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University Self-Assessment Survey Results for Russian & Tajik Universities Key Points

Function

- Presents the Key Points obtained from the survey work

- Looks at both countries and 4 constituencies together

- Final synthesis identifies the perceived needed innovations

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University Administration

- The development and deployment of educational technology policies is a priority in the work of top-level managers

- The exchange of knowledge, information and best practices in the application of educational technologies is low

- The selection of educational technology is often carried out by teachers in isolation

- A variety of active approaches to learning and interactive educational technologies are implemented but in a fragmented way and the drivers are weak

- The development and introduction of new technologies is regarded by middle managers as stressful

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- The development of new and upgrading of existing programmes in engineering education is a dynamic space with various approaches being taken

- Remote learning opportunities are not established and still developing

- Little evaluation of educational changes is undertaken

- Good Practice examples – "Teacher of the Future" (NMSTU), Centre for Electronic Educational Technologies (MGSU), Centre for the Development of Distance Education (MRSU) and others

- Most universities have approaches to teacher development but the models, their implementation and consistency are varied

- The benefits of educational change are appreciated but the complexity of implementation is not

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Teachers

- Appreciate the need to consider the use of innovative ICT in their teaching practice
- Teachers offered anecdotal observations of the value to learning but no evidence of systematic evaluation
- They identify that in order to achieve good results, the path is often very stressful
- Lack confidence in terms of their capabilities to achieve the expected results
- Evidenced a variety of different teaching approaches and uses of technology demonstrating awareness

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- Referred to rewards systems in place to promote educational change and the use of educational technologies
- Many teachers made reference to the lack of educational technology resources in their institutions
- Teachers believe it is necessary to have knowledge of psychology and pedagogy for effective teaching students
- Training is available but it is generally down to the individual to engage

- Tajik teachers demonstrate more 'optimism' than those from Russia

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PhD Students

- Have diverse views about the quality of their graduate educational experience

- Similarly concerning the theoretical / practical mix they experience

- A familiarity with the relevant industry profession is common

- Attitudes towards the use of ICT in learning are generally positive but do vary across institutions suggesting the local culture / context has a part to play

- The engagement with distance education is varied

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- Most students would like the opportunity for greater international exposure
- A course in Pedagogy is taken by the majority of students and deemed sufficient
- Teaching is expected to form a part of most careers on graduation
- Graduate students are encouraged to participate in scientific conferences etc
- Have a broad view of the competencies required to be a teacher and were often not able to appreciate how this is changing

- Tajik students were generally 'more optimistic' about educational technology than those from Russia

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Bachelor and Master Students

- ICT in engineering education is valued and expected by students

- The quality experienced by students is variable and suggests that teachers still have more work to do

- 'Younger' teachers tend to be greater users and more capable

- Students find the use of ICT makes the study process easier and more accessible

- In most institutions the students are actively involved in the educational information environment of the university

- Variable access to high quality ICT for learning was a concern

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- Exposure to distance education experiences is generally low
- The provision of up to date and relevant engineering education was a concern with many students not being satisfied
- The theoretical / practical mix and awareness of industry were areas where students felt improvements could be made
- Real projects and case studies help students to be closer to professional life
- Most students would like the opportunity for more international experiences
- A variety of educational technology options and learning approaches were cited by students
- Importantly in studying engineering, group work, interactive materials, practical tasks, internships, videos, games, analysis of scientific publications and analysis of specific production situations were all identified as being of value

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Teacher Characteristics

Students	PhD Students	Teachers?
• ability to prepare high-quality presentation of educational materials • communication skills • practical experience • ability to support students' interest in the subject of the course • creativity • sense of humour	• ability to explain the material clearly and accessibly • communication skills • practical experience • the relevance of the material being taught • the the ability to help the graduate students to develop skills in the field of study	• Engaging and with a sense of humour • Produce high quality materials to support learning • Clear communication and explanation skills • Passion for the subject and a desire to share with students • Creative in approach to L+T • Materials that are relevant and linked to industry • Practical experience • Users of ICT in learning • Variety in approach to L+T • Real projects / international flavour • Development to build confidence and open eyes • Rewards

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Conclusions – needed innovations

Pedagogical

Organizational

Social

Technological

Economic

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Innovation type: Pedagogical

- Development of an interactive and engaging educational environment

- Production of high quality learning materials

- Create learning experiences and materials that are clearly relevant to industry

- Appreciation of and response to the changing role of the teacher

- Training of teachers and technical staff in the application of new learning technologies and to build confidence

- Seek international opportunities for students

- Provide support within the university for teachers to conduct educational innovation

- Link 'innovation and change' to a more tangible approach to evaluation

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Innovation type: Organizational

- Revise the workload of teachers in order to increase opportunities for individual communication between teacher and student

- Allow teachers time to develop new materials, approaches to learning and educational technology experiences for students

- Integrate key performance indicators for the use of new educational technologies into the monitoring system of the University and individual departments

- Increase the number of technical support staff (preparation of training materials and classrooms, maintenance of equipment, interaction with students)

- Formalise the management of educational technology uses within the quality management system

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Innovation type: Social

- Develop partnerships between students and teachers during the educational process, extending this to co-creation where appropriate
- Develop a system of exchange of experiences and mentoring between staff and staff and between staff and students

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Innovation type: Technological

- Modernisation of equipment, relevant software and the educational infrastructure

- Development of an educational and methodical base for the introduction of ICT into engineering education

- Diversification and sharing of sources of new information for teachers and students in the area of educational technology

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Innovation type: Economic

- Develop a system of motivation, recognition and reward for teachers and technical support staff aimed at promoting the use and development of new technologies within engineering education
- Diversification of sources of financing for educational innovation

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Synthesis

- Appreciation at the top that educational innovation and the use of technology in learning is important

- Students want to see more and of a higher quality

- Implementation challenges – design, infrastructure, capability, confidence, time

- Teachers both established and new are in the middle

- Awareness – Connections – Support

- With an industrial and international flavour where possible

- Suggests the need for an engaging and inclusive infrastructure – an **EXTEND Centre!**

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