

TEACHING AND RESEARCH IN HIGHER EDUCATION - DILEMMA OR SYNERGY?

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1. Introduction

The Bologna Declaration (1999), The Prague (2001), Berlin (2003) and Bergen (2005) Communiqués emphasized:

- **the need for the university to adapt to the fast changing needs of the society's demands and to the advances in scientific knowledge;**
- **research as an integral part of higher education across Europe**
- **the importance of student participation in the evaluation of higher education education activities.**

2. Underlying ideas of the research

- Teaching at university should be student-centred and research-based (W.Muller, 2010)
- the relationship didactic activity - research
 - **synergetic effect teaching – research**
 - **incompatibility teaching – research.**
- the role students play in improving academic activities.

3. The research objective

- Analyze students' perception on the relationship teaching-learning and scientific research activities within the academic environment.

4. Research hypotheses

1. students' perception on the relationship teaching-learning and scientific research varies according to students' academic results;
2. students' perception on the relationship teaching-learning and scientific research varies according to students' learning style;
3. from the students' point of view, academics' strong involvement in research activities entails their particular didactic behaviour, as compared to the ones with a weaker participation.

5. Research tools

- a two-scale questionnaire (RELET):
 - **RET: the relationship research – teaching**
 - **REL: the relationship research – learning.**
- Inventory of Learning Styles (Kolb, 1984).

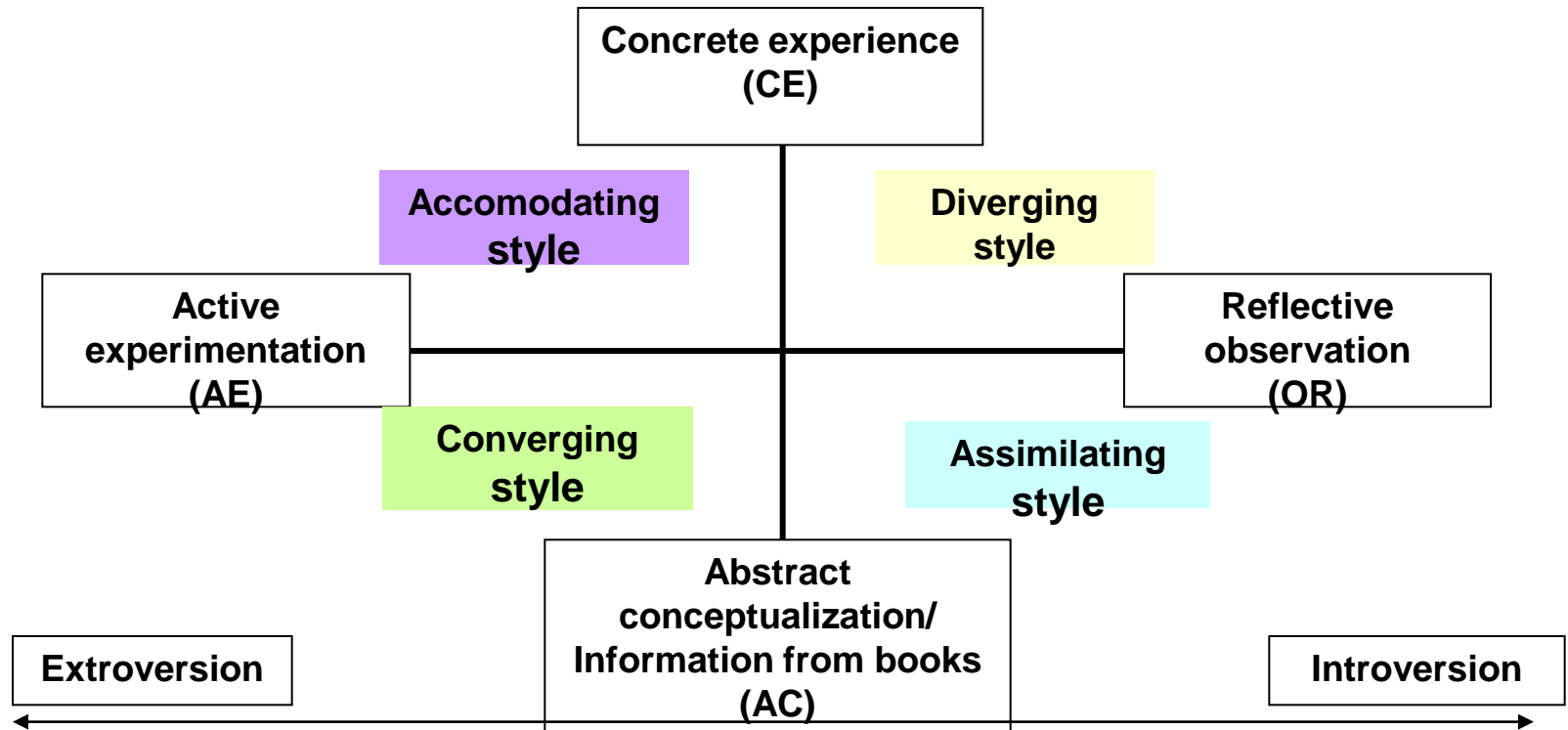
6. Dimensions of the RET Scale

- students' perception on the research activity conducted within their faculty/ university;
- favourable/ unfavourable effects of academics' involvement in research on teaching;
- methods used by academics engaged in research.

7. Dimensions of the REL Scale

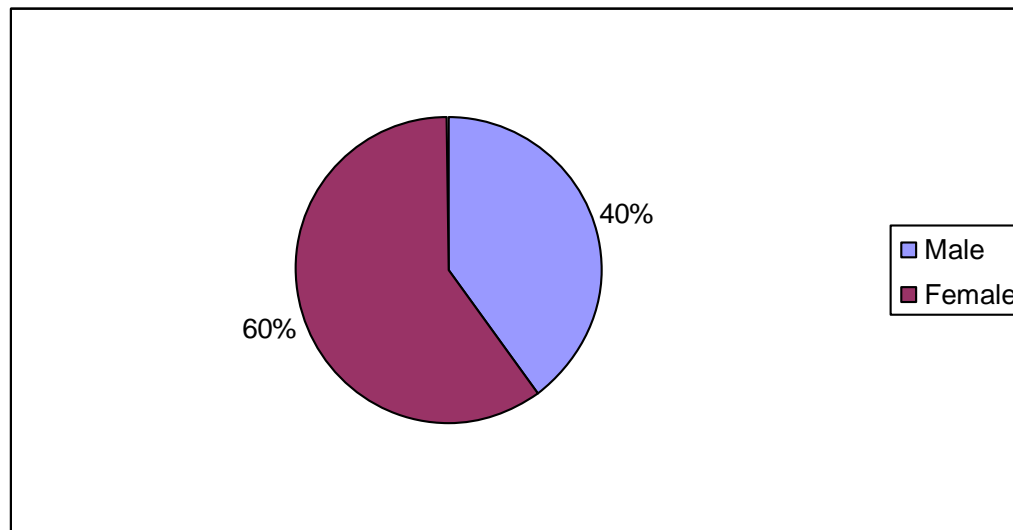
- attribution of academic success
 - internal
 - external
- effects of student participation in scientific research.

8. Kolb's Inventory of Learning Styles (1984)



9. The research sample

- 223 students, average age: 21.6 years;
- technical and socio-humanistic faculties;
- 2nd and last year of study.



10. Students' perception by academic results

Confirmation of the hypothesis.

Students with better academic results:

- have better knowledge of the research activities;
- declare their involvement in research activities together with their teachers;
- feel guided in the research activity by their teachers;
- perceive fewer disadvantages of research over teaching.

11. Perception on the teacher participation in research activities

Variables	Grade average
Perception on advantages	$r=0.153$
Perception on disadvantages	$r=-0.161$

- feeling of frustration in the case of students with lower grades, provided teachers' intense participation in research activities.

12. Advantages of academics' involvement in research

Are revealed:

- by all students, irrespective of academic results;
- more strongly by girls;
- more strongly by students with internal attribution of success.

13. Students' perception on research by learning style

- hypothesis partially confirmed;
- humanistic faculty: diverging style;
- technical faculty: converging style;
- students with a diverging style perceive the disadvantages more strongly.

14. Relationships between the perception on the disadvantages of teacher participation in research activities and the learning procedures

Disadvantages of teacher participation in research activities as perceived by students	Preference for learning by means of reflective observation
They use too academic a language, do not explain so as for me to understand what they teach	$r=0.203, p<0.003$
They are not really interested in developing students' research skills	$r=0.225, p<0.001$
The content they teach is not appropriate for my age and level of development	$r=0.137, p<0.04$

15. După părerea mea, spre deosebire de ceilalți, profesorii care desfășoară activități de cercetare, folosesc următoarele situații de învățare pentru studenți:

	1.Studii de caz
	1.Proiecte individuale și de grup
	1.Lectura unor articole de cercetare și prezentarea lor la seminar
	1.Aplicații practice, exerciții, în urma unui curs prezentat de profesor
	1.Prelegere
	1.Referate
	1.Predare reciprocă

16. Relationship research – didactic behaviour

Academics strongly involved in research favour particular teaching methods:

- individual/ group projects and case studies;
- practical work;
- reading of scientific articles;
- lecture comes last.

17. Relationship research – didactic behaviour

Academics strongly involved in research:

- stimulate students (especially girls) more for the study of the field;
- seem more fond of teaching, according to senior students;
- explain more clearly certain concepts, according to students in the humanistic faculty;
- develop students' research skills, according to students in the humanistic faculty.

18. Are students with good academic results interested in research?

- Student positive perception on scientific research = $18.7 + 0.58 * \text{Academic results} + 1.16 * \text{Gender}$
- $+0.23 * \text{Internal attribution of success}$
 $+0.45 * \text{Student involvement in research.}$

19. Conclusions

- for students with weaker academic performance the relationship didactic activity – research is a dilemma
- for students with better academic performance the relationship didactic activity – research works synergically;

20. Conclusions

- academics' involvement in research influence:
 - academics' career
 - the teaching and learning process
 - the degree of student satisfaction. students'
 - academic results definitely influence their perceptions;
- the traditional role of the university is transgressed.

21. Conclusions

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