

# Articles

## The Relation among IQ, Study Achievements and Motivation to Study Teaching Programmes in the Educational Fields of Study

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### **Abstract**

This research study deals with the relation between intelligence quotient (IQ), success rate, and motivation for study for students of education at the Faculty of Education at the University of Hradec Králové (UHK). The focus is on the relationship between IQ and study achievements and making the connection to academic requirements of students who have not met these requirements within the first two years of their studies. Furthermore, this study determines the motivation to study teaching programmes and its relation to the measured values of IQ. The results of the research show that study preconditions, based on academic abilities, are not the key criteria for acquiring applicants who are motivated to start their teaching career after graduating from the Faculty of Education.

**Key words:** general intelligence, IQ, student of the Faculty of Education, study results, study failure, motivation.

# Vztah mezi IQ, studijními výsledky a motivací ke studiu učitelských programů ve vzdělávacích studijních oblastech

## Abstrakt

Tato výzkumná studie se zabývá vztahem mezi inteligenčním kvocienem (IQ), mírou úspěšnosti a motivací ke studiu u studentů pedagogiky na Pedagogické fakultě Univerzity Hradec Králové (UHK). Zabývá se vztahem mezi IQ a studijními výsledky a vztahuje je ke studijním požadavkům kladeným na studenty, kteří tyto požadavky v prvních dvou ročnících studia nesplnili. Studie dále popisuje motivaci ke studiu pedagogických oborů a její vztah k naměřeným hodnotám IQ. Výsledky výzkumu ukazují, že studijní předpoklady založené na studijních schopnostech nejsou klíčovým kritériem pro získání zájemců, kteří mají motivaci vydat se po skončení studia na Pedagogické fakultě na pedagogickou dráhu.

**Klíčová slova:** obecná inteligence, IQ, student pedagogické fakulty, studijní výsledky, studijní neúspěch, motivace.

## Introduction

From the position of academic staff, while teaching at universities, it is easy to succumb to certain doubts regarding the academic ability of university students nowadays. **The trend of the increasing number of university students** enrolled in the last two decades has contributed to these doubts. **Nowadays, more than a quarter of the population, aged 20–29, in the Czech Republic study at university.** In 2011, 27 % of young people enrolled as university students while in 2012 the number increased to 28 %. When comparing these statistics to 2001, when there were 12 % of university students within the same age group, we can see that the amount of university students has more than doubled. However, compared to other European countries, the Czech Republic is at the low end of the scale considering the number of people with completed tertiary education. In 2008, researchers found that the number of people with tertiary education in the Czech Republic was 15 % (ČSÚ, 2014–Czech Statistical Office). Therefore, the Czech Republic keeps suffering from the lack of tertiary educated people despite the increase in enrolment. The trend of accepting more university students is expected to continue to grow. This growth of students has resulted in **higher level requirements for teachers who work with larger groups of students at various levels of study preconditions, motivation, attitudes towards studying, etc.** The experience of many teachers is well captured in a quote of an author pondering over the problems of teachers' profession-

alism at the present time: *'The fact that the mentality of students has changed strongly, their study habits, morale, behaviour at lectures, seminars and exams (if they attend them at all), is more than evident...'* (Koťa, 2010, p. 68)

The aim of this research is to describe **how the overall trend of the increasing number of university students has been reflected in the level of study preconditions** of students at the Faculty of Education of the University of Hradec Králové. It focuses on the determination of IQ scores which is considered to be a reliable indicator of general intelligence. In addition, there are four main research questions which are presented in order to verify the doubts concerning the study potential of these students:

Research question no. 1: What is the structure of IQ distribution in the student population of educational fields of study at the Faculty of Education at UHK? The main focus being to understand the real potential of the students in order to avoid both unnecessarily pessimistic and overly optimistic illusions. We assumed that the students of pedagogy are an inhomogeneous group in respect to their IQ scores. We were interested in the ratio of the amount of students in individual value zones of IQ.

Research question no. 2: Is there a statistically significant relationship between IQ and study results of the first and the second year students in the field of education? Generally, it is assumed that it is possible to predict the study results based on IQ. The question is whether or not this assumption is currently valid regarding the specific conditions of education at the Faculty of Education of UHK.

Research question no. 3: Is there a connection between IQ and study failure of university students who were not successful at meeting the specific requirements? During the two years of work with our students, the researchers noticed that 18 % of the students did not meet the study requirements. Therefore, the question focused on whether their study failure was related to the lack of study preconditions. Presumably, there is a potential solution to prevent these failures in the future after identifying the IQ connection.

Research question no. 4: Does a statistically significant relationship exist among IQ, study results and motivation to study in pedagogical programs? We tried to describe the students' motivation to study in the pedagogical branches. We wanted to determine the percentage of students that chose the pedagogical branches of study because they see teaching as their future profession. We were also interested in the relation between study preconditions, study results and motivation to become a teacher by profession.

## 1 Theoretical Basis of IQ Measurement

Intelligence, which is manifested in solving various problems, can generally be defined as a one's individual level and quality of mental operations. Intelligence is a broad term, and it cannot be fully identified with the Intelligence Quotient (IQ), which is the value measured by the tests of intelligence (Plháková, 2010).

In our study, we defined the value of IQ as the measured result of the level of General Intelligence (the so-called “g” factor). General Intelligence expresses the individual’s ability to adapt their thinking to new real-life conditions and tasks that are not possible to be gained through learned skills. The model of the General Intelligence has had nearly a century long tradition in psychology. Spearman (1927) described General Intelligence as a part of his two-factor theory of intelligence. Recent research confirming the existence of the general factor is based on a statistical model **of positive correlations between different types of IQ tests** (Mackintosh, 2011). The individual tests of intelligence measure a different type of cognitive functions, for example, verbal, spatial, perceptual (reasoning) capabilities, perceptual speed or memory recall. An individual can exhibit a different performance level in their utilisation. However, a model of positive correlations among these tests shows that a common component, which we can call general intelligence, affects the individual’s performance in these various types of tasks. **A connection between General Intelligence and aspects of brain efficiency as an information processing system has been considered** (Deary, 2000). The aspects of brain efficiency include the speed and precision with which the information is transmitted from one part of the system to another. One of the proven cognitive functions which positively correlates with General Intelligence is the **effectiveness of working memory**.

**Based on IQ, study results at the university level can be well predicted.** The correlation between IQ test scores and a number of different indicators of success in education ranges from 0.40 to 0.70 (Mackintosh, 2011). It is likely that performance at school and on intelligence tests are based on a similar type of cognitive abilities. Svoboda (2001) states that a reliable predictor of study success are multidimensional intelligence tests, in particular.

On the basis of the intelligence measurement, it is possible to anticipate the study results, but **IQ corresponds only minimally with the success in professional careers and with use in practical life**. Although above average intelligence gives students an advantage in managing their study requirements, it does not automatically ensure successful academic performance and subsequent professional career. This also depends on social intelligence, motivation, and other personal characteristics.

The **relationship between intelligence and creativity** which is important during university studies, during independent work on seminar activities for example, is significant. Future teachers are also going to apply creativity in their profession. According to Nakonečný (2009) highly creative individuals tend to be very intelligent, but intelligent people do not always have to be characterized by a high level of creativity. Szobiová (2001) examined the relation between intelligence and creativity of high school students in their final year and found them as overlapping mutually interconnected aspects of intellectual functions.

To measure IQ in our study, we used the **Vienna Matrix Test (VMT)**, which is designed to detect the level of nonverbal intelligence of adolescents and adults. The VMT

is designed to be a time-saving and reliable method for the estimation of intellectual level. This is a one-dimensional test designed to measure a specific component of intelligence. It stems from the theory of General Intelligence and, therefore, measures the "g" factor. The test is based on the **ability to form conclusions, reveal mutual causality (connection), and infer about relations**, which are perceived as the basic dimensions of the General Intelligence factor (Forman, 2002).

## 2 Research Results

### 2.1 Target Group

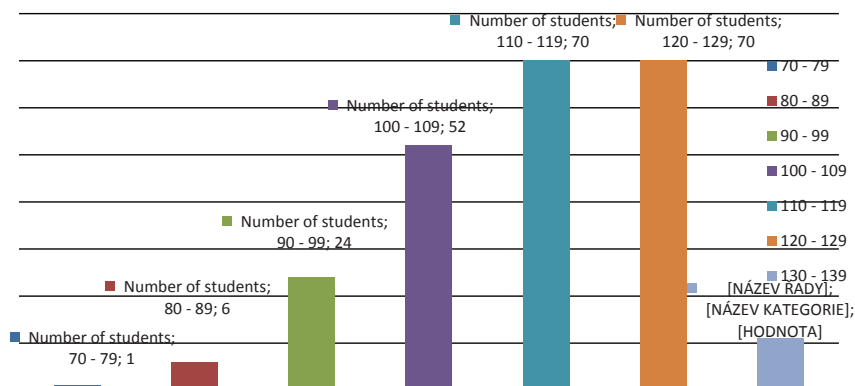
**Full-time students of the pedagogical programs at the Faculty of Education of UHK** were the target group. The measurement of intelligence took place within the framework of general psychology seminars in the first year of study during academic year 2012/13. We can consider the test group to be a representative sample of students of pedagogy, who had registered for 10 of the 16 psychology seminars within the study of compulsory pedagogical-psychological ground. More than half of all of the students in the first year of studies participated in the testing. The selection of students was not affected by voluntary interest in taking part in the intelligence test. The groups in which the testing took place were randomly selected.. Of the selected test groups, all of the students who were present in the classroom filled in the test. Students were guaranteed anonymity and also impartiality of their teachers. The results of the IQ test had no influence on the performance assessment in the particular subject. Those who were interested could learn their own value of IQ obtained in the test and were informed about the principles of the intelligence quotient interpretation at the same time.

### 2.2 Distribution of IQ in the Tested Group of Students

Research question no. 1 was the first to be solved: What is the structure of IQ distribution in the student population of educational fields of study at the Faculty of Education at UHK? In the first year of the full-time study program, 234 students participated in the Vienna Matrix Test. The majority of students (151 persons; 64.5 %) achieved the results in the above-average intelligence zone (IQ higher than 110). Average intelligence (IQ from 90 to 109) was detected in 76 of the participants (32.5 %) Below-average intelligence (IQ of 89 and lower) was measured in 7 participants (3 %).

## Graph 1

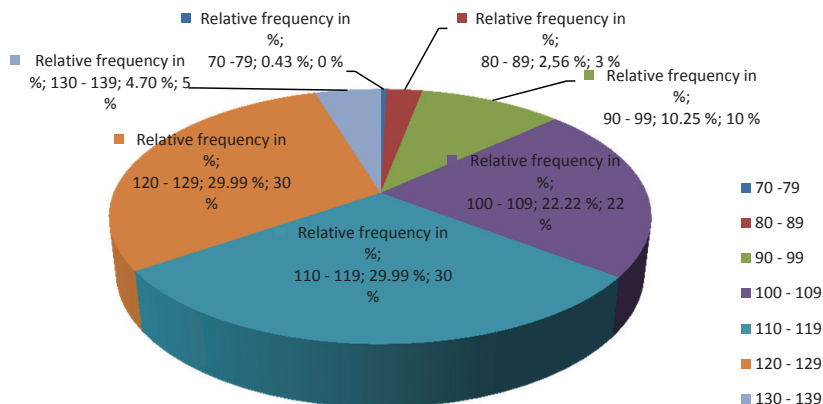
Results of the intelligence test according to the number of students reaching the IQ in individual zones separated by 10 points (n = 234)



If the tested students were a representative sample of the whole population, the results of the IQ measurement would resemble the layout of the Bell curve. Sternberg (2001) states that 68 % of the population reaches the IQ in the range of 85 to 115 points which is the area of the population's average. Approximately 14 % of the population has an IQ score in the range of 70 to 85 points, while another 14 % ranges in the interval from 115 to 130 points. Around 3 % of the population attain an IQ score of less than 70, and another 3 % of the population have the IQ higher than 130. According to the Bell curve of normal distribution, we should expect that from a total of 234 persons tested, approximately 50 % of participants (117 students) will reach an IQ score higher than 100. In the group of participants it was much higher in fact—a total of 203 students. In terms of the IQ value, the population of students of pedagogical branches of the Faculty of Education at UHK is not identical to the whole population.

*Graph 2*

Percentage representation of tested students in individual IQ value zones separated by 10 points (n = 234)



We consider this as a positive solution to the research question no. 1. The fact that the tested students of pedagogical branches at faculties of education produced a higher representation of people with above-average intellectual preconditions than in the whole population. **The students with above-average general intelligence outnumber the students with the average below-average values of IQ.** We found considerable potential in intellectual preconditions of our students. However, it is apparent from the charts that we found a minority of students with below-average IQ scores. The borderline results could have been caused by non-intellectual factors. In fact, this could concern gifted students whose performance on the test was distorted by random influences.

### 2.3 Relation between IQ and Study Results in the 1<sup>st</sup> and 2<sup>nd</sup> Years of Study

We verified the second research question by the calculation of the Pearson correlation coefficient between IQ and values of study averages. The research question no. 2: Is there a statistically significant relationship between IQ and study results of the first and the second year students in the field of education?

We observed the study success of the students who completed the intelligence test during the first two years of their studies. We determined the average study results obtained from the entire study during the course of the school year. It concerned the study results in academic year 2012/13 in the 1<sup>st</sup> year (n = 225), and for the same students

in academic year 2013/14 in their 2<sup>nd</sup> year ( $n = 206$ ). In both the years, the number of the observed university students declined because the average study result of some students were not detected due to study interruption, graduation, etc. The results of the correlation coefficient calculation are summarized in table 1.

Table 1

*Relation between IQ and study results*

Observed variables	Correlation coefficient $r$	Statistical significance
IQ and study results in the 1 <sup>st</sup> year ( $n = 225$ )	-0.256	$p < 0,05$
IQ and study results in the 2 <sup>nd</sup> year ( $n = 206$ )	-0.207	$p < 0,05$
Correlation of study results in the 1 <sup>st</sup> and 2 <sup>nd</sup> years ( $n = 206$ )	+0.454	$p < 0,01$

The relationship between IQ and study results was confirmed in the 1<sup>st</sup> and 2<sup>nd</sup> years of studies. Therefore, we can conclude that IQ has a predictive validity of study results in conditions of education at the Faculty of Education of UHK. The negative correlation value suggests that the higher the IQ the lower the obtained marks at exams (the best study average is 1, the worst is 3).

The correlation between IQ and school results that we have determined is however lower than the usually mentioned values of 0.40 to 0.70 (Mackintosh, 2011). The results at universities are affected by many different variables—the expectations of individual teachers, lack of students' time when preparing for exams, performance motivation, their own value system, study styles, personal affairs, extracurricular activities, etc. According to the correlation value between the study results in the 1<sup>st</sup> and 2<sup>nd</sup> years of study (0.454) we assume that the reception of better or worse study results is tied to the students' personal characteristics, rather than to random external influences.

## 2.4 IQ and Study Failure

The solution of the research question no. 3: Is there a connection between IQ and study failure of university students who were not successful at meeting the specific requirements?

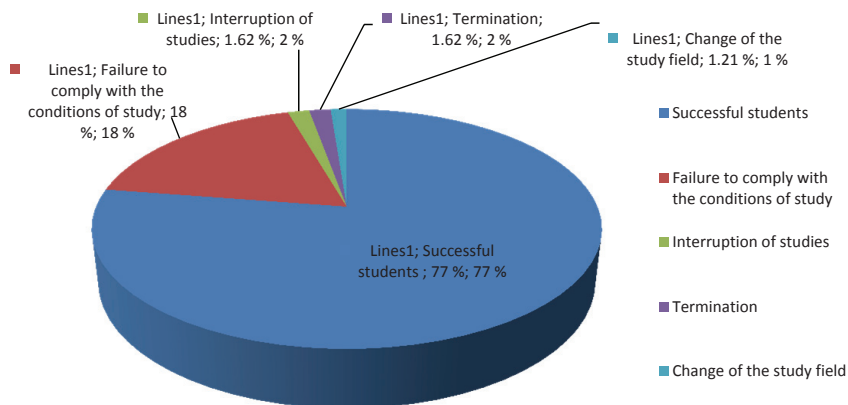
The relatively high rate of study failure is related with the increasing proportion of people studying at universities. From this perspective, the first year of study can be considered as the most risky period. The high number of students in classes makes orientation difficult, worsens the establishment of personal relationships between students and teachers, limits the possibilities of individual approach, and weaken students' beliefs about their study success (Jakešová, Hrbáčková, 2011). During the study implementation we observed a large part of the students' initial problems with fulfilment of study requirements. As for the failure criteria, based on which we put the students in



the unsuccessful group, we consider any disruption of the flow of commencing studies–graduation, interruption of studies, change of the study field, failure to comply with the study requirements in a given year (lack of credits). We evaluated the fail rate in the course of the first two years of the study.

*Graph 3*

Success rate in the first two years of study (n = 234)



Graph 3 shows that the main phenomenon associated with the study failure rate was the **failure to meet study requirements. This was the problem with 18% of the students.** Thus, this group consisted of students who did not obtain the prescribed number of credits and did not pass exams. We were looking for connections between the study fail rate and the value of IQ. We compared the average values of IQ in the groups of successful and unsuccessful students.

*Table 2*

*Comparison of average IQ in successful and unsuccessful students*

	Average in unsuccessful students (n = 57)	Average in successful students (n = 177)
Average value of IQ	111	113

Table 2 shows that the average IQ in the group of unsuccessful students reaches a similar value as the average IQ in the group of successful students. **The failure to meet the study requirements can be considered as a result of the other variables, not of IQ.** Although study preconditions expressed by the IQ value predict the academic per-

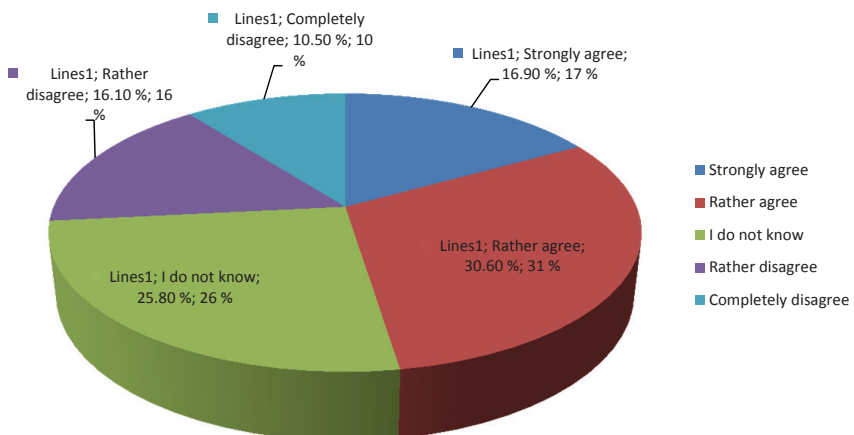
formance in terms of received evaluation, they do not, however, distinguish between students capable and incapable of meeting the prescribed study requirements. This large group of unsuccessful students deserves attention because teachers can identify the causes of their failure and can help them to overcome their difficulties.

## 2.5 IQ and Motivation to Study Pedagogical Branches

In our study, we have determined the motivation to pursue the career of a teacher and looked for connections with study preconditions and study results. At the end of the summer term of the first year of studies, the students were asked ( $n = 124$ ) whether they wanted to teach after graduation. The graph 4 shows the answers.

*Graph 4*

The agreement rate with the statement "After graduation, I definitely want to teach" ( $n = 124$ )



Less than half of the questioned students (47.5 %) answered positively about accepting the teaching profession (answers "strongly agree" and "rather agree"), while about a quarter of the students (26.6 %) expressed a negative attitude (answers "rather disagree" and "completely disagree") towards the opportunity to become a teacher after graduation. Another quarter of students (25.8 %) is uncertain or undecided so far (answer "I do not know") in this matter, which is a considerable number of potential teachers if they started to lean towards this profession during the course of their studies.

Results of the research question no. 4: Does a statistically significant relationship exist among IQ, study results and motivation to study pedagogical programs?

We verified the connection of motivation for the teaching profession with study preconditions and study results by calculating the Pearson correlation coefficient. Table 3 shows that the **motivation to accept the teaching profession does not have a statistically significant correlation either to the study preconditions or the study results.**

Table 3

*The verification results of the connection of motivation to accept the teaching profession (in the table hereafter referred to as “motivation”) with study preconditions (IQ) and study results*

Observed variables	Pearson correlation coefficient	Statistical significance
IQ and motivation (n = 103)	−0.003	Insignificant
Study results in the 1 <sup>st</sup> year and motivation (n = 103)	−0.092	Insignificant
Study results in the 2 <sup>nd</sup> year and motivation (n = 103)	−0.072	Insignificant

We can state that neither IQ nor study results are a reliable indicator of whether the student heads towards the teaching profession. Probably these two variables do not have a major impact on real employment of an individual in the education system as a variety of personality factors and influence of social environment are involved in the process of becoming a teacher.

## Conclusion

The results of the study show that the **future teachers, the current students of pedagogy at the Faculty of Education at UHK, compose a highly inhomogeneous group in terms of study preconditions.** The students with above-average intellect still prevail but many students with average and below-average IQ are also present. In the target group, a statistically significant correlation exists between IQ and study results. We can conclude that **higher general intelligence leads to better evaluation in exams.** We consider it to be important for teachers to be able to retain attention to talented students who still exist in the higher representation, even in mass education.

The value of IQ, however, did not confirm our beliefs to be a crucial indicator on which we could predict the study failure, i.e., inability of a student to meet the prescribed study requirements. **Study failure is influenced by other factors than IQ**—we can think that of personality traits, motivation, or external influence (social environment, current life situation of the student and other). This fact suggests that it would be possible to prevent unnecessary study failures if teachers had better conditions for applying an individual approach to students (e.g. smaller study groups). This does not

exclude the fact that good teachers would benefit from these “failed” students if the teachers paid due attention to them.

Furthermore, it turns out that **neither IQ nor study results are a reliable indicator of whether the student heads towards the teaching profession.** From the point of view of the general intelligence, highly gifted, average, and below-average individuals exist among the large part of students who decided not to enter pedagogical practice already during their studies.

In pedagogical fields of study, many students have long been present who are determined not to enter the pedagogical practice, and they really do not wish to start teaching after graduation. Study at faculties of education is only an ‘alternative solution’ for this group of students. It primarily is a way to get a university diploma. This phenomenon has had increasing incidence in the Czech Republic during the last two decades. While in the late 1990s, approximately 12 % of the students stated that they did not want to teach after graduation, nowadays 20 % to 30 % of students hold a negative attitude towards teaching (Havlík, 1997; Průcha, 2002; Urbánek, 2005; Juklová 2010; Wernerová, 2013). The motivation to study pedagogical fields is diverse and varies also over time. Juklová (2013) identified in new teachers three main categories of motives taking part in choosing their profession: work with children, developing expertise, and acquiring university education (obtaining a diploma). Svatoš (in Wiegerová et al., 2012) compared the motivation of students in the Faculty of Education of University of Hradec Králové in 2000 and 2010. While in 2000 the dominant motive was the factor of an interesting and “good” profession (diversity of the teaching profession), and the resulting benefits (freedom of decision-making, holidays). Ten years later the work with children and the improvement of the field knowledge were identified as the predominant motives. The perception of teaching as a good and interesting profession lasted but with lower importance than in year 2000. Students, who were starting in 2010, saw the teaching profession as a foundation for personal development and opted for university studies to obtain university qualification, and currently, as a means of better prospects for the labour market.

Some of the students who graduate from the faculties of education with no interest in the teaching profession will likely remain there. At present, it concerns about a quarter to a third of all students. **Most of our students fall into the category of those interested in the teaching profession or into the category of the undecided. By offering a quality undergraduate study, we can support the professional development in the direction towards a teaching career with a large group of students, regardless of their study preconditions or study results.** This statement is supported by the results of the research question no. 4.

The criteria by which to select candidates to study pedagogical fields represent one of the topics for further discussion of this problem. It seems crucial for us to find out about motivation and personal attitudes of candidates towards the teaching profession.

This criterion is much more difficult to measure and subsequently compare candidates with each another. However, we deem this as an incomplete selection criterion to admit students only on the basis of achieved points in tests of knowledge.

We see practical benefits of this study in the knowledge of study preconditions and study motivation of students in teaching courses at our faculty. Familiarity with the target group, for which lessons are prepared, can help us set requirements and achievement of realistic expectations of study results in order to avoid under-estimation or over-estimation of students' performance. We hope that we have been able to remove the myths the decreasing level of study preconditions of this group of university students and to support pedagogical optimism of teachers.

## References

- ČESKÝ STATISTICKÝ ÚŘAD. Osoby s ukončeným terciárním vzděláním v mezinárodním srovnání. [cit. 2014-09-11]. Retrieved from: <http://www.czso.cz/csu/redakce.nsf/>
- ČESKÝ STATISTICKÝ ÚŘAD. Studenti a absolventi vysokých škol v ČR [cit. 2014-01-20]. Retrieved from: <http://www.czso.cz/csu/redakce.nsf/>
- Deary, I. J. (2000). Simple Information Processing and Intelligence. In Sternberg, R. J. (ed.) *Handbook of Intelligence*. New York: Cambridge University Press, 2000, pp. 267–284.
- Forman, K. F. (2000). *Vídeňský maticový test*. Praha: Testcentrum.
- Havlík, R. (1997). Hodnotová a profesní orientace studentů PedF. In Kantor, M., & Mošna, K. (1997). *Výchova a vzdělávání v českých zemích na prahu třetího tisíciletí: sborník referátů z 5. konference České asociace pedagogického výzkumu konané ve dnech 30. června a 1. července 1997 v Plzni*. Plzeň: Západočeská univerzita.
- Jakešová, J. & K. HRBÁČKOVÁ. (2011). Analýza prevence studijního selhávání. *e-Pedagogium* [online]. 3. [cit.2014-09-05]. Retrieved from: [www.pdf.upol.cz/rychle-odkazy/casopis-e-pedagogium/](http://www.pdf.upol.cz/rychle-odkazy/casopis-e-pedagogium/)
- Juklová, K. (2010). Začínající učitel a jeho vztah k profesi. In Kappl, M., Smutek & Truhlářová, Z. (eds.) *Etika sociální práce: Sborník z konference VI. Hradecké dny sociální práce, Hradec Králové, 16.–17. října 2009*. Hradec Králové: Gaudeamus.
- Juklová, K. (2013). *Začínající učitel z pohledu profesního vývoje*. Hradec Králové: Gaudeamus.
- Koťa, J. (2010). Vybrané problémy profesionalizace učitelů v postmoderní době. In Krykorková, H., & Váňová, R. *Učitel v současné škole*. Praha: Filozofická fakulta Univerzity Karlovy v Praze.
- Mackintosh, N. J. (2011). *IQ and human intelligence*. Oxford: Oxford University Press
- Nakonečný, M. (2009). *Psychologie osobnosti*. Revised ed. Praha: Academia.
- Plháková, A. (2010). Intelligence. In Blatný, M. et al. *Psychologie osobnosti. Hlavní témata, současné přístupy*. Praha: Grada Publishing a. s.
- Průcha, J. (2002). *Učitel: současné poznatky o profesi*. Praha: Portál.
- Spearman, C. E. (1927). *The abilities of man*. London: Macmillan.
- Sternberg, R. J. (2001). *Psychology: In search of the human mind*. Fort Worth: Harcourt College Publ.
- Svoboda, M., Krejčířová, D., & Vágnerová, M. (2001). *Psychodiagnostika dětí a dospívajících*. Praha: Portál.
- Urbánek, P. (2005). *Vybrané problémy učitelské profese: aktuální analýza*. Liberec: Technická univerzita v Liberci, Fakulta pedagogická.

- Wernerová, J. (2013). Hodnocení profesní přípravy studenty učitelství a jejich postoje k profesi. *e-Pedagogium* [online] 3, [cit.2014-09-17]. Retrieved from: [www.pdf.upol.cz/rychle-odkazy/casopis-e-pedagogium/](http://www.pdf.upol.cz/rychle-odkazy/casopis-e-pedagogium/)
- Svatoš, T. (2012). Začínající studenti učitelství a self-efficacy. In WIEGEROVÁ, A. (ed.) *Selfeficacy (osobne vnímaná zdatnosť) v edukačných súvislostiach*. Bratislava: SPN, 2012. ISBN 978-80-10-02355-4. Pp. 84–104. *Self efficacy: (osobne vnímaná zdatnosť) v edukačných súvislostiach*. 1. vyd. Bratislava: Slovenské pedagogické nakladateľstvo.
- Wiegerová, A. a kol. (2012). *Self-efficacy: Osobne vnímaná zdatnosť v edukačných súvislostiach*. Bratislava: Slovenské Pedagogické Nakladateľstvo.
- SZOBIOVÁ, E. (2001). Vzťah tvorivosti a inteligencie: prieniky, podobnosti a odlišnosti. *Československá psychologie*. 2001, vol. 45, no. 4, pp. 323–337. ISSN 0009-062X.

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**Bc. Klára Svobodová** is a student at the Faculty of Education, University of Hradec Králové, Czech Republic. She has participated in the students' scientific project, with a focus on study achievements and motivation to study teaching programmes at the educational fields of study.