PROFESSIONAL BELIEFS AND PERCEIVED COMPETENCES OF PRE-SERVICE TEACHERS AND BEGINNING TEACHERS

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Abstract - The aim of this study was to assess the vocational competence of beginning teachers (teaching up to 5 years) and students in their final year at teacher education academies in Croatia. We also wanted to examine the teaching approach of the two groups and the differences in the perceived competences of teacher-oriented and student-oriented beginning teachers and final year students.

Our sample consisted of 123 beginning teachers and 334 final year students, all of whom had studied at the same academies.

Out of 20 areas of knowledge and skills needed for the teacher's job mentioned in our questionnaire, the students assessed themselves as more competent than the teachers in 8 areas, for 10 items there was no statistical difference, and the teachers assessed themselves as more competent in only two areas.

It seems that beginning teachers may experience a kind of *reality shock*. When they are students, they have some expectations and assessment about their job that are not compatible with the experience of beginning teachers.

While students and teachers did not differ in their teacher-centred orientation, students were more student-oriented in their teaching approach than the teachers. The teachers and pre-service teachers who favoured a teacher-centred approach felt more competent in their work than those favouring a student-oriented one.

Sažetak

Cilj istraživanja bio je ispitati profesionalne kompetencije učitelja početnika (do pet godina radnog staža) i studenata završnih godina učiteljskih studija u Hrvatskoj. Također se željelo ispitati njihove pristupe u poučavanju te razlike u opaženim kompetencijama učitelja s tradicionalnim pristupom i učitelja s pristupom usmjerenim na učenika.

Ispitana su 123 učitelja početnika i 334 studenta završnih godina s istih fakulteta i visokih škola.

Od 20 područja znanja i vještina koje su se procjenjivale studenti su sebe procijenili kompetentnijim od učitelja-početnika u 8 područja, u deset područja nije bilo statistički značajne razlike, dok se se učitelji-početnici procijenili kompetentnijim u samo dva područja.

Izgleda da učitelji početnici doživljavaju ono što se zove "šok relanosti". Kao studenti imaju određena očekivanja i procjene svog posla koje nisu u skladu sa iskustvima koje doživljavaju kao učitelji-početnici.

Između učitelja i studenata nije bilo razlike u tradicionalnom pristupu poučavanju, ali su studenti bili skloniji pristupu usmjerenom na učenika. Učitelji i studenti skloniji tradicionalnom pristupu osjećali su se kompetentniji u poslu od onih koji su bili skloni pristupu usmjerenom na učenika.

INTRODUCTION

Unlike the induction process in other professions, the passage from student to teacher is abrupt because from the first day the beginner is expected to perform the same tasks as those undertaken by an experienced teacher (Lortie, 1975). Effective teachers should have (for example, Rayn and Cooper, 1988; Arends, 1991; Galagher, 1994; Good and Brophy; 1995; Sorenson et al, 1996):

a. a knowledge base about the subject matter to be taught, as well as theoretical knowledge about learning and human behaviour;

b. a repertoire of teaching skills that facilitate student learning (executive, interactive, organisational skills);

c. a set of beliefs and attitudes that foster student learning, genuine human relationships and a positive self-concept.

As some researchers point out, it is not easy to achieve all of this. For example, Leung and Park (2003), in reporting on East Asian teachers' competence in mathematics, state that teachers have conceptual and procedural understanding of mathematics, but they lack a profound understanding of mathematics and their skills and strategies for exploring and talking about the subject are weak. The majority of beginning teachers have an adequate knowledge base in their subject area, but this knowledge in itself is insufficient in ensuring proficiency as a classroom teacher. Success in the first year of work depends on the ability to communicate knowledge and concepts to students, as well as skill in managing the learning situation. They should be able to prepare and plan, to utilise a variety of assessment and teaching techniques, consider individual differences, and ask for advice (Ballantyne, Thompson and Taylor, 1996). In addition, they will have a hard time in the classroom if their classroom management skills are poor (Evers, Tomic and Brouwers, 2004).

It is possible that students do not fully realise the extent of knowledge and skills their future job requires. They might underestimate the fact that teaching is a process of interaction where teachers and students require additional skills once the teacher enters the classroom. This discrepancy between expectations and the reality of the work situation they are confronted with is referred to in the literature as 'reality shock' (Kramer, 1974; Veenman, 1984; Vila, 1988; Vonk, 1983).

Twenty-first-century classrooms challenge the traditional, teacher-centred curriculum to meet the increasingly diverse needs of students and to make the required increases in achievement gains.

Teacher-centred approaches include instruction where the teacher's role is to present the information that is to be learned and to direct the learning process of students (Shuell, 1996). The teacher identifies the lesson objectives and takes the primary responsibility for guiding the instruction by explaining the information and by modelling. This is followed by student practice. The teacher-centred approach is associated chiefly with the transmission of knowledge. McDonald (2002) clarified the definition by saying that the work of teachers depends upon the abilities, skills and efforts of their students. Student achievement is at the forefront of the teacher-centred curriculum, but teachers are driven to meet accountability standards and often sacrifice the needs of the students to ensure exposure to the standards.

In a student-centred approach to teaching, teacher and student roles are redefined. The teacher becomes a facilitator of learning instead of a dispenser of knowledge, and the students take more responsibility for their own learning. A learner-centred approach is founded on the concept that the learner is central in the learning process. Learners learn primarily because of what they bring to their classroom experience in terms of their perceived needs, motivations, past experiences, background knowledge, interests, and creative skills. Learners are active, as opposed to passive, recipients of knowledge. They may assume a decision-making role in the classroom, often deciding what is to be learned, through which activities, and at what pace. Teachers, on the other hand, are seen as facilitators, helpers, and resources (Campbell and Kryszewska 1992), with a decentralised role.

In the last decade, special attention in educational research has been paid to the examination of teachers' beliefs, especially their orientation toward student centred or teacher-centred approaches to teaching. It has been well argued that the beliefs teachers hold about teaching and learning are significantly related to their classroom decision-making and actions (Richardson and Placier, 2001, in Richardson, 2003). The issue of teachers' beliefs, and their development and change, has also become a central point in understanding how pre-service teachers acquire and interpret knowledge, as well as how they judge their competences (Lundeberg and Levin, 2003).

Susceptibility to change beliefs has been critical to the teaching profession because, in contrast to other jobs, student teachers enter classrooms with tacit beliefs about learning and teaching which are grounded in their previous schooling experience. Such deeply-rooted, but also idiosyncratic and often strongly emotionally-coloured, attitudes are difficult to change through relatively short initial teacher education as compared to the period of engagement in the long-lasting student role. Quite a few research results point out that during their introductory courses student teachers significantly change their simplistic views on teaching and start perceiving teaching as more complex. In addition, a shift occurs from the traditional towards a more constructivist orientation (e.g. Richardson and Kile, 1989, in Richardson, 2003).

It has also been documented that an important role in a more profound belief change is played by structured involvement in classroom experience, especially the model behaviour of a cooperating teacher (Borko and Mayfield, 1995). Some authors also point out considerable methodological problems in assessing belief change, stressing the

students' tendency to offer answers that they believe the teacher educator expects from them (Richardson, 2003).

In order to examine more closely the relationship among classroom experiences, the perception of vocational competences, and the teacher's orientation, the aims of this study were formulated as follows:

a. to examine possible differences in the self-assessment of the vocational competences of beginning teachers and pre-service teachers (i.e. final-year students of teacher training colleges in Croatia);

b. to examine the teaching approach of the two groups and the differences in the perceived competences of teacher-oriented and student-oriented beginning teachers and final-year students.

METHOD

SUBJECTS

The participants were 123 beginning teachers (with less than 5 years of teaching experience) and 334 final year students who had studied at the same colleges.

PROCEDURE

A trained research assistant tested students in groups during regular classes, while the instruments for teachers were administered by researchers during teachers' board meetings.

INSTRUMENTS

- The *teacher competences* scale consisted of 20 items indicating various competences derived from the literature and the results of a pilot study. Competences were assessed using a four-point Likert scale, ranging from 1 (a *very low level)* to *4 (a very high level).*

- *The attitudes towards teaching* scale consisted of 14 items indicating a student-oriented or a teacher-oriented approach to teaching. Items were rated using a four-point Likert scale, ranging from 1 (*completely disagree)* to *4 (completely agree).* The scale which was constructed for the purpose of this study was derived from a larger pool of empirically-obtained items.

RESULTS

Data were processed using the standard statistical SPSS package

I Self-evaluation of competences by beginning teachers and final-year students of teacher training colleges

- Table 1 about here -

Out of 20 areas of knowledge and skills needed for their job, students rate themselves as more competent than teachers in 8 areas, for 10 items there is no statistical difference, and beginning teachers assess themselves as more competent in only two areas.

II The approach to teaching by beginning teachers and final-year students of teacher training colleges

a. Factor analysis of the *attitudes towards teaching* scale

The items were factor analysed (separately for teachers and students), using a principal-components analysis with varimax rotation. The initial analysis of data produced four factors for teachers and five factors for students with eigen values greater than one, accounting for 53.52% and 55.82% of variance respectively. According to the scree test, the second analysis was performed with a forced two-factor solution. This analysis confirmed two factors for both teachers and students, accounting for 34.70% and 31.77% of variance respectively. Items, factor loadings and Cronbach alphas are presented in Table 2.

- Table 2 about here -

b. Differences in teaching approaches between beginning teachers and final-year students

- Table 3 about here -

c. Differences in self-reported competences between teacher-centred and student-centred teachers and students

In the following tables (Tables 4 and 5), only significant differences in the perception of competences between teacher-centred and student-centred teachers and students are presented.

- Table 4 about here -
- Table 5 about here –

DISCUSSION

Both teachers and students assessed themselves as the most competent in *teaching techniques and skills, knowledge base in the subject area,* and *preparation and planning*. The lowest ratings for teachers were obtained for *communication and cooperation with parents, knowledge of school law,* and *working with students with emotional disturbance or behaviour disorders.* On the other hand, students rated themselves as the least competent in *knowledge of school law, communication and cooperation with parents*, and *classroom management.* It is evident that the ratings of low and high competence areas are similar for both teachers and students.

Coping with students who display problems in personal and social adjustment can be frustrating. Success in teaching problem students often requires extra time, energy, and patience. Recent research reviewed by Jones (1996) indicates that teachers rank individual students who have serious or persistent behaviour problems as their chief cause of stress. Meta-analysis reported by Veenman (1984) identified eight of the most frequent problems felt by teachers, six of them concerning their relation with students troubled by dysfunctional, motivational and discipline factors.

Research shows that teachers' feelings of self-efficacy or confidence are correlated with their effectiveness ratings (Brophy, 1996). Developing skills for enhancing student socialisation represents an expansion of the teacher's role beyond that of instructor or classroom manager. Teachers who believe that they possess, or at least are developing, good management and student socialisation skills will be able to remain patient and focused on seeking solutions when confronted with difficult problems. In contrast, teachers who view management and socialisation skills as talents in which they are lacking may tend to become frustrated and give up easily.

On the other hand, out of 20 areas of knowledge and skills needed for their job, students rate themselves as more competent than teachers in eight areas, for ten items there is no statistical difference, and teachers assess themselves as more competent in only two areas (classroom management and school law). The eight areas in which the students assess themselves as more competent than the teachers are: teaching techniques and skills, information technology, preparation and planning, developing student self-

esteem and self confidence, promoting open communication and cooperation among students, working with students with emotional disturbance or behaviour disorders, working with gifted and talented students, and promoting student critical thinking and creativity. It seems that our students felt overconfident and more competent than they would feel after meeting the real life situations in the classroom.

Some other studies also suggest that initial training promotes both unrealistic expectations and an idealised image of the teacher, but does not prepare future teachers to cope with obstacles and difficulties arising in real working situations (Gruwez, 1983; Honeyford, 1982; Ryan, 1979; Vonk, 1983). According to Walter (1974, in Esteve, 1992), during their first teaching year, 91% of teachers must revise the expectations developed during their initial training. Ballantyne et al. (1996) quote researchers describing the initial year of teaching as *trial by fire, transition shock, rude awakening.*

Our participants, both teachers and students, were more student-centred than teacher-centred in their approach to teaching. While students and teachers did not differ in their teacher-centred orientation, students were more student-oriented in their teaching approach than teachers.

It is possible that this difference reflects changes in the teacher education curriculum that is becoming more oriented to the student-centred approach to teaching than was the case a few years ago. However since the researchers were also teacher instructors, it is also possible that the students were prone to giving answers compliant with their perception of the researchers' orientation. But it is also possible that beginning teachers, when confronted with a predominantly traditional school climate, change their approach towards a more teacher-centred one. Tillema (2000) has also suggested that beliefs developed during academic courses are usually not validated through teaching experience and therefore might be easily abandoned upon immersion into regular classroom practice.

On the other hand, it is also evident from the data that teachers and students favouring the teacher-centred approach felt more competent for their work than those with a student-oriented approach. It may be assumed that initial teacher education is designed in a way that better meets the needs of traditionally-oriented teachers and students.
These data invite further investigation of changing beliefs throughout the teaching career. It would also be especially important to explore the relationship between teacher beliefs, classroom strategies and actions during the full span of teacher professional development. Do beliefs precede strategies and actions or merely accompany them, as some studies suggest? And to what extent is it also possible that the application of certain teaching strategies and reflections on their consequences induce major changes in belief (Richardson, 2003)?

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Table 1. Item means of *Teacher competences* scale for beginning teachers and students and t-values.

Competence	M teachers	M students	t
1. Knowledge base in subject area	2.96	2.98	-.33
2. Teaching techniques and skills	2.97	3.22	-3.75***
3. Information technology	2.00	2.23	-2.96**
4. Practical skills (organising experiments, competitions, exhibitions, performances, etc)	2.10	2.11	-.18
5. Assessment and evaluation techniques	2.14	2.26	-1.34
6. Preparation and planning	2.54	2.86	-3.64***
7. Classroom management	2.15	1.87	3.19**
8. Communication and cooperation with parents	1.72	1.78	-.75
9. Developing student self-esteem and self-confidence	2.31	2.68	-2.86**
10. Promoting open communication and cooperation among students	2.46	2.80	-3.95***
11. Working with students with learning disabilities	1.97	2.12	-1.92
12. Working with students with emotional disturbance or behaviour disorders	1.85	2.12	-3.18**
13. Working with gifted and talented students	1.90	2.10	-2.21*

14. Promoting student critical thinking and creativity	2.41	2.63	-2.84**
15. Developing student self-regulated learning skills	2.34	2.39	-.64
16. Developing student ethical reasoning and behaviour	2.27	2.39	-1.65
17. Developing student ecological awareness	2.46	2.66	-1.46
18. Teaching about human rights and civil society	2.19	2.18	.12
19. Knowledge of school law	1.89	1.70	2.42**
20. Evaluating quality of educational process (including self-evaluation)	2.12	2.21	-1.95

*** $P < .001$; ** $P < .01$; *$P < .05$

Table 2. Items and Factor Loadings for the *Attitudes towards teaching* scale

Factor 1. Teacher-centred approach	Factor loadings (teachers)	Factor loadings (students)
1. There should be one, the best, obligatory textbook for each subject	.486	.349
2. In order to learn successfully, students should listen carefully to the teacher during the lesson, and not interrupt with questions	.443	.436
3. In teaching, problems with one, well-defined solution should be used	.418	.405
4. Teaching younger students should focus on gaining basic knowledge	.411	.395
5. Frequent competition in knowledge fosters student motivation	.344	.285
6. Elementary education should be more focused on cognitive than on social or emotional aspects of education	.343	.448
7. Students should not be allowed into the next grade if they do not acquire all the basic knowledge	.322	.420
Cronbach alpha	.60	.55
Factor 2. Student-centred approach		
1. Play and cooperation are better means for learning than listening to lectures	.671	.463
2. Students should have more freedom for critical thinking and expressing their views	.646	.504
3. Students should self-evaluate their progress in learning	.589	.567
4. School should be a place where all children feel comfortable and joyful	.511	.349
5. Students' wishes about what and how to learn should be taken into account	.482	.550
6. Students should evaluate the work of their teachers	.472	.602
7. In classes, students should be given the opportunity for cooperation in order to achieve common goals	.387	.352

Cronbach alpha	.70	.68

Table 3. Means and standard deviations for the teacher-centred and student-centred approach subscales and t-values

	teachers		students		t-value
	M	St.dev.	M	St.dev.	
Teacher-centred approach	2.28	.44	2.27	.44	.220
Student-centred approach	3.02	.43	3.14	.42	2.73**

** P< .01

Table 4. Differences in self-reported competences between teacher-centred and student-centred teachers

Competence	M Teacher-centred teachers	M Student-centred teachers	t
4. Practical skills (organising experiments, competitions, exhibitions, performances, etc.)	2.30	1.88	2.80**
5. Assessment and evaluation techniques	2.36	1,82	3.05**
6. Preparation and planning	2.74	2.32	2.65**

Table 5. Differences in self-reported competences between teacher-centred and student-centred students

Competence	M Teacher-centred students	M Student-centred students	t
5. Assessment and evaluation techniques	2.36	2.15	2.43*
7. Classroom management	1.98	1.71	3.16**
9. Developing student self-esteem and self-confidence	2.82	2.53	1.97*
14. Promoting student critical thinking and creativity	2.71	2.54	2.21*
16. Developing student ethical reasoning and behaviour	2.48	2.29	2.31*
17. Developing student ecological awareness	2.84	2.47	2.39*
18. Teaching about human rights and civil society	2.28	2.05	2.71**