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The executives' standard on research competence of teachers in Dutch non-university higher education institutions (0174)

Aim of this research

Nowadays research skills are part of the competencies of higher educated professionals (Borgdorff, van Staa & van der Vos, 2007). Therefore, research activities are part of the educational reality in non-university (van Lieshout & Borgdorff, 2005). The aim of this study is to determine the way, which the teachers' executive managers perceive the necessary competence of this new task. The standard of executive managers might give direction give to the nature of research activities in non-university institutions.
In 2008, Griffioen and De Jong (2009b) asked teachers about their research self-efficacy. The present study can be seen as a follow-up, in which the results of a study into the self-perceived research competence of teachers are compared to the standard of executive managers on research competence of teachers. The results indicate in what way norms of executive managers and beliefs in capability of teachers correspond with each other.

Theoretical background

In the context of implementing research activities in the curricula of non-university higher education institutions, little attention has been given to position of the executive managers. The lectores are responsible for conducting research and thus seen as the carriers of these activities. Nevertheless, it is relevant to study the viewpoints of executive managers as they are responsible for developing the curricula and creating the necessary conditions for teachers in which research competence and research activities can evolve (Geijsel, Meijers & Wardekker, 2007; Moolenaar, Daly & Sleegers, 2010)
Teachers, however, are considered to be the link between research activities and the students who need to become the critical professionals. Therefore it is important to understand how teachers perceive their own competence in implementing and

carrying out research: *research self-efficacy.* Self-efficacy relates to the self-assessment of a person to comply with the requirements of a specific situation. This belief is independent of the actual empirical result, and derived from other concepts of the self, such as: confidence and self-esteem (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). Generally, when discussing self-efficacy of teachers, they refer to the teachers' level of self-confidence in their dexterity to work as education providers. (Tschannen-Moran & Woolfolk Hoy, 2001).

Methodology

Research question. In which way does the standard of executive managers regarding the research competence of teachers match with the perception of teachers on research efficacy?

Sample. Executive managers of a Dutch university of applied sciences were asked to rank-order a set of twenty statements about research related tasks of teachers. Only executive managers with the task to directly monitor the performance of teachers were included (N= 59, response ratio = 82%).

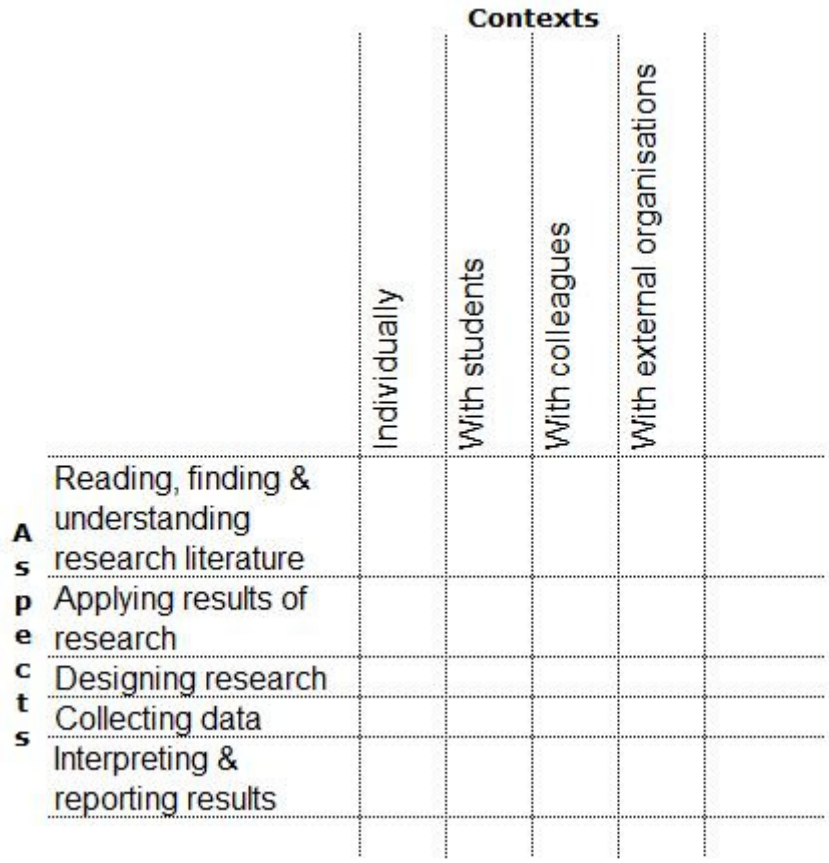

Figure 1: Twenty research dimensions

Measures. In order to answer the research question, five stages of doing research within four contexts (Figure 1) are used as a base to design twenty statements. The 5x4 design is comparable to the design of Griffioen and de Jong (2009a). Each statement represents one research dimension in which one context is combined with one research task. The respondents were presented with a set of twenty cards each containing a statement and a frame for a Q-sort. Q-methodology was used to rank-order the statements. This methodology is an attempt to analyse subjectivity in all its forms (Barry & Proops, 1999; Exel & de Graaf, 2005). The results of Q-methodology were used to establish the viewpoints of executive managers. The respondents were asked to sort the statements into a Q-sort frame (see Figure 2 for an example). Important research tasks had to be placed to the right, less important tasks to the left.

Each statement, based on his position in the Q-sort, received a quantitative score (0,5 – 4). The result of the sorting is a normally divided distribution of statements of each respondent. All distributions combined, reflect the standard of executive managers regarding research competence of teachers.

Which research competency does a teacher of your department need to be capable of ?

not important to be capable of — neutral — very important to be capable of

0.5	1	1.5	2	2.5	3	3.5	4
… is individually capable of collecting data	… is capable of advising external organisations to apply results of research	… is capable of supporting external organisations to collect data	… is capable of supporting external organisations to interpret and report results	… is capable of supporting students to reading, find and understand research literature	… is individually capable of applying results of research	… is individually capable of reading, finding and understanding research literature	… is capable of supporting students to interpret and report results
	… is capable of supporting external organisations to design research	… is capable of supporting colleagues to design research	… is capable of supporting colleagues to collect data	… is capable of advising students to apply results of research	is individually capable of interpretting and reporting results	… is capable of supporting students to collect data	
		… is individually capable of designing research	… is capable of supporting colleagues to read, find and understand research literature	… is capable of supporting organisations to read, find and understand research literature	… is capable of supporting colleagues to interpret and report results		
			… is capable of advising colleagues to apply results of research	… is capable of supporting students to design research			

Figure 2: Example of one complete Q-sort, by respondent 1.

Findings

The descriptive analyses show a higher mean for the research tasks with students and a lower mean for research tasks with external organisations (e.g. '*the teacher is capable of supporting students to interpret en report results' to 'the teacher is capable of supporting external organizations to collect data*').

A Principal Component Analysis confirmed that three out of four scales as used by Griffioen and de Jong (2009b) can be formed out of the data in the current study: a) individual research b) research with colleagues, c) research with external organisations (C. Alpha= .63 to .69). The reliability of the scale of 'research with students' as used in the study of Griffioen and de Jong is too low and therefore excluded for further research. With the three scales used, the explained variance is 67 percent. The ordering of importance of tasks for teachers in the eyes of executives managers shows that the group of statements resembling individual

research competence is most important (M= 2.6) and the statements resembling research competence with external organisations (M= 1.3) is least important. This ordering is also confirmed by a student's t-test (p= .001).
Based on these preliminary results it can be concluded that the standard on research competence by the direct executives is comparable to the ordering in beliefs of ability by the teachers: research tasks with students are most important, while research tasks with external organisations are least important.

Theoretical significance

Because of the dependent arranging of statements, Q-methodology has proven to be a valuable instrument to establish a holistic view on the importance of educational tasks. However, the different levels of data constrain the statistical comparability between both studies.
Both teachers and managers have a primary focus on educational research competencies such as individual tasks and tasks with students. This outcome is in accordance with the study of Griffioen and de Jong (2009b) in which is shown that research goals with the aim of improving daily the educational practice are most important.
The teachers' research self-efficacy corresponds with the level that is required by executive managers. Concluding: executive managers focus on the same research competence requirements as teachers feel they are able to comply with.