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## **ARE THE STUDENTS AWARE OF THEIR KNOWLEDGE? – AN EXPERIMENT**

**Keywords:** *descriptive geometry, technical drawing, education*

In the current academic year, an experiment has been conducted in order to improve the quality of education at the Silesian University of Technology. The experiment has been carried out during the Geometry and Engineering Graphics course within the Environmental Engineering programme at the Faculty of Energy and Environmental Engineering. The subject is taught in a one-semester cycle consisting of 15 hours of lectures and 15 hours of project classes. There are four project groups of 22, 24, 22, and 21 participants. The size of groups, allowing for a several-minute long introduction to the project, requires that the student prepare for the classes, which has not always been the case. The concept of homework preparing for particular class work, which used to be done during almost every class, is now impossible to realise because of the lack of time for checking homework and for possible help or suggestions related to the present work (the average time of help is less than 2 minutes for one student!). This is why during the classes, the instructor talks with the students and analyses the problem in order to suggest its correct solution and, as a result, to allow them to create the project correctly and with understanding.

All the students were admitted to sit the first test, which consisted of four tasks in different variants of the same level of difficulty. After reading the tasks, the students were to choose three of them which should be taken into account when grading the final note. The students were also informed that all the tasks will be checked, but only those marked by them will be the basis for the final note. For each task, they could get 5 points (the grading scale was introduced immediately after the presentation of the tasks).

Topics of the tasks: [1] [2] [3] [4]

- Task A – Affiliation,
- Task B – Intersection point and edge,
- Task C – Revolved section and perpendicularity
- Task D – Transformation.

## Evaluation from the test

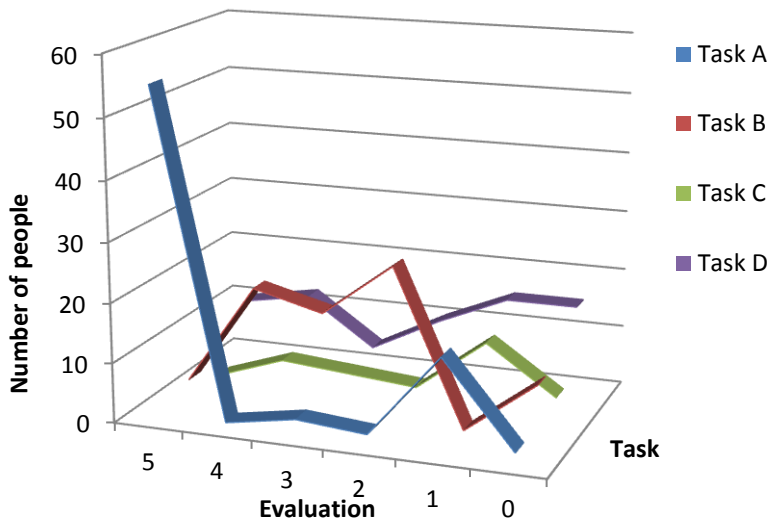


Fig.1 A summary ratings

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