



## ORIGINAL PAPER

DOI: <https://doi.org/10.20883/jms.2017.163>

# Teachers' evaluation of the project "Little Physician" by the Polish Academy of Kids run at the Poznan University of Medical Sciences

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### ABSTRACT

**Introduction.** The project "Little Physician" has been run for over four years as a joint project of the Poznań University of Medical Sciences and the Polish Academy of Kids. It is an innovative undertaking in the international educational market, where young 'scientists' aged from 6 to 12 contribute to the classes and pursue their research interest in the broadly understood field of natural science.

**Aim.** The aim of this research was to probe the opinions of the teachers participating in the "Little Physician" initiative.

**Material and Methods.** The research was conducted on the population of 32 teachers. The applied technique was an interview based on an original questionnaire consisted of respondent's particulars and 7 questions evaluating the usefulness, quality and thematic range of the classes, as well as the lecturers' competencies and organisation of the classes.

**Results.** The usefulness of the project was positively evaluated by all the interviewees (81% rated it as "very good", 19% thought it was "good"). As many as 75% of the respondents decided that the thematic range of the lectures was "very good". An even higher percentage assessed very positively the competencies of the adults giving lectures, the coordinators of the classes, the lecture halls and the manner in which classes were conducted.

**Conclusions.** The project is very highly evaluated by the teachers supervising the participating children. The high assessment stems from the high competencies of the coordinators and lecturers participating in the classes, an accurate choice of issue or subjects discussed.

**Keywords:** schoolkids, teaching, medicine, innovation.

## Introduction

The project "Little Physician" has been run for over four years as a joint project of the Poznań University of Medical Sciences and the Polish Academy of Kids. The idea of opening up the universities to children regardless of their social status or school achievements came from the Polish Academy of Kids Association working closely with over 20 higher education institutions and scientific centres in Poland and abroad [1, 2].

"Little Physician" is an innovative undertaking in the international educational market – the first university run by kids, where young 'scientists' aged from 6 to 12 contribute to the classes and pursue their research interest in the broadly understood field of natural science. The classes carried out by the representatives of various medical fields are not only supposed to get young students acquainted with human physiology, diseases and medicines, but also provide an opportu-

**Table 1.** Grades assigned by the teachers to each question in the questionnaire

Question:	Grade				
	Very poor/low 1 point	Poor/low 2 points	Average 3 points	Good 4 points	Very good 5 points
Usefulness of the project	0	0	0	6	26
Quality of the classes	0	0	1	7	24
Thematic range of the lectures	0	0	0	8	24
Competencies of the adult lecturers	0	0	0	5	27
Environment of the classes	0	0	0	2	30
Organisation of the classes	0	0	0	7	25
Competencies of the project coordinators	0	0	0	3	29

nity for practical learning of first aid, as well as developing proper emergency behaviours. Encounters with science help shaping health-promoting attitudes, correct eating habits and personal care in children.

School is one of the oldest social institutions, designed to prepare the young generation for adult life. Thanks to their knowledge, experience and professional skills, teachers play a crucial role in the process of schooling and education [3–5].

Early education is particularly important for shaping attitudes and, as a consequence, the entire personality of pupils. It is the younger children, grade 1–3, who are exceptionally vulnerable to external influence and who show great eagerness and curiosity to learn about the world around them. Therefore, as far as this age group is concerned, the organising skills of the leading teacher have a considerable impact on the children's future development and professional career [6].

## Aim

The aim of this research was to probe the opinions of the teachers participating in the "Little Physician" initiative. The usefulness of the project, the quality, organisation and environment in which the classes took place, as well as their thematic range and teaching staff's competencies were the main points of interest.

## Materials and methods

The questionnaire was carried out in April 2016 among 32 teachers (30 women and 2 men) age 22–55 who in the academic year 2015/2016 participated in the "Little Physician" project as group supervisors. The respondents represented 16 school groups: 13 from Poznań and 3 from Wielkopolska region (voivodeship) – Mieścisko, Krotoszyn, Granowo, comprising 400 children. The teachers were of various level of profession-

al advancement, namely 8 apprentices, 22 appointed teachers and 2 certified teachers.

The questionnaire consisted of respondent's particulars and 7 questions evaluating the usefulness, quality and thematic range of the classes, as well as the lecturers' competencies and organisation of the classes. The responses were categorised within the scale from 1 to 5 where 1 stood for "very poor/low" and 5 for "very good". The respondents were also asked about their willingness to participate in similar projects in the future. The possible answers included "yes", "no" and "I am not sure".

## Results

**Table 1.** presents the responses given by the teachers. The usefulness of the project was positively evaluated by all the interviewees, of whom 81% rated it as "very good" while only 19% thought it was "good". Only one teacher perceived the quality of the classes as "average". As many as 75% of the respondents decided that the thematic range of the lectures was "very good". An even higher percentage assessed very positively the competencies of the adults giving lectures (84%), the coordinators of the classes (91%), the environment in which the classes took place (94%) and the manner in which they were conducted (78%). **Table 2.** presents the average score for each tested category.

**Table 2.** Average score for each tested category of the questionnaire

Question	Average score
Usefulness of the project	4.8
Quality of the classes	4.7
Thematic range of the lectures	4.75
Competencies of the adult lecturers	4.8
Environment of the classes	4.9
Organisation of the classes	4.8
Competencies of the project coordinators	4.9

## Discussion

Traditional school education does not teach children scientific approach to problems and theories. It is contemporarily believed that learning is a natural process, similar to growth and development [7]. The idea of the "Little Physician" matches perfectly the new theories regarding learning processes. Many authors underline that it is enthusiasm and joy of discovering that is the key to learning [8]. According to the most recent research, enthusiasm allows the brain to develop, while its lack leads to re-playing the previously stored information only and not to any development [9]. Therefore, the main idea behind the project the "Little Physician" is promotion of the autonomy and creativity of the youngest pupils. It is aimed at stimulating the cognitive activity, popularising knowledge and sustaining the children's primary curiosity about the world around them. It draws from the observation of children who, provided with the right tools and research spaces, can actually contribute to the world of science [10]. Participation in the extracurricular classes allows children not only to get acquainted with the latest scientific achievements but also to develop their own scientific passions which can be shared with their peers. In this way, science becomes a fascinating adventure and a very personal experience [11, 12].

It has been known for a long time that the initial few years at school determine the child's attitude towards further education, provide the basic knowledge of the world and shape the character. The teacher becomes a particularly important person in the child's life, supporting his/her creative activities and influencing his/her future level of motivation and interest in learning [12].

According to teachers, encounters with science organised out of school become an additional challenge for them involving time management, keeping discipline and ensuring funding [13].

However, despite these difficulties, since the very beginning in 2012 the "Little Physician" has been very popular among primary school teachers of Wielkopolska. Undoubtedly, free enrolment for pupils and their supervisors is a great advantage.

The "Little Physician" project is carried out within the structure the University of Medical Sciences in Poznań and by its employees, but it engages the audience in the process of active education, who are given the possibility to present their own knowledge by giving their own lectures. The classes have been organised regularly for the last five years. Each academic year the participants meet 9 times – monthly from

October to June for a two-hour class. During this time young students listen to lectures given by the academic staff of the university and their own peers. Children prepare independent presentations following their passion for certain topics, and subsequently deliver them as lectures in front of the entire audience. In this way, the reasons underlying the project are being confirmed and once again show that an immediate contact with science through experiment and university lab shapes a very different attitude towards learning, encourages studying, exploration and discovering new information. Moreover, compared to their peers, children participating in the meetings feel happier and are prouder of their work [14, 15].

In primary teaching, increasing attention is paid to health education. Its goal is not only to change behaviour (e.g. caring about one's health), but also to develop children's skills and abilities to consciously act for the benefit of their own health and of the environment they live in [16, 17].

Teachers of grades 1–3 particularly have a great opportunity to develop health attitudes in pupils, given the possibility of implementing the educational content not only in rational physical education, but also through shaping hygienic habits, or paying attention to diet. All those topics are subject of the project [18].

A highly positive evaluation of the "Little Physician" that has been carried out for the last four years within the structures of our university, results in its increasing popularity among primary schools. Moreover, this form of education provides new didactic experience to university teachers since children are a very different audience from their regular students. However, those who one decided to take up the challenge and lecture to a group of 400 children, as well as answer all of their very inquisitive questions in an accessible way, are very happy to continue and participate in the following editions. It is another great advantage of this educational program that the knowledge acquired by the young students is transferred to others, as the participants of the project become leaders, organise lectures and presentations in their own schools, or take active part as lecturers in International Children Conferences, in this way promoting both the project and the university.

## Conclusions

The project "Little Physician" is very highly evaluated by the teachers supervising the participating children. The high assessment stems from the high competen-

cies of the coordinators and lecturers participating in the classes, an accurate choice of issue or subjects discussed as well as the environment (quality of lecture halls) in which the classes take place. Participation in the project encourages cognitive curiosity in children and inspires further scientific activities in school.

### Acknowledgements

#### Conflict of interest statement

The authors declare no conflict of interest.

#### Funding sources

There are no sources of funding to declare.

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Acceptance for editing: 2016-12-10  
Acceptance for publication: 2017-03-27

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