

THE INFORMATION MANAGEMENT IN FRAME OF THE EDUCATION SYSTEM IN AREA OF MECHANICAL ENGINEERING WITH ASPECT TO THEIR QUALITY

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ABSTRACT

The article is focused on the engineering education system application with point of view non-cutting technologies. Important task in the education process especially the e-learning form using is gaining of the quality information /mix of educational resources/, and information's management as well as the analysing of understanding /knowledge/ level of the examined person. It has had various ways of the approaches and alternatives of the analysing in respect of new information technologies, and inexpensive /short - timed/ training of students and apprenticeship programs or courses of manpower.

Keywords: Information handling, database, SQL language, information management, information filtering to quality aspect, knowledge testing, non-machining technologies

1. INTRODUCING

The multimedia, internet, distribution computing. . Are there not enough of this electronic smog? What so the conventional text book, self-ideas, self-sight and reflections, to strain biological neurons and not artificial? This is certainly one of the process knowledge gaining. However it is not the impeachment of the e-learning education form. This form is and stayed indubitable. The key matter in the education process frame is handling of the gathering information, their presentation and the knowledge analyse of education person.

2. THE INFORMATION INQUIRES AND TREATMENT.

The sources and information inquires can have various forms /literature, practical experiences, etc./. Its treatment is realized by different ways, naturally on digital platform.

The large volume of wide-spectral data /information/, what is typical for non-cutting technologies, requires suitable tools for data storage and data treatment:

- Information storage in database forms:
 - Relation databases,
 - Multidimensional databases,
 - Data warehouses,
 - Tables, etc.
- Simplicity of the information modification and filling up,
- Possibility of the editing without alternation of the source code,
- Frugality according to hardware.

In creation of education software it can be applied special or “conventional“ software. If e-learning presents real “distance education”, off-line also on-line courses that made possible quick modification of education, probably it will be need special software or development equipment and technologies /on base of HTML, DHTML, XML, NET, SQL, etc /.

For creation /tailored/ suitable education environment it is the advantage to use development tools RAD (rapid application development). In some less difficult areas it is probably sufficient common office software and graphics editors.

The information collecting according to non-cutting technologies it can be realized in view of the information electronically presentation with aspect to production experiences. And it should include the wide-spectral areas /according to type and character/:

- forming and casting process character,
- automation of forming and casting processes,
- process modeling /deformation, material flowing, .../,
- virtualization /simulation/ of the forming and casting processes /FEM/,
- simulation equipment /SuperForge, Deform, .../,
- automation creation of technological documentation for forming and casting processes,
- presentation and possibilities of the application using of artificial intelligence tools in frame of presented area /expert systems, fuzzy sets, genetic algorithms.../,
- etc.

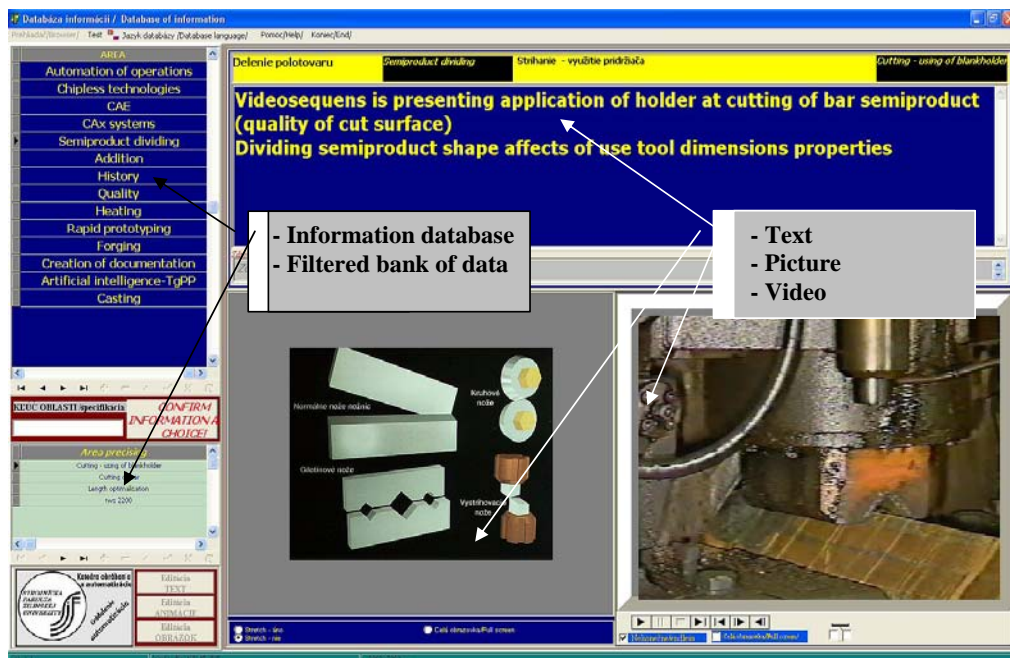


Figure 1. Example of the digital database information

Information that are contributing to the education improvement, have to be offered with aspect to cost reduction, the mistakes and defects prediction, with orientation to progressive technologies (effectiveness of forming and casting process design incl. design of tools-dies, forms, moulds, cold forming, precision casting, ...)

3. ANALYSED AND INFORMATION FILTRATION / KNOWLEDGEMENT /

It is needless, that analyze /testing/ of knowledge is related with database part of the education software / data warehouse/.

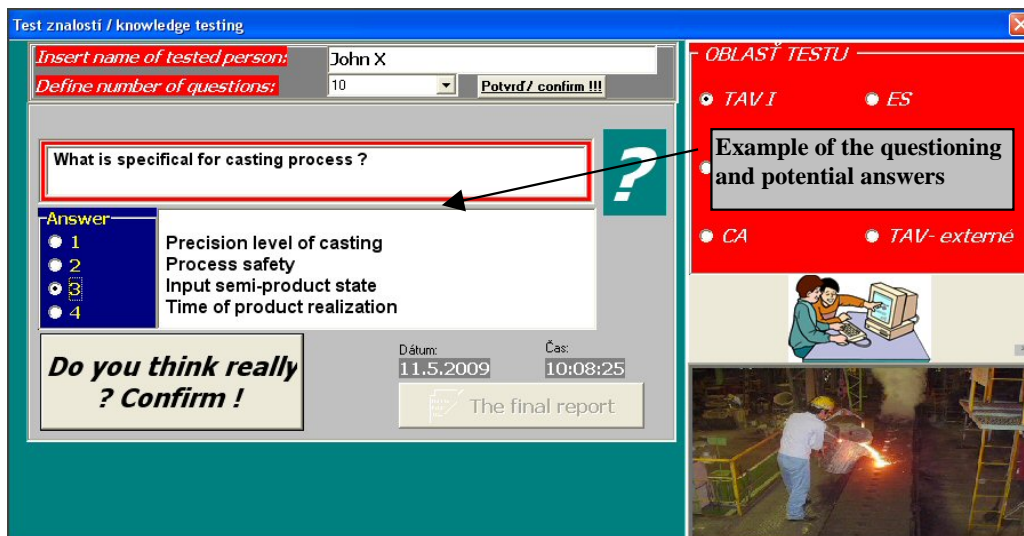


Figure 2. Input date for electronic exam

Eventually questions can be generated by random numbers, by optimal formulated rules of source algorithm, e.g. Suitable it can be using of SQL language equipment.

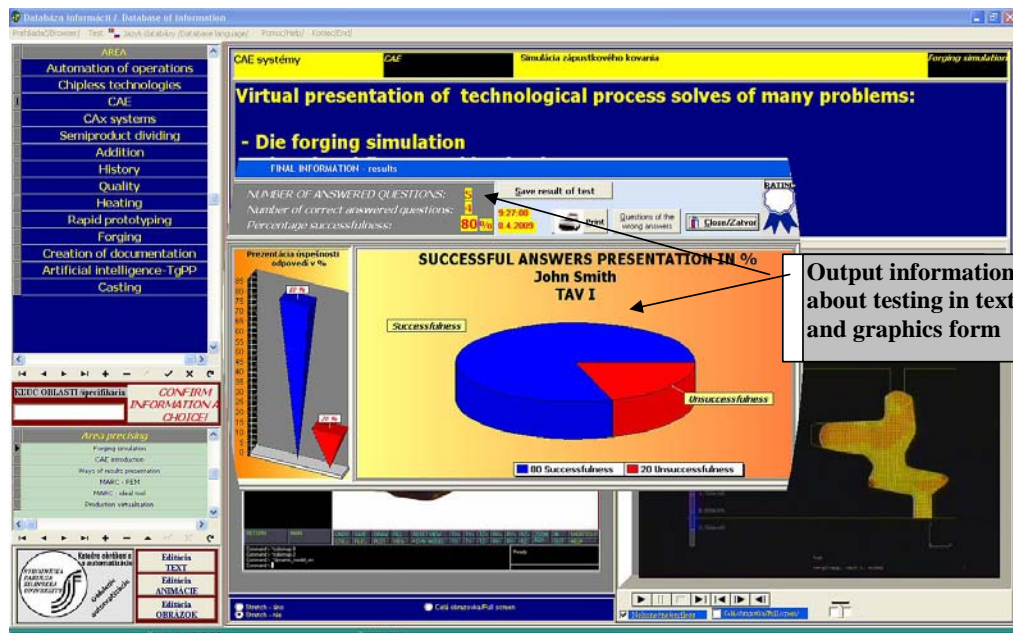


Figure 3. Example of the students knowledge analyse

The presentation of the students understanding should be intelligible and user friendly with possibilities of the follow archiving with unique reference.

4. CONCLUSION

E-learning, either on-line or off-line, performs uncoverable task. And that is namely not only in relation teacher-student, but also in relation employer-employee. In area of “electronic education” is important compression of education time and knowledge database innovation */preference of so-called instant knowledge, where is paper form appears as out-of-date/*. The unchanged statement also refer to non-cutting technologies area, mainly with aspect to process virtualization and application of the artificial equipment.

The graphical slides presented in this article are result from user environment of software which is created in Department of automation and production systems, Mechanical engineering faculty. That is created by the medium of RAD - Borland Delphi 2006.

The paper was elaborated in frame of project KEGA 3/5219/07 and VEGA 1/4101/07

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