation; f) other ... (please explain);
- 7) *What is the average group size?* Answers were presented in nominal scale: a) 5-10; b) 10-20; c) 20-30; d) Other;
- 8) *What is the age of the children or adults you work with?* Answers were presented in nominal scale: a) up to 5 years; b) 5-10 years; c) 10-16 years; d) 16-19 years; e) adults (19+).
- 9) *What kind of problems do you encounter when you teach outside?* Answers were presented in nominal scale: a) Control/discipline; b) Legal problems; c) Financial problems; d) Equipment problems; e) Transportation problems; f) Permission problems from parents; g) Lack of information for guiding you; h) Difficulty in fulfilling learning plans; i) Other (please explain);
- 10) *Does your organisation or school support outside learning?* Answers were presented in dichotomy scale „Yes/No“. To this question there was a request to specify what was the help. Answers were presented in nominal scale: a) support with money; b) support with equipment; c) support with informatikon; d) support with motivation; e) Other (please explain);

The block of competence has been made from 5 questions: 2 of them were the closed type and 3 questions – the open type:

- 1) *How do you get information/sources for organising an activity?* Answers were presented in nominal scale: a) Internet; b) Books; c) Training centers; d) Talking to experts; e) Other;
- 2) *Have you ever had any training in teaching outside?* Answers were presented in dichotomy scale „Yes/No“. To this question there was a request to specify the type of course. Answers were presented in nominal scale: 1) formal course; 2) informal course;
- 3) *How many days of training do you receive for yourself in an average year?* Answers were presented in scale of ranks: a) 1 day; b) 2 days; c) 3 days; e) More;
- 4) *What training for outside education is available in your town/region/country?* Answers were presented in nominal scale: a) Training organised by NGOs (voluntary organisations); b) Training organised by government; c) Private training organisations; d) Other (please explain).
- 5) *Do you feel that you need more training in this area of working?* Answers were presented in dichotomy scale „Yes/No“. To this question there was a request for respondents, who answered „YES“, to specify the acceptable form of training. Answers were presented in nominal scale: a) A training day; b) A manual; c) An evening course; d) E-learning; e) International Exchange; f) Other (please explain).

The block of distribution of experience has been made from 2 questions: 1 of them was the closed type and 1 question – the open type:

- 1) *Do you have sufficient teaching materials for outside activities?* Answers were presented in dichotomy scale: „Yes/No“;
- 2) *Do you have any recommendations for outside learning activities?* Answers were presented in dichotomy scale: „Yes/No“. To this question there was a request to give some examples.

The questionnaire was prepared during project meeting in Istanbul (Turkey) 2006. After that the questionnaire was translated on national languages. The pilot interrogation to improve the questionnaire in the countries participating in the project was organized. After an exchange of comments among partners by e-mail the final variant of questionnaire was prepared in College of Newcastle(UK). Interrogation was spent in January - February, 2007 in UK, Belgium, Germany, Estonia, Lithuania, Turkey and Hungary.

The selected respondents are teachers in primary and secondary schools, and instructors at institutes of higher education. The selected primary schools are all part of an existing partnership between these schools and the Department of Teachertraining of the Katholieke Hogeschool Leuven. The selected secondary schools are all located in the wider area of Leuven (Louvain). The institutes of higher education were selected according to the education they offer: is there a possibility of applying outdoor learning? The questionnaire was sent by e-mail, it contained a brief introduction to the project and the request to inform about the use/lack of outdoor learning.

Characteristics of respondents

134 respondents answered the questionnaire, 44% of them has experience in teaching outdoors (Figure 1).

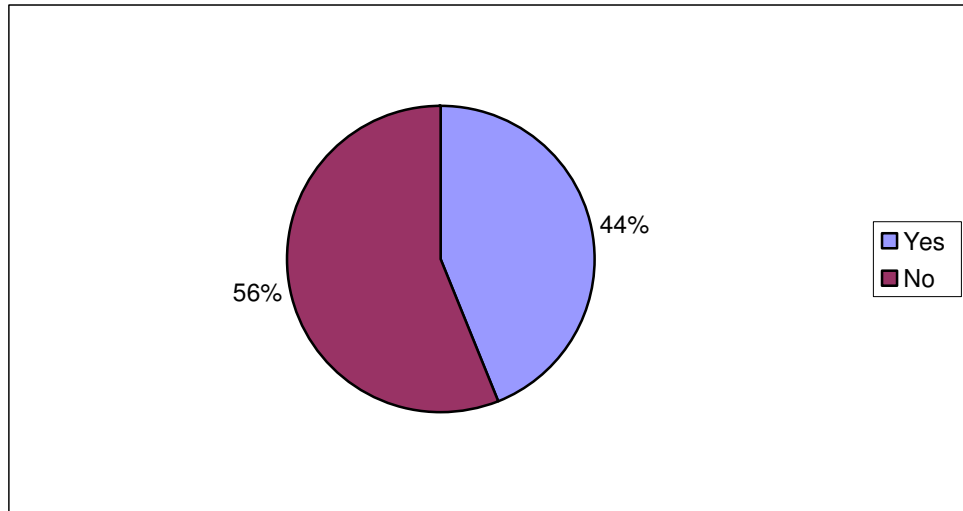


Figure 1. **The experience of teaching outdoors (N=134)**

The respondents are mainly teachers in primary school (6-12 years old), high/secondary school (12-18 years old) and higher/further education (non-university) (Figure 2). Respondents from secondary school and further education are mainly teachers of science and geography (Figure 3).

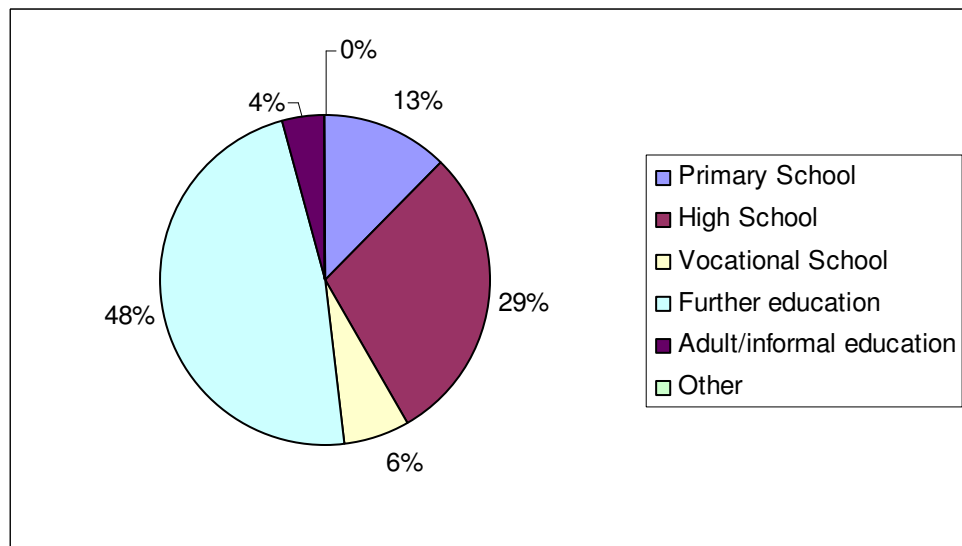


Figure 2. **The kind of representative organisation (N=59)**

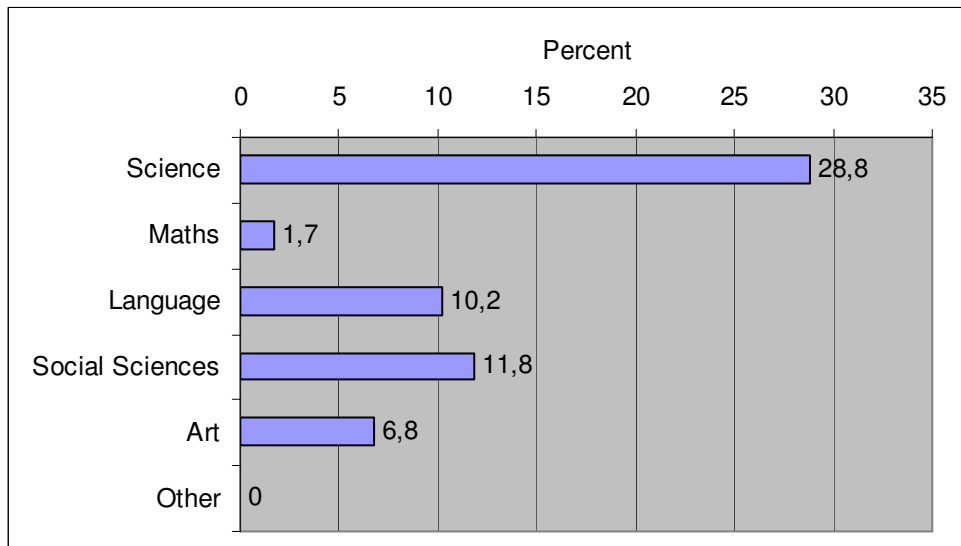


Figure 3. Teaching subjects (N=59)

Most of the participants of the interrogation have more than 10 years' pedagogical experience. Basing on this fact it is possible to expect, that respondents have a certain amount of experience which can be useful for the realisation of the idea of the project (Figure 4).

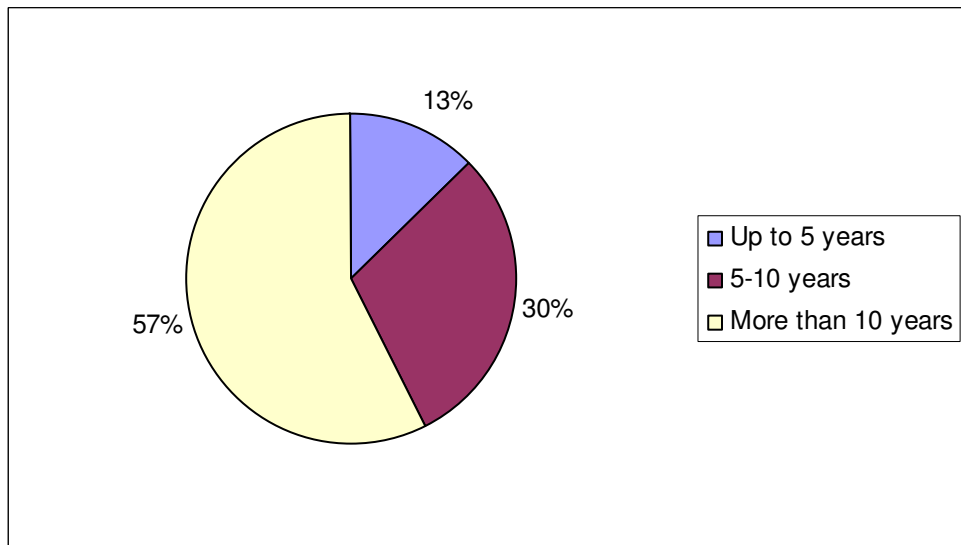


Figure 4. The pedagogical experience (N=59)

3. Results of research

3.1. Some aspects of experience of teaching outdoors

Why respondents prefer to teach outdoors? Answering this question most of the respondents answered that learning outdoors gives students the opportunity to learn through experiences (Figure 5). Experiential education is already quite common in Flemish education, especially in primary education and science education in secondary schools. Going outdoors with learners is the most common and easy way to implement experiential education.

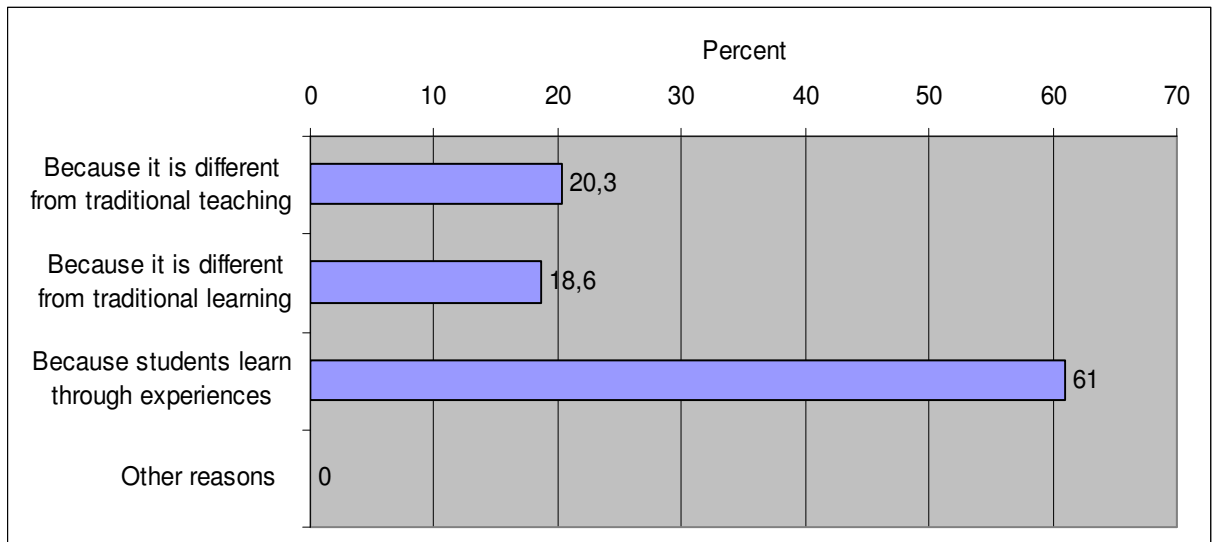


Figure 5. Motivation of teaching outdoors (N=59)

How often do the respondents teach outdoors? Most of the participants of the given interrogation are teaching outdoors once a month (52%), only 11% teaches outdoors weekly. Apparently “time” is the most limiting factor in case of outdoor learning: educational programs are already full of learning activities, it’s not that easy to fit outdoor learning in. 37% goes outdoors only once a year, the respondents that picked this answer are mostly secondary school teachers who organise a yearly excursion.

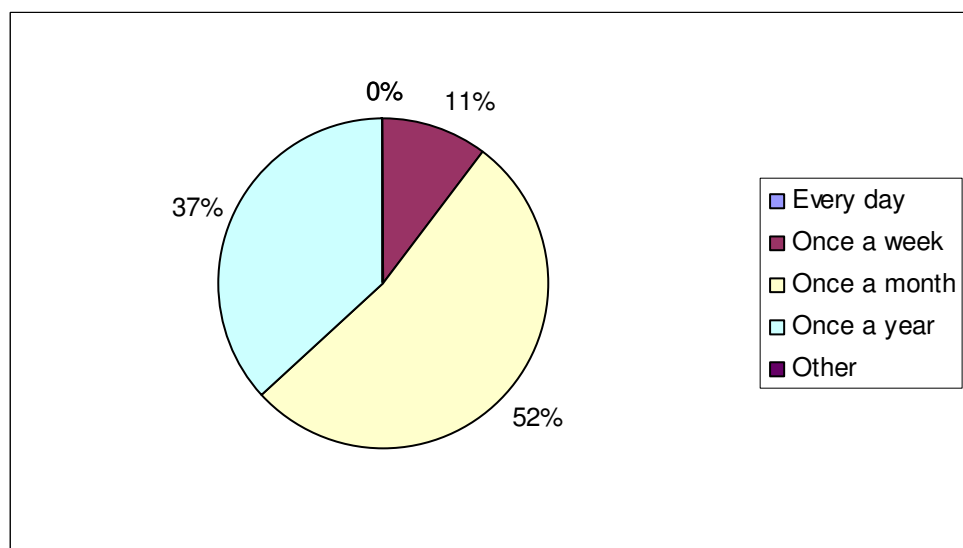


Figure 6. The frequency of the teaching outdoors (N=19)

What organizational forms, what educational methods are applied? Most of the respondents marked excursion (50,8%) and experimentation (42,4%) (Figure 7). Nowadays, experimentation is often integrated in a one day excursion. Especially in primary school, longer periods of excursion (one week) are organised at least in one grade of primary school. The most popular environments are the seaside, forests and the farm. During this trip, pupils are offered learning activities, sports and leisure.

32,2% marked sports/adventure types activities. In this type of learning activities the goals are learning sports, learning social skills, groupbonding.

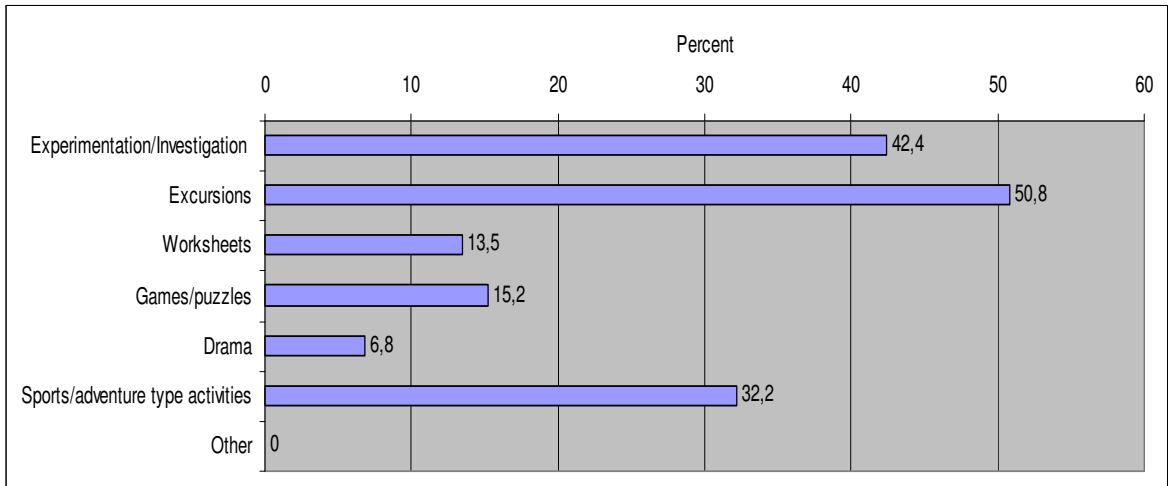


Figure 7. Teaching methods used for outdoor education (N=59)

Where do the respondents teach outdoors? 35,6 % of the respondents use forests as teaching environment, 22% use wetlands. These locations are used during one-day-education and during longer periods of excursion (Figure 8). If outdoor learning is organised in a shorter period, teachers often go to parks (30,5%).

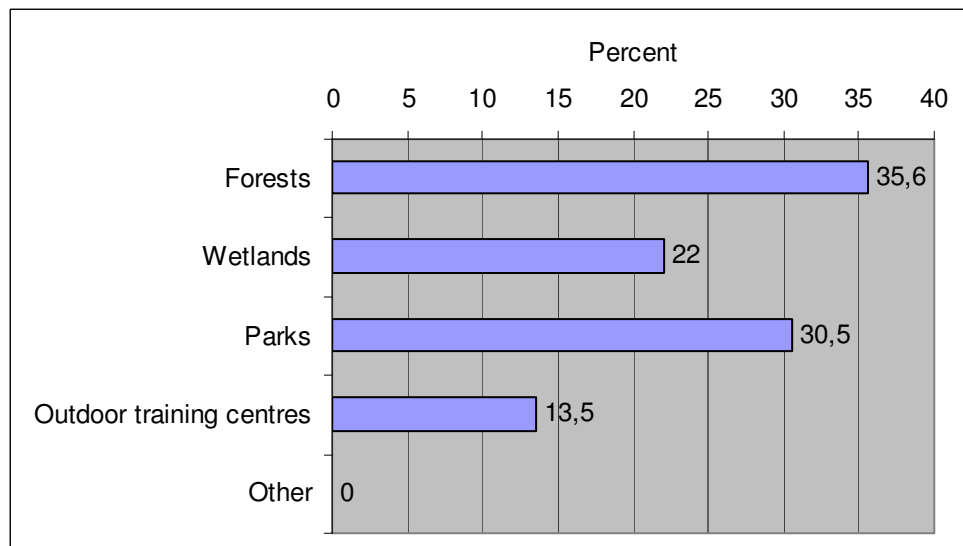


Figure 8. The places of outdoor education (N=59)

What educational programs are realized during teaching outdoors? Basing on results of the given interrogation it is possible to maintain that programs of a Science, Nature conservation and Art in most cases are realized (Figure 9). There exists no such subject as "Nature conservation" in Belgian formal education. Programs of "Nature conservation" are realized integrating them in other subjects.

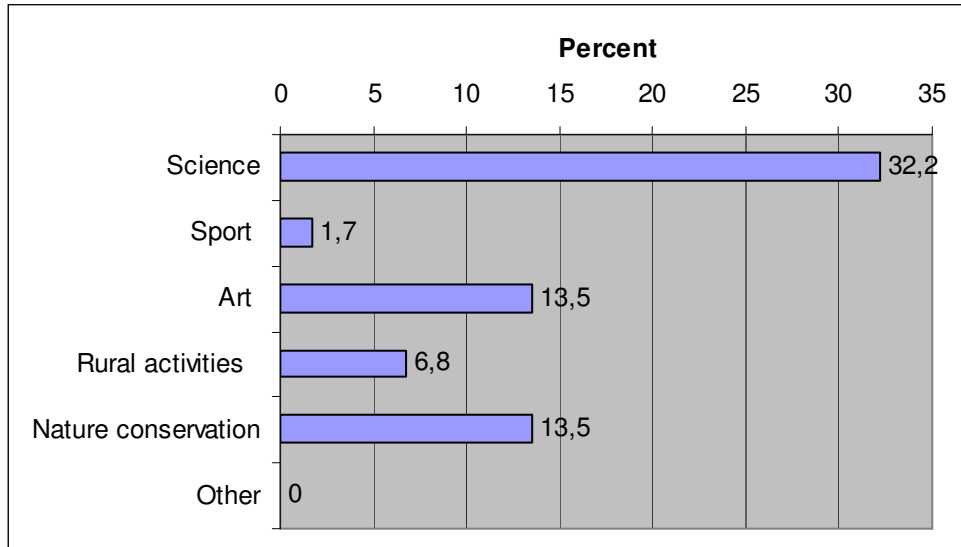


Figure 9. The teaching programs realising trough outdoor education (N=59)

What is the size of the students group? In most cases the size is from 10 up to 20 students (33,8%) and from 20 up to 30 students (33,9%) (Figure 10). This is the most common size of classrooms primary and secondary school.

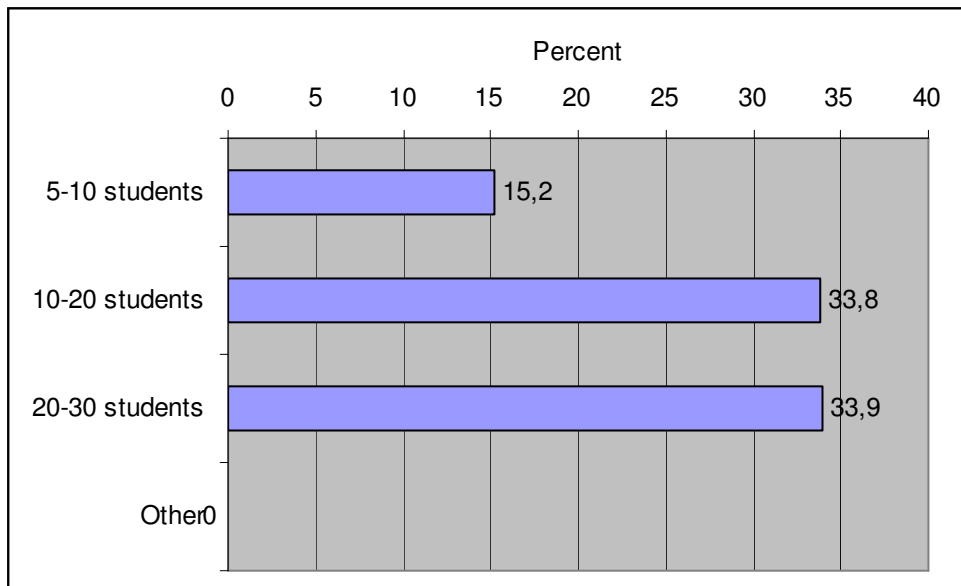


Figure 10. Students' group size (N=59)

In Belgium, primary schools is attended by children from 6 up to 12 years old. Secondary school goes from 12 till 18 years old. The interrogation learns that outdoor education is more applied for students in the age-category of 10 till 16 years old (20,3%) than that of 5 to 10 (6,8%). Consequently, outdoor learning is not that common in the first grades of primary school. But in the last two years of primary school, teachers often go outside with their pupils. The category 10-16 years and 16-19 years learn that in secondary school, students do go outside to learn. However, the outdoor education is mostly limited to sciences and art. Far the most of the respondents that do organise outdoor learning are teaching adults (45,8%). This group consist of students of Higher Education. Statistics might learn us that outdoor learning is used a lot in Higher education, but interpretation is crucial. Due to the fact that the instructors of Higher Education that answered the questionnaire are mainly Science-teachers, nearly 46% might be overrated.

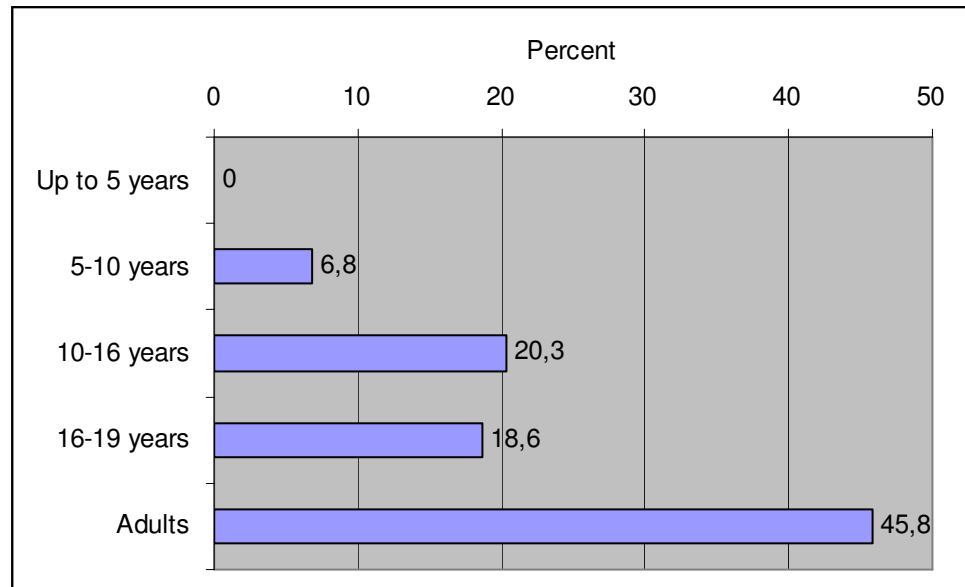


Figure 11. The age of the students (N=59)

What problems do teachers suffer from if organising outdoor learning? The two main problems are transportation problems (30,5%) and financial problems (23,7%). Control and discipline in case of working with a complex organisation doesn't seem to cause big problems.

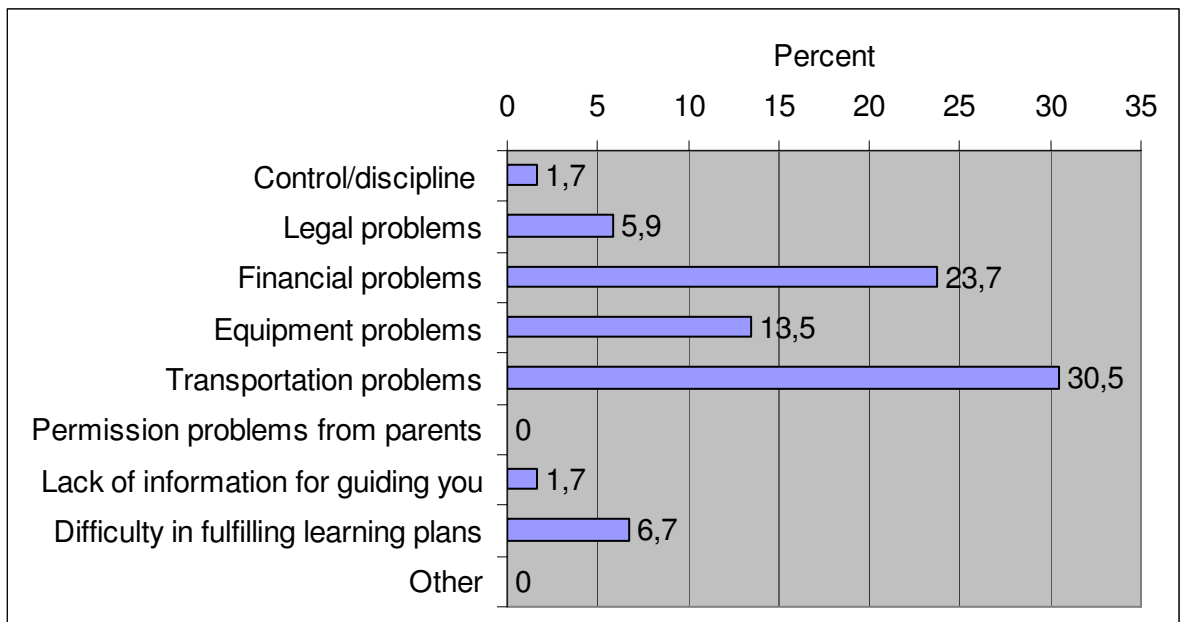


Figure 12. **The problems considering outdoor education practice (N=59)**

Though most of the respondents get support from their organization (Figure 13), only 22% receive financial support receive (Figure 14).

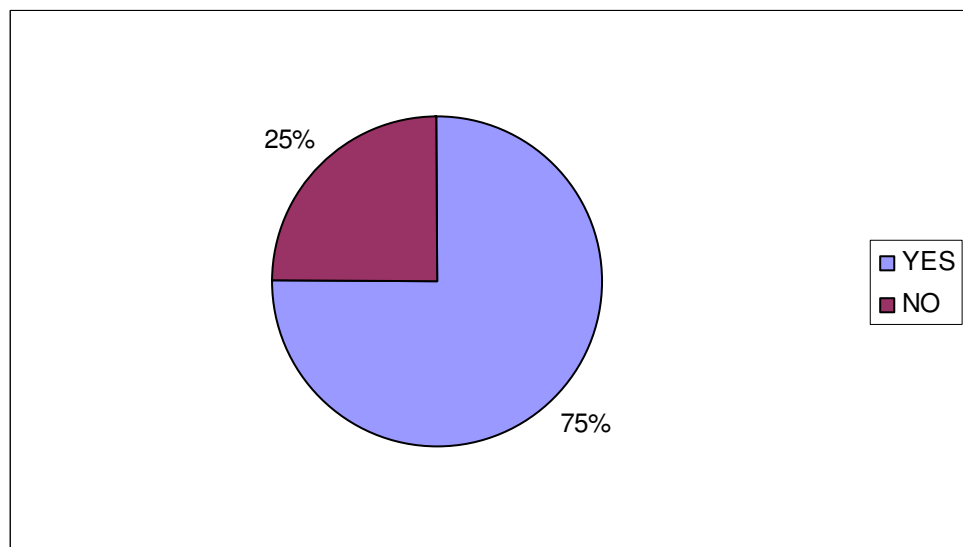


Figure 13. **Outdoor education supported by organisation (N=59)**

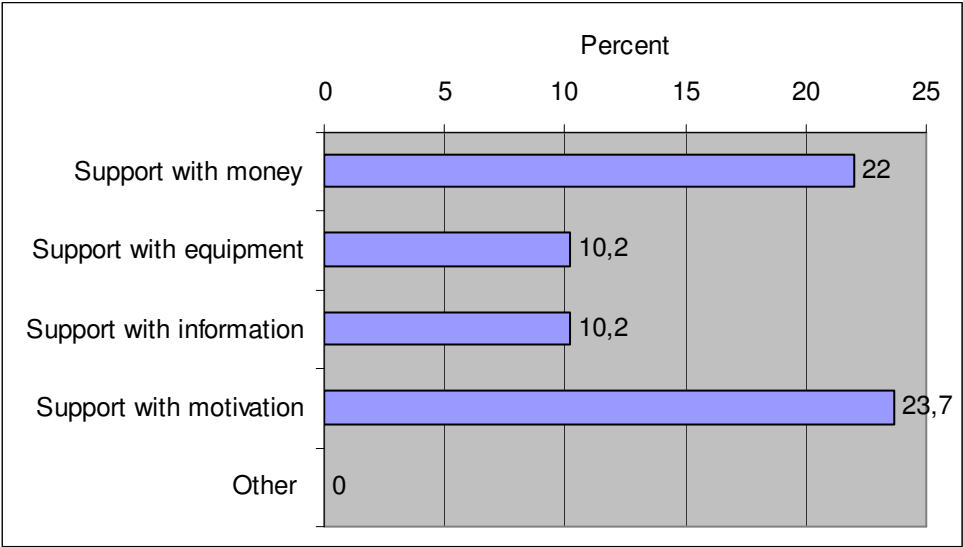


Figure 14. The supporting methods (N=59)

3.2. Some aspects of development of competence concerning teaching outdoors

What opportunities to develop the competence concerning teaching outdoors have teachers in Belgium? Appearing from the results of the given interrogation, 72% of the respondents have sufficient methodical materials concerning teaching outdoors.

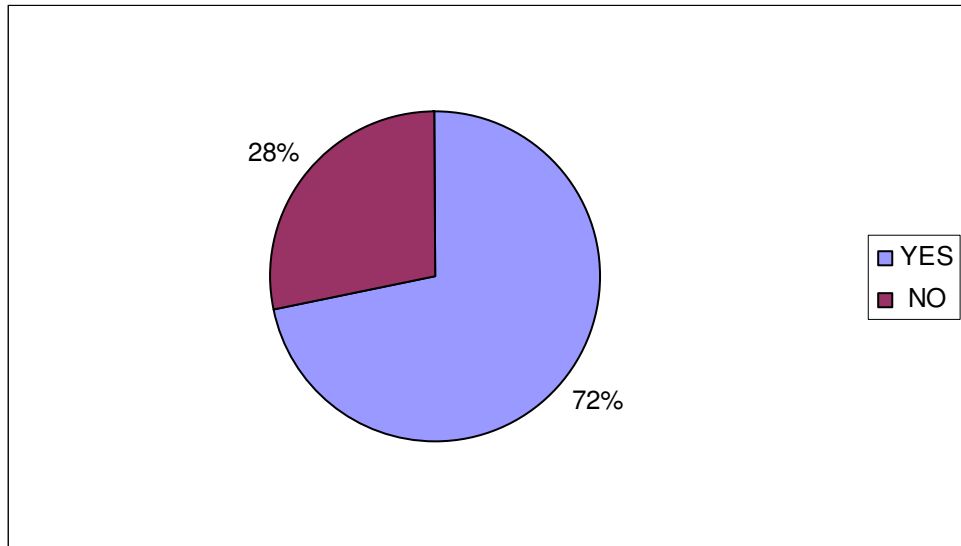


Figure 15. **Having sufficient teaching materials for outside activities (N=39)**

How do teachers develop their competences concerning outdoor learning? The internet seems to be an important source of information (52,5%). Belgian teachers also learn a lot by talking to experts (37,3%), consulting specialised books (32,3%) and following courses in specialised training centres (32,2%). A lot of ready-made teaching materials can be found on Belgian (Flemish) and Dutch websites.

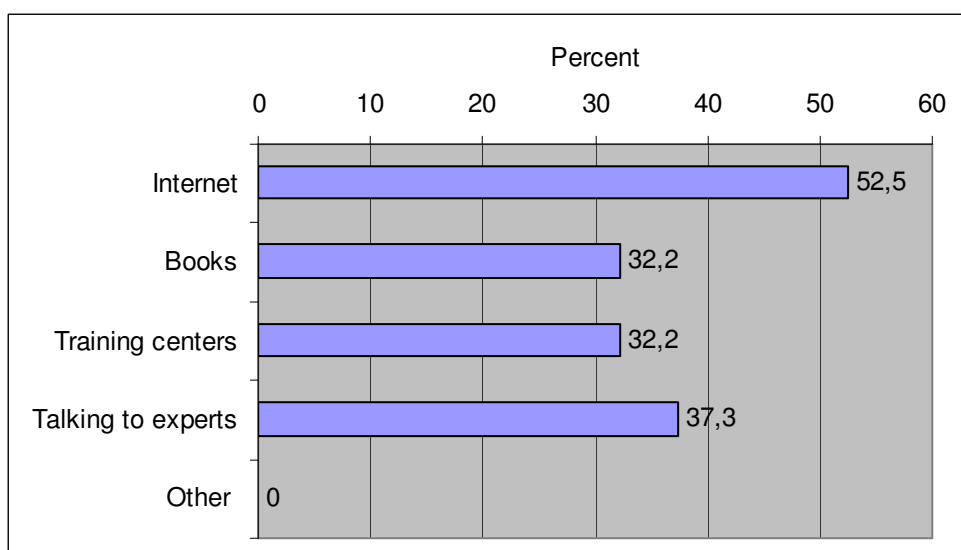


Figure 16. **Resources of information/sources for organising teaching outdoors (N=59)**

Only 31% percent of the respondents has ever had specific training in teaching outdoors (by a formal or informal course).

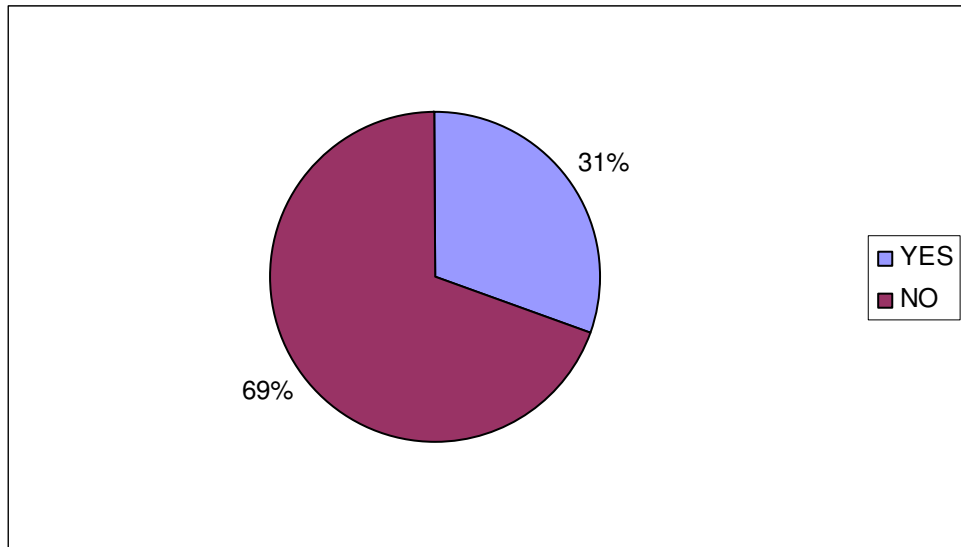


Figure 17. Training in teaching outdoors (N=49)

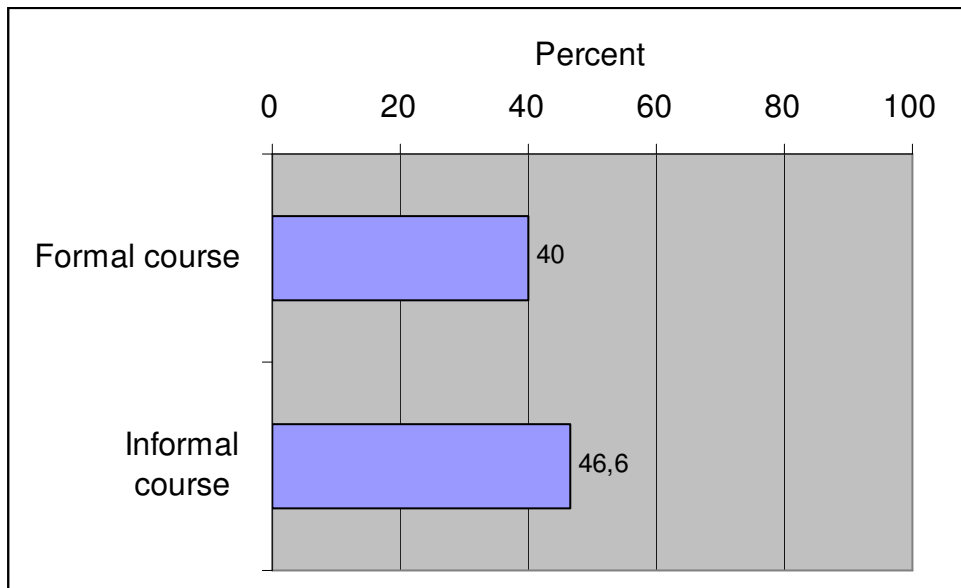


Figure 18. Type of course (N=15)

Most of the trainings in outdoor education is organised by private training organisations. It has to be remarked that, in Flanders, most of the refresher courses in the field of education are organised by private organisations that share their experience with educators. Half of the respondents follows more than 3 courses a year (Figure 20).

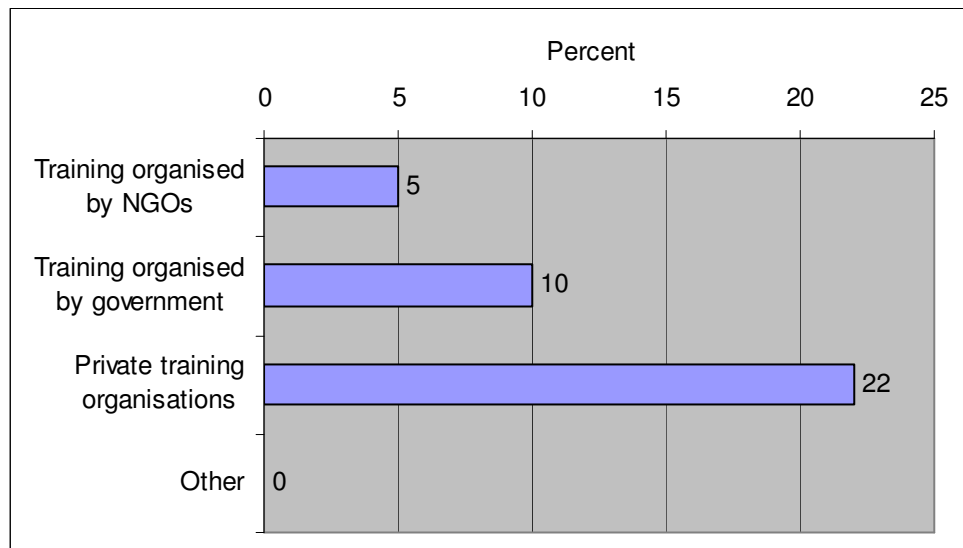


Figure 19. The available training for outdoor education by type of organisation (N=59)

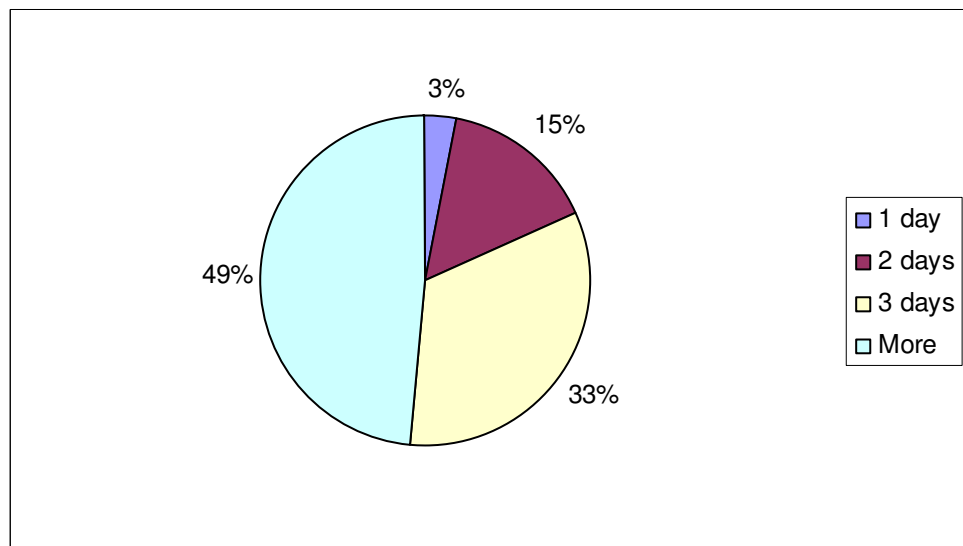


Figure 20. Days of personal training in a year (N=35)

In spite of the fact that most of the respondents give a lot of time for the in-service training, half of them (57%) confirm that refresher courses, concerning teaching outdoors, do not suffice them (Figure 20).

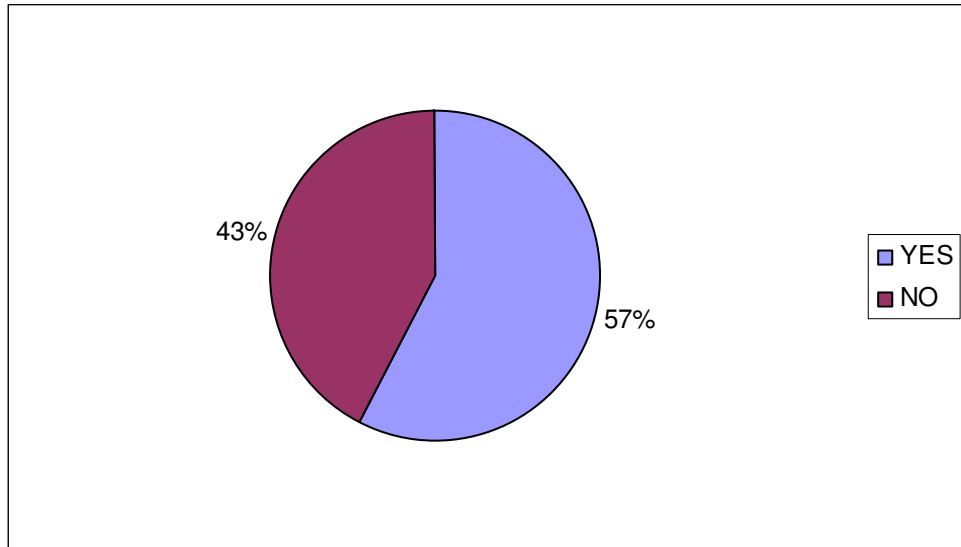


Figure 21. The needs of more training in outdoor education (N=40)

The training day is the most (22 %) comprehensible form of the in-service training for respondents of the given interrogation (Form 21). 20,3 % states that learning from colleagues abroad might be usefull. Only 15,2 % of the respondents would like to learn by e-learning, same for printed books. Evening courses are not acceptable for most of the respondents.

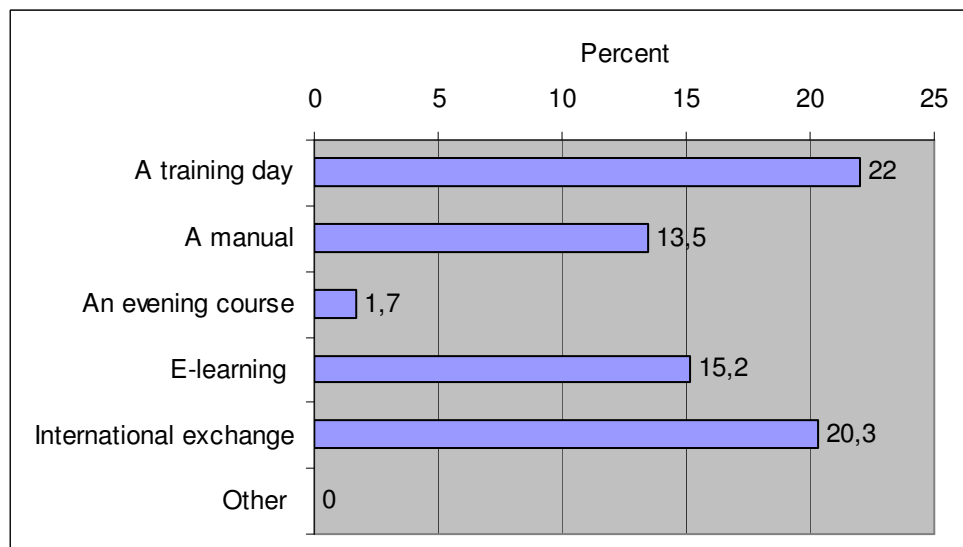


Figure 22. The best forms for training on outdoors education (N=59)

3.3. The opportunity of distribution of pedagogical experience

This part of the interrogation delivers an opportunity for the realization of the project "The Nature of Learning: Take Learning Outdoors". As the end-product of this project is based on the examples of pedagogical experience, presence of such experience and the desire to share it with others is very important information for the authors of the project. As it was found out, only 13% of all participants of the given interrogation declare to have sufficient experiences of conducting of teaching outdoors and a methodical material (Figure 22). Consequently, only 9% of the respondents want to share experiences.

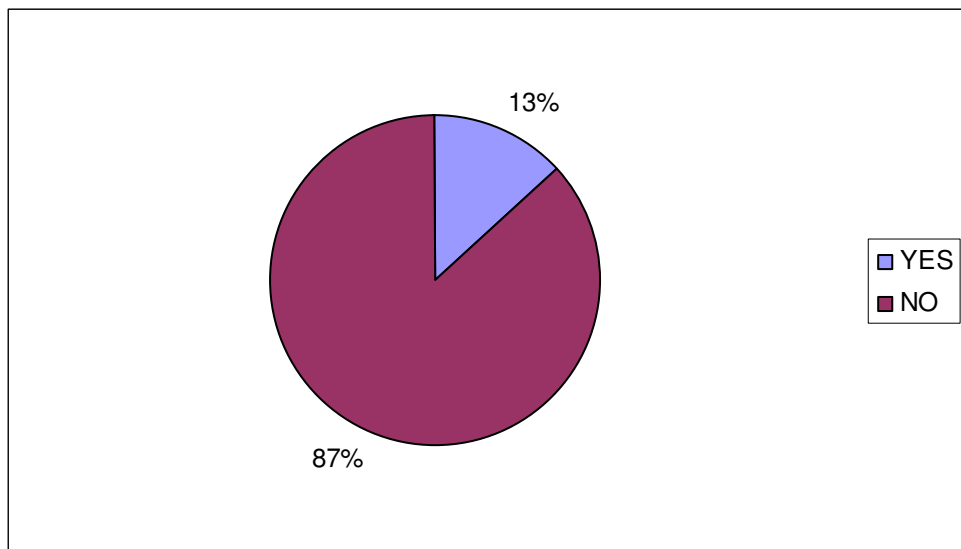


Figure 23. Sufficiency of recommendations for outdoor activities (N=59)

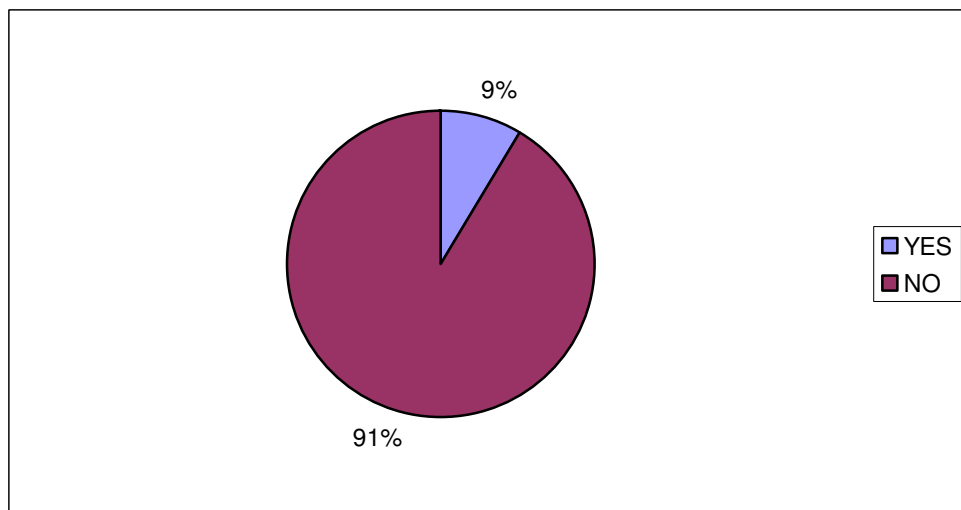


Figure 24. Agreement of respondents to share their experience (N=59)

Conclusions

- Teaching outdoors is mostly applied in the last two years of primary school, in science- and art-education in secondary school, and in science- and art-education in Institutes of Higher Education. The main obstacle to apply outdoor learning is time.
- The experience of teaching outdoors is connected with realization of educational programs of science, nature conservation, physical training and arts by conducting active knowledge of an environment, physical activity, educational games and forms of art.
- Mostly, teaching outdoors takes place in forests, wetlands and nearby parks.
- The main problems limiting teaching outdoors are: financial problems, transportation problems.
- The day of training and self-education using the internet are the best forms of the in-service training for teachers in Belgium. The learning from more skilled colleagues is the predominant form today.
- Unfortunately, most of the respondents don't have sufficient experience in outdoor learning to share it with other colleagues.

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