

**Theses of the university doctoral dissertation (PhD)**

**The analysis of psychological background factors of  
the school talent development in the senior section**

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## 1. Introduction, objectives

Accompanying the talented students' development with attention, that is mainly present in the examination and the analysis of study performance in practice, is extremely important. The students' study performance change offers teachers a lot of information concerning how successfully they do their work and what they have to do in the future. This way we can find out only a few things about the phenomena lying in the background of the talent's development. The talent can be grasped by the union of several examination procedures complementing each other and spanning the personality (Heller, 2000). In the course of the impact analysis we have to take into consideration the change of considerable background factors such as motives, learning strategies and anxiety that besides special abilities significantly influence performance. It is important to examine also the development of general intellectual abilities because these do not always appear directly in the study performance. In our country such examinations spread from the end of the 1980s, and they were taken place in relatively homogeneous groups, the so-called "selected" classes (Balogh, 2004). Their feature is that children with intellectual ability exceeding the average are gathered, and they work with them in this closed framework for years developing their talent this way (Nagy, 2000).

From the turn of the millennium not only in the literature of pedagogy but also in school practice a view spread that in the course of developing work the talented student shall stay in a natural organizational form, random heterogeneous groups, in the so-called "normal" classes. This means that the students with different abilities go to a class together, and the teachers try to achieve the best possible result in deploying children's talent, evidently based upon the forms of the efficient differentiation. Previously there were not any impact assessments based on background factors concerning talent care in the "normal" classes. I would like to make up for this deficiency with my paper.

Let us take a close look at the important background factors mentioned above which are examined worldwide in the course of developing the talented ones, referring more considerable researches so far.

**1.1. General intellectual abilities:** Francis Galton is the father of mental tests. For him intelligence is based on the person's ability to make efforts and on his/her sensibility for his/her environment (Cianciolo-Sternberg, 2007).

James McKeen Cattell American psychologist transmitted Galton's assessment methods into the United States of America. He used the expression 'mental test' for the first time.

At the beginning of 1900s as for the individual and the collective intelligence tests considerable improvement can be observed (Sattler, 1982, Vane and Motta, 1984). "In France Alfred Binet together with Theophile Simon and Victor Henri rejected Galton's view on the substantial sensor and motor features of intelligence, and stated that the examination of higher mental processes differentiates more efficiently between the individual differences appearing in the people's intellectual abilities" (Tóth, 2003, p. 101). The original Binet-Simon test was modified many times. It was adapted first by Lewis Terman (1916) who applied them for an American usage, translated and renamed the task sheets (Stanford-Binet scale). He used first the intelligence quotient, so the IQ value which was introduced by William Stern.

In 1939 David Wechsler broke the autarchy of the Stanford-Binet scale with the Wechsler-Bellevue in the market of the market of the individual intelligence tests.

**1.2. Motives:** one of the characteristic features of the examinations concentrates on the relation of school performance and school motivation (Grolnick, Ryan and Deci, 1991, Wentzel, 1989, Csikszentmihályi, 1990, Kozéki, 1986, 1990, Réthyné, 1988, 1989, 1995). These researches generally got the result that school motivation has a positive effect on school performance. This becomes exciting whether what is meant by school motivation and by whom, in what model framework the relation between motivation and performance is interpreted, which elements of school motivation are distinguished.

The elaboration of the theoretical background and the list of viewpoints concerning the research of school motivation began in the 1980s in Hungary. Béla Kozéki developed his concept at that time. Kozéki gives an excellent role what kind of motivational sources the external world, so the scene of the child's socialization mean to the person.

**1.3. Learning orientation, strategies:** the researches dealing with information process, efficient learning methods have been taken place in psychology for decades (Balogh, 2004a). In this period there were a lot of examinations lead in relation with variables projecting school performance ahead (e.g. learning strategies (Andreassen and Salatas-Waters, 1989)). The analysis of learning strategies has roots traditionally in the attitude research. Complete theoretical background was not available at the beginning. Efforts were made to reveal the students' values and attitudes in connection with school and learning. Essential definitions such as the concept of learning orientation derive from the attitude scales to be made perfect later; and the recognition of the motivation's role is also due to this research. Learning strategies are "such plans concerning learning activity that include collecting of information, processing of information and its developing if needed" (Tóth, 2000, p. 152). Cognitive

psychology dealt with the learning process, processing and storing of information from early times.

**1.4. Anxiety:** several researches proved that anxiety and school performance are linked to each other. The anxiety curve shows an inverse U shape with performance. That means neither the very high, nor the very low value of anxiety favours good performance (Bóta, 2004). Other researches separated the cognitive and emotional components of the exam anxiety (Sipos and colleagues, 1988). The concern component is related to the assessment of performance and cognitive processes concerning the consequences of participating at an exam and has an effect of reducing performance.

## **2. Own researches**

The main goal of our research is to contrast talented children's development in "normal" and "selected" classes at primary school senior section. We tracked and revealed the change of the "background factors" (general intellectual abilities, motives, learning strategies, anxiety) with the help of psychological impact assessments since these largely influenced the deployment of intellectual talent. We wished to compare our data obtained in the course of examination with the national and international research experiences we have.

### **2.1. Methods, sample**

In the analysis more than 500 students of 10-14 took part. Some (189) of the students attended in the "normal" classes of 6 different settlements (altogether 13 classes) while the rest (320 students) attended in the "selected" classes of 3 settlements (altogether 18 classes). Altogether 317 students took part in the "normal" classes on the occasion of the first assessment. The number of the participants in the examination decreased to 299 at the second assessment and to 211 at the third assessment. Finally 189 students were left in the analyses concerning "normal" classes. László Balogh made assessments previously in the "selected" classes (Balogh, 2004) and gave us the data concerning the "selected" classes in order to use them to compare the results. 394, 351, and 420 students of the "selected" classes took part in the examination. 320 students were left for the final analysis whose data lines were complete.

The analysis consisted of 3 assessments: at the beginning and at the end of the 5th class, and at the end of the 8th class. We obtained the data for the Hungarian adaptations of the measuring devices presented mentioned below with his help.

- The assessments of general intellectual abilities were made by *Raven Standard Progressive Matrix* Test. This test "examines observing skill, revealing structural

relations, keeping the revealed information in mind (short term memory) and the ability to do operations with information in more planes simultaneously” (Kulcsár, 1982, p. 171).

- To analyze the students’ school motivation *Kozéki-Entwistle’s (1986) learning motivation questionnaire* was applied. The questionnaire includes 60 statements, the students should mark the rate of their agreement with them on a five-point scale. Three main dimensions (follower, interested, performing) can be separated in it and there are three subparts can be found in each.
- *Kozéki-Entwistle’s (1986) learning orientation questionnaire* is equivalent to the school motivation questionnaire in its construction. The three great orientations appearing in this are the deep, reproducing and organized ones.
- The students’ exam anxiety was examined by *the TAI-H questionnaire* elaborated by Sipos and his colleagues (1988). This questionnaire includes the following three indicators: aggregated value, anxiety, emotional excitement.

## **2.2. The results of the research**

We have formulated our hypotheses in a separation based on the background factors (general intellectual abilities, learning motives, learning strategies, anxiety) it. We have examined the statements formulated in the hypotheses with the help of a statistical analysis of the data.

### **2.2.1. Our first three hypotheses are formulated concerning the development of the general intellectual abilities.**

**1. We supposed in our first hypothesis that the development of the intellectual ability of the students in the ”selected” classes exceeds that of their peers in ”normal” classes during the examination period.** This assumption of ours proved true. At the beginning of the 5th class the students’ general intellectual abilities in the “selected” classes (see dissertation Annex 5/a Table 3) are already higher than their peers’ in the “normal” classes. The intellectual abilities of the students in the “selected” classes developed in a more intensive way in the long run than those of their peers in the “normal” classes (see dissertation Figure 7). By dividing the sample into excellent, medium and weak ones we experienced that the development of the general intellectual abilities of the students in the ”selected” classes were much more intensive (see dissertation Annex 5/b Table 2) than that of their peers in the ”normal” classes (see also dissertation Figures 8-10). It can be observed that the general intellectual abilities of the excellent ones are the same in the ”normal” and the ”selected” classes at the 1st assessment, however, the difference is significant in favour of the ”selected” classes at the 2nd and especially at the 3rd assessment. We also felt the development in the ”selected” classes more considerable in the medium group but this was shown only in the 5th

and 8th classes, i.e. between the 2nd and the 3rd assessments (see dissertation Annex 5/c Table 3). On the other hand among the weak ones there is no difference at all in the development of the intellectual abilities in the "normal" and the "selected" classes (see dissertation Annex 5/d Table 3). We can say that the higher initial general intellectual abilities the students had, the more significant impact the way of teaching has on intelligence.

**2. In our second assumption the values for general intellectual abilities varied a lot in both the "normal" and the "selected" school classes at the 1st assessment, and during the development, as the result of the talent care programme, the difference decreases between the students in this area.** This hypothesis of ours proved true since examining the students' general intellectual abilities in the long run we can state that the difference decreases in the "normal" and the "selected" school classes as well (see dissertation Annex 5/e Table 4, 5/ f Table 5).

**3. Our last hypothesis said that the development of the general intellectual abilities is independent of the students' gender.** This was proved because the general intellectual abilities of the two genders (boys and girls) showed similar development. Furthermore researches and studies (Cianciolo-Sternberg, 2007, Halpern & LaMay, 2000, Loehlin, 2000, Loehlin, 2000, Lynn, 1994) prove this assumption of ours.

**2.2.2.** Let us take a look at the **three hypotheses concerning school motivation** in the following.

**1. The 1st hypothesis says the motivation features of the students change in the same way in both the "normal" and the "selected" classes during the development as a function of time.** This assumption of ours proved true because the values of the nine motives examined (parental affection, identification, affiliation, independence, competence, interest, conscience, need for order, responsibility) decreased in the long run in both class types (see dissertation Annex 6/a, b, c, d, e, f, g, h, i Table 3).

**2. Our second hypothesis is that the role of the three main elements (follower, interested, performing) of learning motives changes in the students' motivational structure from the 5th class to the 8th one.** This hypothesis of ours was not proved to be true since there were identical orders in the course of all the three assessments in both class types. The values of the performing dimension are the highest ones (see dissertation Annex 6/l Table 3), followed closely by the next dimension (see dissertation Annex 6/j Table 3). The interested motive is the weakest one (see dissertation Annex 6/k Table 3) in the course of all the three assessments.

**3. The 3rd hypothesis** was concerning the ranking of the motivation elements. **We supposed that the structure of the elements inside the 3 main dimensions (follower, interested, performing) changes during the development.** There were changes in the position of seven elements between the 1st and 3rd assessments in the "selected" classes while the ranking of seven elements changed as well in the "normal" classes. So the motivation structure of learning was transformed significantly between the 5th and the 8th class.

**2.2.3. Now we review the three assumptions formulated in connection with learning orientation.**

**1. As our first hypothesis states that the role of the three main learning orientation elements (deep, reproducing, organized) changes in the students' information processing from the 5th to the 8th class irrespective of class type.** This hypothesis of ours did not prove to be true because the order of the three main orientations remained unchanged during the examination period. We may confirm that the values of deep orientation are the highest ones (see dissertation Annex 7/a Table 3) followed by the organized orientation (see dissertation Annex 7/c Table 3) and the reproducing one (see dissertation Annex 7/b Table 3). The order is the same in the "normal" and the "selected" classes at the beginning of the 5th class, at the end of the 5th class and at the end of the 8th class. It should be mentioned that all three main orientations are weakening in the course of the assessments.

**2. The second assumption stating that the structure of elements within the three main (deep, reproducing, organized) orientations changes during the development,** was proved. There was a change in the position of six elements between the 1st assessment and the 3rd one in the "normal" classes while in five elements in the "selected" classes which shows the strengthening of the deep and organized orientations on the whole.

**3. The last assumption was that instrumental learning orientation plays a more considerable role in students' learning in the "normal" classes than in the "selected" classes.** This assumption of ours proved true since the value of the instrumental element is higher for students in the "normal" classes (see dissertation Annex 7/d Table 3) than in the "selected" classes at the beginning of the 5th class, at the end of the 5th class and at the end of the 8th class. This indicates that the students of the "normal" classes go better only for the good results, good marks or under outside pressure than the students of the "selected" classes.

**2.2.4. We review our three assumptions concerning anxiety.**

**1. In our first hypothesis we expressed that the change of the students' anxiety indicators generally shows similar tendencies, that is why they are independent of class type.** This

was proved since anxiety does not change with the elapsed time and there is no difference between the "normal" and the "selected" classes.

**2. The second assumption, namely the element of anxiety in the "normal" classes during the examination period (from the 5th to the 8th class) is higher than in the "selected" classes,** proved to be true: the students of the "normal" classes present higher values in the course of all the three assessments (see dissertation Annex 8/b Table 3) than the students of the "selected" classes.

**3. In connection with anxiety our last hypothesis is that the rate of the emotional excitement is dependent of class type, its value is higher in the "selected" classes than in the "normal" tracks.** This hypothesis of ours proved true since the value of the emotional excitement component in the "selected" classes is higher in the course of all the three assessments (see dissertation Annex 8/c Table 3) than in the "normal" classes.

**2.2.5. Nine hypotheses were formulated to explore the relations among the four factors** examined such as general intellectual abilities, motivation, learning strategy and anxiety.

**1. First of all these hypotheses, there is a weak correlation between the character and the strength of general intellectual abilities and motivation irrespective of class type,** was proved since we observed a weak correlation between the two factors examined both in the "normal" and the "selected" classes. However, it was not possible to make worthwhile deductions due to the low correlation values. Our assumption also proved to be true besides this because when we wondered if the relation of learning motivation is shaded by *class type* and *time*, and with regard to see who and how performed during the 1st Raven test, only at the conscience motive among the ten elements *time* and *Raven3* had significant impact on their own as opposed to the rest of the elements. This statement confirms our hypothesis.

**2. Our second hypothesis, in the development process the establishment of the applied learning strategies is also influenced by the standard of the students' general intellectual abilities (excellent, medium, weak) irrespective of class type,** proved true. At the striving for understanding, intrinsic, mechanical learning, failure-avoiding, good organization of work and success-targeted strategies the Raven3 got into an interaction with time. This also proves that the standard of the students' general intellectual abilities has a big impact on the establishment of learning strategies mentioned before. Presumably in their learning the deep and organized orientations are used more frequently by the excellent or medium students than the weak students.

**3. The third hypothesis, namely the standard of the general intellectual ability and the reproducing learning strategy (mechanical learning) show an inverse relation**



**irrespective of class type**, was partly proved since in the "normal" and "selected" classes as well as aggregated it is negative. It was not possible to make a worthwhile deduction here because of the low correlation values.

**4. The standard of the general intellectual ability and the rate of anxiety show an inverse relation and is independent of class type, so our fourth assumption** did not get an essential proof. We support this with the following: the relation between the standard of the general intellectual ability and anxiety is negative, however, we can observe low values both in the "normal" and the "selected" classes, and we were not able to make a worthwhile deduction as a result.

**5. The fifth hypothesis of ours is the deep and the organized learning orientations depend largely on the level of learning motivation, class type does not influence these relations.** This hypothesis proved true because motivated students in both class types apply more efficient learning strategies to reach their goals.

**6. In the sixth hypothesis the reproducing strategy (mechanical learning) correlates with the strength of learning motivation negatively in the "normal" and the "selected" classes** which proved true since in both class types the reproducing strategy (mechanical learning) can be connected to the learning motivation in a negative way. The difference between the class types lies in that there is no significant relation between the two factors mentioned earlier in the "normal" classes while there is such in the "selected" classes.

**7. Our seventh assumption says that there is a strong relation between learning orientation and motivation, and it does not change with the years in either class type.** This was partly proved because in both class types in the course of all the three assessments the deep and the organized orientations has a close and positive relation with the three main motivation dimensions. We could only observe a strong relation in the inverse direction between the reproducing strategy (mechanical learning) and the interested dimension in the "selected" classes in the course of the three assessments.

**8. Our eighth assumption stating that the rate of motivation and the level of anxiety show an inverse relation and class type does not influence relations** proved to be true since both in the "normal" and the "selected" classes there is a negative relation between learning motivation and anxiety.

**9. The last hypothesis: inside learning orientation the reproducing tendency and the strength of anxiety show a positive relation irrespective of class type.** This assumption of ours was proved since in both class types there is a worthwhile, significant, positive correlation between the reproducing strategy (mechanical learning) and anxiety.

### 3. Summary

The practical usage of the paper's results is useful for every teacher, especially the sceptical ones since hereby they can get a picture that the development of the students' general intellectual ability, motivation, learning strategy and anxiety does not depend on the organizational form of education rather on the teachers and methods applied.

During the examinations several questions, of content and methodology, have been left open, answering them is beyond the frameworks of this paper.

It would be worth examining the topic of socialization in more details, particularly family socialization. Analyzing family's impact on talent care would be also essential. The family's role has an outstanding significance because it means a pattern for the growing child. If knowledge is as a value in the family, then the child is striving to absorb more knowledge. The motivation of children coming from such a family has generally roots inside and they are striving for producing as good performance as possible. Besides this we could go into details about the characteristics of the talented students' teachers, so we could collect the teacher characteristics that are efficient in developing talented students. The examination of the students' self-image in both ("normal", "selected") classes could give an answer to some open questions. Additional researches are required to examine substantially why the students' (including the talented ones) motivation for school work decreases at the age of 10-14; our method applied seemed to have a narrow capacity.

My results on the whole indicate that in the view of the psychological factors examined there is no substantive difference in favour of the "selected" classes in the talent care as opposed to the work in the "normal" classes. In this framework anyone can find the methods which are efficient in the exploration and acquisition of the students' talent as already signalled by practical examples of the last decade (cf. Balogh, Koncz, 2008c).

### Works consulted

1. ANDREASSEN, C., SALATAS-WATER, H. (1989): Organization during studying: Relationships between metamemory, strategy use, and performance. *Journal of Educational Psychology*, 81 (2), pp. 190-196.
2. LÁSZLÓ BALOGH (2004): *School talent care*. Kossuth Egyetemi Kiadó, Debrecen
3. LÁSZLÓ BALOGH (2004a): The analysis of learning strategies. In: L. Balogh, M. Bóta, I. Dávid and J. K. Páskuné: *Psychological methods to tracking analysis of the talented students*. The Association of János Arany Talent Care Programme Institutions and János Arany Programme Office, Budapest, pp. 113-140.

4. LÁSZLÓ BALOGH, ISTVÁN KONCZ (2008): *Extended talent care*. Professors for European Hungary, Budapest.
5. MARGIT BÓTA (2004): Analyzing secondary school students' self-image and exam anxiety. In: L. Balogh, M. Bóta, I. Dávid, J. K. Páskuné: *Psychological methods to tracking analysis of the talented students*. The Association of János Arany Talent Care Programme Institutions and János Arany Programme Office, Budapest, pp. 141-182.
6. CIANCIOLO, A. T., Sternberg, R. J. (2007): Measuring intelligence. In: Cianciolo-Sternberg: *The short story of intelligence*. pp. 40-64.
7. MIHÁLY CSÍKSZENTMIHÁLYI (1990): Motivation and creativity: Road towards the synthesis of structural or energetic approaches of cognition. *Psychology*, 10, 1.
8. GROLNICK, W.S., RYAN, R. M., DECI, E. L. (1991): Inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology*, 83 (4), pp. 508-517.
9. HALPERN, D.F., LAMAY, M. L. (2000): The smarter sex: A critical review of sex differences in intelligence. *Educational Psychology Review*, 12(2): pp. 229-246.
10. HELLER, K. A., STERNBERG, R. J., MÖNKS, F. J., SUBOTNIK, R. (Eds.) (2000): *International Handbook of Giftedness and Talent*. Pergamon, Amsterdam - New York.
11. BÉLA KOZÉKI, ENTWISTLE, N. J. (1986): The analysis of learning motivations and orientations among Hungarian and Scottish students. In: *Psychology*, 2: pp. 271-292.
12. BÉLA KOZÉKI (1990): School motivation. In: Jarmilla Kürti (ed.): *Current questions of the education psychology researches*. Akadémiai Kiadó, Budapest pp. 95-124.
13. TIBOR KULCSÁR (1982): *Psychological factors of school performance*. Tankönyvkiadó, Budapest.
14. LOEHLIN, J. C. (2000): Group differences in intelligence. In R.J. Sternberg, ed., *Handbook of intelligence*. New York: Cambridge University Press, pp. 176-193.
15. LYNN, R. (1994): Sex differences in intelligence and brain size: A paradox resolved. *Personality & Individual Differences*, 17(2): pp. 257-271.
16. KÁLMÁN NAGY (2000): Talent developing programme in Gábor Bethlen Reformed Primary, Technical School and Students' Hostel of Törökszentmiklós. In: László Balogh (editor): *Talent and school*. Kossuth Egyetemi Kiadó, Debrecen. pp. 215-218.
17. ENDRÉNÉ RÉTHY (1988): *Analysis of motivational opportunities of the teaching-learning process*. Akadémiai Kiadó, Budapest.
18. ENDRÉNÉ RÉTHY (1989): *Benchmarking and learning motivation*. Tankönyvkiadó, Budapest.
19. ENDRÉNÉ RÉTHY (1995): *Learning motivation*. ELTE Faculty of Arts, Department of Pedagogy, Budapest.
20. SATTLER, J. M. (1982): *Assessment of children's intelligence and special abilities* (2nd ed.). Boston: Allyn and Bacon.
21. KORNÉL SIPOS, MIHÁLY SIPOS, SPIELBERGER, C. D. (1988): The Hungarian version of Test Anxiety Inventory adapted to analyzing primary school students. In: *Psychodiagnostical vademecum*, I/2. (edited by Ferenc Mérei and Ferenc Szakács). Tankönyvkiadó, Budapest.
22. TERMAN, L. M. (1916): *The measurement of intelligence*. Boston, MA: Houghton Mifflin.
23. LÁSZLÓ TÓTH (2000): *Psychology in teaching*. Pedellus Tankönyvkiadó, Debrecen.
24. LÁSZLÓ TÓTH (2003): *The small encyclopaedia of talent development*. Pedellus Tankönyvkiadó, Debrecen.
25. VANE, T. R. and MOTTA, R. W. (1984): Group intelligence tests. In G. Goldstein and M. Hersen (Eds.), *Handbook of psychological assessment* (pp. 100-116). New York: Pergamon.

26. WENTZEL, K., R. (1989): Adolescent classroom goals, standards of performance, and academic achievement: An interactionist perspective. *Journal of Educational Psychology*, 85 (2), pp. 357-364.

### **Publications**

- KORNÉLIA GÖMÖRY (2006): The psychological impact assessment of the students of complex talent care programmes in integrated classes. In: *Applied psychology*. Volume VIII Issue 2, pp. 19-33.
- KORNÉLIA GÖMÖRY (2006): The development of talented students' intelligence, learning strategies, motivation and anxiety in "normal" and "selected" classes. In: *Hungarian pedagogy*. Volume 106 Issue 3, pp. 213-229.
- KORNÉLIA GÖMÖRY (2007): The impact assessment results of complex talent care programmes in integrated classes. In: *New Pedagogical Review* Volume LVII Issues 3-4, pp. 79-103.
- KORNÉLIA GÖMÖRY (2008): The development of talented students' intelligence and learning strategies in integrated and selected classes. In: *Social Science Studies I*. DETEK Teachers' Training College of Hajdúböszörmény. pp. 28-44.
- GÖMÖRY KORNÉLIA (2008): The development of 10-12-year-old talented children's motivation and study strategies in 'integrated' and 'selected' classes. In: Ferenc, Mező – Szilvia Péter-Szarka (eds.): Psychological aspects of gifted education. Kocka Kör Association and Department of Educational Psychology (University of Debrecen, Hungary). pp. 45-54.
- KORNÉLIA GÖMÖRY: The component change of learning orientation and its comparison in the talent care programmes accomplished in "normal" and "selected" classes (under publication In: University of Miskolc Teacher Training Institute).
- KORNÉLIA GÖMÖRY: Relation between general intellectual ability, motivation, learning strategy and anxiety in "normal" and "selected" classes at the age of 10-14 (under publication In: *New Pedagogical Review*).

### **Lectures**

- Tracking analysis of talented students' intelligence, motivation, learning strategy and anxiety. The Day of Science Programme, DE-HPFK, Hajdúböszörmény, 8 November 2006.
- Psychological impact assessment of talented students' development. The Day of Science Programme, DE-HPFK, Hajdúböszörmény, 7 November 2007.
- The component change of learning orientation in the talent care programmes accomplished in "normal" and "selected" classes 2nd Taní-tani (Teaching) Conference, University of Miskolc Teacher Training Institute, Miskolc, 6 February 2009.