

**A Didactical Concept for Supporting  
Reflection in Software Engineering  
Education**

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# ABSTRACT

- ▶ Software engineering is concerned with the development of complex software systems and requires a high degree of multi disciplinary. This presents great challenges for the learning of software engineering, since this complexity requires a comprehensive development of competences and in addition to the training of professional knowledge, the genesis of context-sensitive and general interdisciplinary competences. The reflection process plays an important role in the educational debates in order to apply what has been learned and to facilitate the integration of theoretical contents of the study into practice. A systematic investigation of the importance of reflection for the learning process of students in software engineering is, however, so far missing.

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# EXISTING SYSTEM

- ▶ This presents great challenges for the learning of software engineering, since this complexity requires a comprehensive development of competences and in addition to the training of professional knowledge, the genesis of context-sensitive and general interdisciplinary competences.
- ▶ The reflection process plays an important role in the educational debates in order to apply what has been learned and to facilitate the integration of theoretical contents of the study into practice.

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# DISADVANTAGES

- ▶ discipline that in the past mainly focused on training mere technical and methodical competences (such as programming, development of software modules, etc.) and not on the promotion of interdisciplinary competences. Yet, as complex as the appearance of software in our modern society is, as complex the education of software engineering has to be. In recent years, however, it became increasingly evident that nontechnical, also known as soft, skills are equally important as software is developed in teams of individuals who need to interact with each other and with various stakeholders.

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# PROPOSED SYSTEM

- ▶ This presents great challenges for the learning of software engineering, since this complexity requires a comprehensive development of competences and in addition to the training of professional knowledge, the genesis of context-sensitive and general interdisciplinary competences.
- ▶ The reflection process plays an important role in the educational debates in order to apply what has been learned and to facilitate the integration of theoretical contents of the study into practice. A systematic investigation of the importance of reflection for the learning process of students in software engineering is, however, so far missing.

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# ADVANTAGES

- ▶ The stimulation of the ability to reflect and the accountability of existing competences allows students to draw important conclusions for the design of their individual educational and professional biography.
- ▶ The competence assessment also enables students to deal with their individual development status, thereby putting them in a position to recognize their individual learning needs and to set goals for their own learning process on the basis of their development

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# HARDWARE REQUIREMENTS

- ▶ Processor :Intel Pentium IV 1GHz
- ▶ RAM :256MB (Min)
- ▶ Hard Drive :5GB free space
- ▶ Monitor :1024 \* 768, High Color inch
- ▶ Mouse :Scroll Mouse(Logitech)
- ▶ Keyboard :104 keys

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# SOFTWARE REQUIREMENTS

- ▶ OS : Windows XP/7/8
- ▶ Front End : Visual Studio 2010/ netbeans 7.1
- ▶ Back End : SQL Server 2005/ heidisql 3.2
- ▶ Browser : Any Web Browser

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# CONCLUSION

- ▶ The concept of competence has become more important in recent decades. Changes in social and economic structures led to new forms of learning and organization and thus to an expansion of the decision and action scope of the subjects.
- ▶ As a result, the entire spectrum of individual competences and the need for continuous development of individual potentials were demanded. It has been found that it became increasingly evident that nontechnical competences, also known as context-sensitive and general interdisciplinary competences are as important as technical competences in order to be able to work competently in the field of software engineering.
- ▶ In addition to the comprehensive competence development, the assessment of competences is becoming increasingly important since the results of this assessment allow conclusions to be drawn on the competences and personality traits of the individuals and enable a targeted development of competences and self-organized learning.

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