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# Teacher Training for Political Science PhD Students in Europe: Determinants of a Tool for Enhanced Teaching in Higher Education<sup>1</sup>

# Abstract

In this paper we examine the state of teacher training for political science PhD candidates in the European Union and make a comparison with the situation in the United States. We investigate the determinants of supply and demand of teacher training. On the supply side, we suggest that research orientation and quality assurance are factors which might enhance institutional willingness to provide training. On the demand side, we examine the influence of gender, career plans, year of study and career status on student motivation to undergo teacher training. We find that about half of EU institutions offering PhD programs also provide some form of teacher training; this closely follows American trends. We also uncover that while research orientation has a significant effect on the willingness of universities to provide training in pedagogy, quality assurance does not. Of the four factors we put forward as potential influences on student demand for teacher training; only future plans have a significant effect. We argue that similarities in the situation of teacher training in the United States and the European Union make transatlantic dialogue in graduate education worthwhile. Moreover, the positive impact of teacher training on the quality of teaching and learning as well as the positive valuation of training by more than two-thirds of PhD students in our sample makes us conclude that teacher training should be more widely available.

<sup>&</sup>lt;sup>1</sup> The authors wish to thank Adam Chapnick, Bob Reinalda, Marvin Overby, Agi Simon, Henk Stronkhorst, Jussi Välimaa and two anonymous reviewers for their help and advice.

Key words: teacher training, doctoral students, European Union

# Introduction

Teacher training is an important factor in improving both the self-confidence of teachers in the classroom and student learning (e.g. Donnelly 2006; Postareff et al 2007; Coffey and Gibbs 2000, Gibbs and Coffey 2004). Yet, we see in the American context that preparing the future generation of political science professors for their teaching duties comes second to preparing them for a research career. Few courses are available to PhD students on teaching undergraduate level students. At best, teacher training is offered only when the "training contributes to the PhD department's own teaching needs" (Rothgeb et al 2007, 761-2). Only discontinuous information exists pertaining to the availability of teacher training from other parts of the world other than the United States.

This paper broadens the scope of existing teacher training literature by examining this topic in the wider European context. We ask whether political science doctoral programs in Europe offer teacher training to its doctoral students and whether PhD candidates find such training desirable. We put forth that two structural factors – namely a universities' commitment to research and the existence of quality assurance measures in EU member states – as possible determinants informing whether a university offers teacher training. We also examine the influence of four factors – career status, career plans, gender, and the year of study – on doctoral candidates' motivation to undergo teacher training.

Based on unique data we collected through an online survey that was administered in the 27 member states of the European Union we find that slightly less than half of the Political Science doctoral programs in Europe make teacher training available for their students. This is very similar to the situation in the United States. We also find that while the research commitment of

universities has a strong negative relation with the availability of teacher training, quality assurance is not a significant factor influencing its provision. In this respect, on the demand side, only students' future plans to stay in academia and the level of economic development of a country (our control variable) are significant. Nonetheless, we conclude that there exists a substantial demand for training in pedagogy in Europe, because two-thirds of our respondents would like to undergo training. These observations, as well as the positive effects of teacher training on teaching and learning, lead us to argue that pedagogic training should be included in all graduate programs.

#### **Motivation for Studying the Topic**

The study of teacher training in higher education is a relatively new area of research. Still, almost all studies on the effect of teacher training suggest that it has a positive impact on teachers and students alike. Whether results are based on self-reports or more objective measures, teachers' attitude and skills seem to improve with teacher training. Donnelly (2006) finds that training makes professors more reflective with respect to teaching practice, new teaching strategies, and the design and delivery of classes. Training also increases confidence about teaching and results in a more student-centered approach (Donnelly 2006; Postareff et al 2007; Gibbs and Coffey 2004). MacDonald (2001) notices remarkable changes in teachers' understanding of their role, their teaching skills and their enthusiasm for teaching as a result of training. Camblin and Steger (2000, 15) report that faculty development grants result in the greatest degree of self-evaluated progress in teaching-related activities. Some researchers claim that long-term training programs are those that bring about desirable effects (Shannon et al 1998; Postareff et al 2007). This might explain why Norton et al (2005) find only insignificant improvements in teaching beliefs and intentions after their respondents underwent training (Postareff et al 2007, 569).

Available evidence also suggests that improving teaching skills positively affects student learning. Based on student evaluations, Coffey and Gibbs (2001) report that teacher training enhances teachers' enthusiasm for the subject, interest in students, and clarity of explanation. More importantly, students also perceived a positive relation between their teachers' pedagogical training and their learning (Coffey and Gibbs 2001; Shannon et al 1998). In their cross-national study, Gibbs and Coffey (2004, 97) noticed a significant tendancy for students of teachers who had undergone teacher training to take a deeper approach to learning.

Since teacher training seems to be an important determinant of a professor's attitude toward teaching and of the quality of student learning, it is significant to examine its availability as well as the attitude of PhD students towards it. However, studies on existing programs are rather scarce, and those that exist approach the issue from the point of view of institutions (Rothgeb et al 2007) and do not consider teacher training from the perspective of doctoral students. Trigwell and Millan (2006) provide a rare exception in finding that although doctoral students do not expressly choose to attend the University of Oxford in order to enhance their teaching skills, these students still tend to express concern that the lack of training opportunities available might affect their future career.

The scarcity of information is typical for the European context. The little data that is available mostly refers to the state of affairs in the Western European and Anglo-Saxon worlds (e.g. Trigwell and Millan 2006; Thorlakson 2003). Our paper improves upon this by examining teacher training in all twenty-seven member states of the European Union.

Moreover, although in previous studies the determinants of the supply side have been pointed to, their effect has rarely been examined systematically. Studies are especially lacking pertaining to the quality control of teaching, which has been introduced by EU member states over the last thirty years. In academic circles it appears to be an accepted and largely untested truism that research and teaching are incompatible or coexist in inherent tension (Gottlieb and Keith 1997). Yet, this runs counter to the Humboldtian educational philosophy embraced in many European countries. This philosophy holds that research and teaching are intertwined and should go hand in hand (Enders 2001, 4). There is some support for this claim: teaching (Gottlieb and Keith 1997) and, to a limited extent, student learning (Dunbar-Goddet and Trigwell 2006) benefit from simultaneous involvement in teaching and research.

The state of teacher training in Europe may be of interest for the American reader because of the strong commitment of both the EU and the United States to provide high quality education to its PhD students. In addition, higher education in Europe and the United States has recently been facing common problems, including shrinking financial resources, a growing number of non-tenured faculty (Honan and Teferra 2001, 184, 187; Fuertsmand and Lavertu 2005, 731; Huisman et al. 2002, 142), and deteriorating student-faculty ratios (e.g. Honan and Teferra 2001, 186-7; Kwiek 2003, 461-2; Enders 2001, 5). Because of the growing number of students with a greater diversity in their skills, mass university education today requires more conscious teaching practices than the ones provided by elitist higher education systems (Johnston 1996).

Both the United States and the European Union recognize the importance of a knowledgebased economy (Kehm 2006, 67). To further this end, the EU has committed itself to the improvement of higher education at universities; however, this commitment has largely taken the form of enhanced support for, and development of, university research capacity (Kehm 2006, 67). However, the quality of research and education also depend on the quality of teaching. Therefore, economic competitiveness cannot be fully realized without due consideration for the quality of teaching in higher education institutions. It is with this rationale and in light of the great diversity among and within the education systems of EU member states (Musselin 2004) that we undertake this study of teacher training in the cross-national European context. Some European trends point at the convergence between the educational systems of the EU and the United States. The Bologna process, which brought about the harmonization of the degree structure in the EU, has led to a three-tier degree structure of BA, MA and PhD programs, making it similar to the American degree-structure (Reinalda and Kulesza 2005). This has resulted in the appearance of private institutions offering BA and MA programs and foreshadows the growth of the private educational sector in Europe, which is still meager in comparison to that of the United States (Honan and Teferra 2001, 183). The appearance of private and primarily teaching (non-research) colleges in Europe is also likely to lead to a boost in the demand for college professors with good teaching skills. This need is already present in the US (Fuertsman and Lavertu 2005; Rothgeb et al 2007, 761).

# Expectations

### Demand side

Because most PhD students are required to teach during their graduate years and can thus not avoid facing the difficulties which are inherent to teaching, it is our hypothesis that a large majority are motivated to undergo teacher training. In addition, based on the positive effect of teacher training on professors' self-evaluation of post-training performance (Donnelly 2006; Postareff et al 2007; Coffey and Gibbs 2004; MacDonald 2001; Camblin and Steger 2000, 15), we posit that the great majority of participants in training valued this experience. Thus, we expect that the majority of those who attended training find the experience beneficial. Furthermore, as learning by doing is often a traumatic experience plagued by feelings of inadequacy, incompetence, and perplexity, we anticipate that the majority of those who did not complete training would find that such training is necessary. We expect this in both situations whereby

respondents did not undergo training, and also whereby respondents either did not have the opportunity to be trained or decided against taking an available, *albeit* voluntary, training course.

Although teacher training may provide PhD students with useful skills for any future job, it is decidedly more useful for those who envision a future teaching career. To examine this, we consider demand for teacher training amongst young professors in the first three years of their professional career and amongst PhD students. Young professors constitute the portion of postgraduate students having chosen an academic career; given this choice, we expect that they could unquestionably benefit from teacher training. Accordingly, we expect a higher level of demand for training amongst young professors than amongst PhD students in general, because the latter includes students ultimately aiming to work outside of academia, while the former have specifically chosen a teaching career.

Academia is still a male dominated world both in North America and in Europe. Women professors are a minority and because of structural barriers, they are less likely to reach top positions (Mason and Goulden 2004, 88; Enders 2001, 15; Huisman et al 2002; Kwiek 2003, 463-5). Less than one-fifth of full professors in the United States are women (Honan and Teferra 2001, 192). In most European countries, only around 10% of professors are women (Mora 2001, 143; Chevaillier 2001, 59; Huisman et al 2002, 145). The two notable outliers are Poland (19.5%) and the Netherlands (7%) (Kwiek 2003, 462; Huisman et al 2002, 15). In addition, women largely occupy temporary, non-research, non-tenured, and poorly paid faculty positions (e.g. Huisman et al 2002, 146; Slantcheva 2003, 431). The greater uncertainty faced by women concerning their future in academia and the higher likelihood for them to end up in a teaching career lead us to expect that teacher training is more attractive for women than for men.

PhD students face the most acute need to acquire teaching skills when they first have to teach and when they are about to graduate and their need to find a job becomes imminent. Doctoral candidates typically start teaching in the second year of their studies. Social science PhD candidates usually complete their program between the fifth and seventh years (Sadlak 2004, 24, 55, 216). Consequently, these are the two periods when we anticipate heightened demand for teacher training.

All in all, we expect that:

The majority of respondents demand training.

Those planning for a career in academia are more likely to demand training than those with plans for a career elsewhere.

PhD holders are more likely to demand training than doctoral students.

PhD students are most likely to demand training in the second, fifth, sixth and seventh years of study.

Women are more likely to demand training than men.

#### Supply side

Previous studies suggest that only a minority of countries in the EU offer teacher training programs. France, Sweden, Norway and the Netherlands offer state-mandated teaching programs for university teachers; however, this training is not necessarily to occur in the course of their PhD studies (Thorlakson 2003, 12; Gibbs 1998, 224-5; Chevaillier 2001, 56). However, even in the UK where training is supposedly compulsory, two-thirds of students at the University of Oxford doubt that they "have the opportunities to learn how to teach" (Trigwell and Millan 2006, 5), which points to a problem in the dissemination of information about teacher training. There seem to be a few places in other countries which provide teacher training; however, this example has not generalized across the EU. In the majority of EU member states, either training is not

offered (Gibbs 1998, 224-5) or there is no information available on the existence of teacher training. Because PhD students are treated as researchers in the EU (Kehm 2006, 67), we expect that only a minority of institutions offering PhD programs provide training.

We put forth both research orientation and quality assurance as possible determinants influencing the availability of teacher training. Our reasoning for considering these determinants firstly stems from the common professorial worry that teaching-related activities, including professional development and thus teacher training, hinder their capacity to optimally pursue research activities. This worry appears to be justified (Gottlieb and Keith 1997); in effect, teaching does not foster research the way research fosters teaching (Gottlieb and Keith 1997). Rather, teaching takes time away from research. This suggests that the more universities focus on research, the less likely they are to offer teacher training to their doctoral students.

Secondly, in Europe, the meaning of quality assurance focuses on "teaching evaluations and instruction in study programs" (Roads and Sporn 2002, 382). We raise the question of how effective such measures have been so far, and how much the concern for quality in teaching has translated into more and better teacher training programs for future professors. Though the harmonization of European higher education gave birth to a European level quality assurance agency – the European Network for Quality Assurance in Higher Education (ENQA) –, quality assurance remains the responsibility of individual member states. The UK and the Netherlands pioneered quality assessment in higher education institutions in the 1980s (Rhoads and Sporn 2002, page). Since then all EU member states have introduced some quality assurance practices. Our hypothesis is that the longer quality assurance has existed in a country, the more likely higher education institutions are to offer teacher training to doctoral students.

In sum, we expect that:

Only a minority of institutions offering PhD programs provide teacher training for their students. The more a university is research oriented, the least likely it is to offer teacher training. The longer quality assurance has been operating in a member state, the more likely its institutions are to offer teacher training.

# Control Variable

There are two factors which confound observations related to student demand for teacher training and the availability of training in European higher education institutions: a countries' economic prosperity as well as certain historical implications which divide old and new EU member states. Firstly, less prosperous countries may engage in less research because of limited research funds, thus professorial duties might be limited to teaching. Limited funding for research would enhance the teaching function of a university as well as the need for high quality teaching and good teachers. At the same time, students preparing for a teaching career would more likely demand teacher training.

The way in which the field of social sciences was portrayed and treated under Communism can also explain current differences in the provision and demand for teacher training between old and new member states. Almost all states that have joined the EU since 2004 are post-Communist countries. Under Communism, social sciences were strictly controlled by the state and research opportunities were limited. Thus, during Communism, an academic's opportunities were limited to teaching. As such, research is alien to the academic tradition of post-Communist countries, where it has a relatively short history.

Because economic difficulties of transition were a major factor hindering the quick development of research practices in Eastern Europe, we suspect that the two aforementioned factors are not independent. This is supported by our correlation of the two variables (R- square=0.84).<sup>2</sup> We decided to use economic development as a control variable in this study because it encompasses much of the difference between old and new Europe and because it is the more sensitive measure of the two.

## Data

#### Data Collection and Response Rate

The paper uses a unique sample of political science PhD students and young professors who graduated in the last three years in the 27 member states of the European Union. All of our respondents had at least one semester of experience teaching at the higher education level. The fact of having both PhD students and PhD holders (junior faculty members having obtained their degree no more than three years before) in our sample helped us in assessing teaching-related experience in a larger time frame. Responses were collected in the form of an online survey that was administered in each EU member state in the period of March-August 2007. Potential respondents were contacted through our personal networks, their contacts, direct emails (if we could identify respondents' email addresses from the Internet), and via department heads and national political science associations. Even though most of our data was collected online, we provided hard copies of the questionnaire to junior political scientists attending the annual conference of the European Political Science Network. Of these methods, we found that personal emails to respondents, regardless of whether we knew them personally or not, were the most efficient.

Although we collected data from both PhD students and junior faculty members, we received a significantly higher number of responses from the former than the latter.

 $<sup>^{2}</sup>$  Difference between old and new Europe is measured by a dummy variable (old/new) which takes the value of 1 if the state is an old member state and 0 if it is a new member state.

Consequently, our results disproportionately reflect the experience of PhD students as opposed to those of junior faculty members. Our sample included an equal number of male and female respondents. The greatest number of respondents were in their second and third year of studies (Table 1).

#### TABLE 1 ABOUT HERE

Because no comprehensive data exists with information about the total number of Political Science PhD students and junior faculty members in the European Union, we cannot know what proportion of them our respondents represent. However, we can appropriately use our data to fulfill one of our main purposes, which is to find out how many institutions in the EU offer teacher training. In effect, our responses allow us to determine which institutions (and countries) of the EU offer PhD programs (Table 2).

Two countries – Malta and Luxembourg – offer no PhD programs in Political Science. Cyprus still has a few PhD students at the University of Cyprus, but it has not accepted new students for a while and, thus, technically has no PhD program at present. Therefore, we left these countries out of the study.

#### TABLE 2 ABOUT HERE

Though the overall response rate is 42%, it varies to a great degree on a country-tocountry basis (see table 2). The response rate was calculated as the ratio of institutions offering PhD degrees in the European Union and the number of institutions in our sample. Occasionally, we received responses from universities not included in our list of PhD-offering institutions. While there may be mistakes in this list, we suspect that this is a reflection of structural conditions; including the fact that political science is a broad field whose disciplinary boundaries are not clearly defined. Furthermore, it is a field which is differently divided into sub- or related disciplines in various member states (Klingemann et al 2002; Klingemann 2007).<sup>3</sup> For example, political science departments are rare in the UK. Instead, they have departments dealing with political studies issues such as government, politics, or international relations. Some universities treat international relations as part of political science, while some offer programs in one of these topics but not in the other.<sup>4</sup> Also, in many countries (especially in Eastern Europe), though faculties can offer political science topics, these may be included in a legal studies or economics department and lead to a doctorate in law or economics.

Because we allowed respondents to classify themselves as to the nature of their studies (e.g. as political science PhD students), we may have received answers from doctoral candidates researching political science issues but not working toward an explicitly termed political science PhD degree. As these PhD students are equally likely to pursue their academic career in a political science department and publish in political science journals, we kept them in our sample.

#### Method and Variables

We first look at the demand for teacher training using descriptive statistics, and then we use binary logit analyses to test our expectations for both sets of hypotheses.

<sup>&</sup>lt;sup>3</sup> Even though there may be various departments offering political science doctoral degrees within a university, our data did not allow us to always consider this. Nonetheless, we are fully aware that the policies and programs in particular departments of the same universities may differ.

<sup>&</sup>lt;sup>4</sup> For instance, the LSE has both Departments of Government and International Relations, the University of Tallinn has one institute for the study of international relations and political science, and the University of Aberystwyth has only an international politics department.

## Demand side

For individual-level hypotheses, we create a binary dependent variable, demand (0=no demand; 1=demand). We generate this variable from two survey items. The first of these is a categorical variable, which recorded responses to the question 'Have you ever undergone any training of teaching skills during your PhD studies?' The four response categories are: 1. Yes, I received training at my home department, 2. Yes, I received training at another institutions, 3. I had the opportunity to be trained but I did not take it, 4. I had no training opportunities. In order to differentiate between the responses of those who did not attend training, we add responses (yes/no) to the question 'if you did not attend any teacher training do you think that you have missed such an opportunity?'

The demand variable is created to measure pre-training demand, i.e. whether the respondents would have opted for teacher training without any previous knowledge of what a particular teaching program would entail. Because compulsory training appears to be rare in PhD studies, we assume that those who attended teacher training desired to attend, and thus constitute a demand for it. In addition, those who were not trained but expressed regret for not having such an opportunity are also coded as 'in demand' of training. Not attending an available training program and not having the opportunity to attend a training program are coded as 'no demand'.

When analyzing the demand side, we are interested in effects of four dummy variables: gender (male; female), career status (PhD student vs. young professor), career plans (in academia; outside academia), and year of study. The year of study was originally a scale variable, ranging from the first to tenth year of study. We dummied the variable and dropped the years of study seven and above, because of the small number of observations in these years. Unfortunately, this makes it impossible to test our expectations about increased demand for training in the seventh year of study. However, since the fifth and sixth years of study are still in the sample, we will be able to assess whether demand for training increases as one is about to graduate.

## Supply side

Our dependent variable is the binary variable *training* (no training=0; training=1). We use the same 4-category variable as we used in order to create the dependent variable, *demand*. To measure supply, we transform it into an institutional-level binary variable. Of the four categories, only 'training at one's PhD giving institution' is accepted as training by the respondents' institution. We code 'training at other institutions' and 'no opportunity for training' as 'no training at one's home department'. Because it is unclear where the opportunity for training presented itself for those who did not attend them, we dropped these cases from our data set. In cases where there is a contradiction between individual-level responses within one institution (when some respondents reported training availability and others reported no training availability for the same institution), we assign the value of 1 (=training) to the given institution. We do this because we trust respondents' claim to have attended training. Also, a respondent reporting that there is no teacher training opportunity at the same institution might not have been aware of its existence, signaling potentially inadequate information on the availability of the voluntary training program.

Our structural independent variables are research orientation and quality assurance. Research orientation is measured by the ranking of European political science departments by Hix (2004). He provides a list of the top 100 European universities and names additional universities in regional and country division that are still among the top 500 universities in the world. We cluster universities into four categories: ranked in the top 50 (=4); ranked between the top 50 and 100 (=3); ranked outside the top 100 but within the top 500 universities worldwide (=2) and not listed by Hix (=1).

As for quality assurance, we are interested in quality assurance evaluations and not the initial accreditation. We prefer to use information stemming from the first cycle of program reevaluation rather than earlier information, including information taken when quality assurance laws or agencies were first instituted. Only compulsory evaluations were taken into account. Using the same technique as that pertaining to research orientation, we created four categories: state of quality assurance before 1990 (=4), between 1990-1995 (=3), between 1995-2000 (=2), and after 2000 (=1). Table 3 presents the distribution of member states across the four categories.

#### TABLE 3 ABOUT HERE

#### Control variable

We use the same control variable, economic prosperity, when we test our expectations with regards to student demand and institutional supply of teacher training. Economic prosperity is measured in real GDP per capita. We use the RDGPL variable of the Penn World Table 6.1 for 2004, which is the most recent data available (Heston et al 2002). The data is in USD and the base year is 1996.

#### Results

#### Demand

Before analyzing demand in terms of demand prior to completing training, we describe our data more broadly. Besides pre-training demand, we consider whether those completing training found it beneficial. We are also interested to know whether the fact of teaching without training influenced demand for training. For this, we are interested in the responses of those who had the opportunity but did not attend training. Since they initially judged training as being of little value, we are interested to note whether their opinion has changed *ex-post*.

As predicted, the vast majority (71%) of the students in our sample would (have) like(d) to be trained. Of the four factors considered – gender, career plans, career status, and year of study – career plans has the greatest influence on desire for training. There is a 20 percentage point gap in demand for teacher training between those who are planning an academic career (75%) and those who are planning a non-academic career (55%). As expected, women (77%) were more likely to demand training than men (65%). However, somewhat to our surprise, there is no difference between PhD students (71%) and PhD holders (72%) in their demand for teacher training. With regard to year of study, as predicted, doctoral candidates express the greatest need for training in their second year and sixth years of study: more than 77% of second- and sixth-year PhD students demanded training. Fifth-year students produced the third-highest rate (75%) of demand for training, and fourth-year students followed closely at 70%. Demand for teacher training is substantially lower in the third year (35%). When examining things in terms of benefits, we find unequivocal demand for training even when students knew what the training program entailed. All PhD students who completed teacher training found the experience beneficial. We consider this to constitute absolute demand on the part of those who completed teacher training, a somewhat unexpected response given the strong criticism some respondents expressed about their training programs.

While generally supporting our expectations, answers from respondents regretting the lack of training opportunities is more diverse. For example, 64.7% of those who did not complete training regretted that they could not have undergone it. This includes both those who initially refused to take training and those who did not have an opportunity to do so. When breaking down

the data further, we note that even the majority (55.6%) of those who originally chose not to attend available training programs regret this *ex post*. This is 12.8 percentage points lower than the demand among the respondents who did not have the opportunity to attend training.

On the basis of descriptive statistics, career plans appears to be the most influential factor in determining demand for training. We will now turn to assessing the significance of these factors on pre-training demand by using a binary logit analysis. Because of multicollinearity problems, we ran two regressions, testing the effects of year of study and career status separately (table 4). As a result, model 1 only discusses the trends with regards to PhD students. In both models, all of the independent variables have a positive effect on the dependent variable, but only career plans and economic prosperity are significant determinants of students' demand for training. Students in more prosperous countries and those who plan to pursue an academic career are more likely to demand training.

## TABLE 4 ABOUT HERE

#### Supply side

Fifty-one percent of the PhD programs in our sample do not offer teacher training for their doctoral students. This is better than we expected and is similar to the findings of Rothgeb et al (2007) and Dolan et al (1997) who reported rates of 45 and 55 percent, respectively. However, the fact that half of institutions offering PhD programs do not provide teacher training of any kind is far from being satisfactory.

To investigate determinants influencing the willingness of institutions to make teacher training available, we examined the impact of research orientation and quality assurance separately, and then together. When tested separately the research orientation variable registers a positive relationship with the supply of training just as we expected. However, the relationship between quality assurance and teacher training is contrary to our expectations. We found that the longer quality assurance has been operating in a EU member state, the more likely its institutions are to offer teacher training. Testing the effects of research orientation and quality assurance together, the signs of the relationships remain unchanged. Yet, while both factors are significant as long as their effect is tested separately, the level of significance of both decreases when they are considered together. Nonetheless, research orientation still remains significant at the .05 level. Quality assurance loses its significance, which suggests that when tested independently, it picks up much of the content of the research orientation variable.<sup>5</sup> Economic prosperity does not demonstrate significance on the supply side. Table 5 presents the results.

## TABLE 5 ABOUT HERE

#### **Conclusion: Implications for Europe and the US**

Based on a Europe-wide student survey, we find that slightly less than half of the European Union's institutions which offer PhD programs provide training in pedagogy to its students. This closely follows American trends, where 45% of political science PhD programs currently offer this kind of training (Rothgeb et al 2007). While European trends are better than we expected, a large number of PhD students are still denied any kind of teacher training. Therefore, we believe that the recommendation of Rogthgeb et al (2007, 761) for the US, that doctoral programs should put more emphasis on teacher training, should be taken seriously in Europe as well.

<sup>&</sup>lt;sup>5</sup> The correlation between the independent variables – research orientation and quality assurance – is not high (R-square=.45)

Doctoral students' interest in training certainly warrants such a conclusion. More than twothirds of PhD students would like to acquire teaching skills during their studies, a finding which is aligned with the work of Trigwell and Millan (2006) analyzing the opinion of graduate students at the University of Oxford. Moreover, research has found a positive relationship between training and teaching performance (e.g Donelly 2006; Postareff et al 2007; Camblin and Steger 2000), and all of the PhD students in our sample feel that they benefited from such training. On this basis we argue that teacher training should be part of the political science PhD curriculum.

Our expectations about the role of gender and career status in influencing student desire for training were not supported. Only PhD candidates' career plans proved to be an important determinant of their likeliness to demand teacher training. We find meaningful regional differences in demand for training, which shows a somewhat alarming pattern. PhD students in more prosperous countries are more likely to demand training. For example, in East-Central Europe, where an academic career is primarily a teaching career and where the opportunity to carry out research is limited, PhD students are only moderately interested in teacher training. This raises doubts about the future quality of higher education in East-Central Europe, both in terms of teaching and research effectiveness. Thus, while uniformity should be avoided within the EU, unified standards should be set as to level out the differences in teaching quality and research opportunities between old and new EU member states.

One of our main quantitative findings, that research orientation in a university is linked to inattention to teaching, is hardly surprising. American and British trends over research orientation and quality assurance appear to be applicable in many continental European states, whereby teaching is only secondary in importance to research (Rothgeb 2007; Shattock 2001, 41).

However, the negligible influence of quality assurance mechanisms is unexpected, especially when considering that quality assurance in Europe has existed for decades with the aim of improving the quality of teaching. With our analysis, we conclude that current measures for attaining quality in teaching are currently not aimed at improving the pedagogic skills of university professors. The extremely technical language and the strong focus on program structure and research in the quality assurance literature (e.g. Campbell and Rozsnyai 2002; Rhoades and Sporn 2002) are a testament to this.

It is our argument that teacher training for PhD students and junior faculty members is at least as important as monitoring the structure of academic programs and focusing on research quality. The detailed regulation of program or even course content can only lead to successful outcomes if knowledge is efficiently conveyed. Similarly, the value of research depends in part on professors' ability to communicate research results and methods to students. Therefore, if we wish to improve the quality of education at universities in both Europe and North America, the teaching skills of university professors must be improved. Such a conclusion is in alignment with Enders's (2001, 18) suggestion with regard to German higher education and Rothgeb el al's (2007, 762) recommendation in the US context. Also, it strongly resonates with the comments of some of our respondents: "There are excellent minds and researchers out there who are poor teachers, because they never learnt to communicate their knowledge well. The academy is not only in need of new theories and findings but also good teachers that can train the new generations."

The similar state of affairs in Europe and the United States points to the usefulness of a transatlantic dialogue over the issue of teacher training in graduate education. Although there might already be some informal dialogue taking place, we are not aware of any formalized institutional practices. Our survey results signal that exchange of experience in this field might offer significant benefits for both Europe and the United States.

We conclude with the remarks of another respondent who brings up a contradiction in current academic practice: "[I]t contradicts the gist of our business (educating students) to put people with no teaching training whatsoever in charge of teaching. It is a sort of double standard: on the one hand, we expect students to become qualified, professional political scientists, and we praise the value of education, but still let people teach without any formalized quality check of their teaching skills."

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