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## **Economics from a Different Point of View – Good Practice in Teacher Training: How to Handle, Use and Judge External Standardized Tests in Schools**

The Economic Actions in Education training module (EAE) teaches how to handle, use and judge external standardized tests in schools. The EAE programme was implemented in teacher training at the University of Kiel, because teachers are increasingly under external scrutiny and are being held accountable for student and school achievements. The EAE programme includes a reader (in English), through which prospective teachers understand and analyze core terms of the field. Furthermore, different didactical methods such as think-pair-share, role play and short lectures provide a group dynamic in which students gain an insight into standardized tests at a macro level. Students learn what is involved in standardized tests and they develop the ability to make a critical judgement about how they will use or refuse standardized tests in schools. EAE enables teachers to use standardized tests for curriculum and instruction improvement as well as refuse standardized tests to highlight autonomous teaching and decline governance from outside.

Das Modul Economic Actions in Education (EAE) lehrt zukünftige Lehrer und Lehrerinnen die Bewertung von externen standardisierten Tests, den Umgang damit, sowie deren Nutzen. Das EAE-Modul wurde an der Universität zu Kiel im Studiengang Handelslehramt eingeführt, weil Lehrende immer häufiger extern kontrolliert und für die Schüler- und Schulleistungen verantwortlich gemacht werden. Das EAE-Modul arbeitet mit einem Reader und 20 Experteninterviews. Mit verschiedenen didaktischen Methoden (wie zum Beispiel think-pair-share, Rollenspiel und Kurzvorträgen) wird eine Gruppendynamik initiiert, die es den Studierenden ermöglicht, sich einen Überblick innerhalb der Makroebene des standardisierten Testens zu verschaffen. Die Studierenden lernen, welche Handlungen das standardisierte Testen beinhaltet und eignen sich ein differenziertes Urteil darüber an, wann sie an standardisierten Tests teilnehmen sollen und wann nicht. Durch das EAE-Modul können die Studierenden sich standardisierte Tests zu Eigen machen. Sie lernen, die geeigneten Tests für Curriculum- oder Unterrichtsverbesserung zu nutzen. Dadurch heben sie ihre autonome Profession für den Unterricht hervor und treten der Governance von außen entgegen.

### **Keywords:**

training module, standardized testing, collaborative learning

### **1 Introduction**

The University of Kiel drafted the Economic Actions in Education training module (EAE) for teacher training in order to educate teachers in how to handle, use and judge external standardized tests in schools. In the following paper I will outline this special training programme as an example for good practice, which was developed and applied at the University of Kiel. In detail I will explain what the EAE module is and why the topic standardized testing should be included in economics teacher training. The EAE training programme is an answer to changes in the teaching profession (in Germany).

The EAE training programme contains training units that teach how to handle, use and judge external standardized tests in schools. The training is for students (trainee teachers of economics or trainee vocational teachers) or economics teachers in further education and

was designed to be completed in (at least) eight training units of 90 minutes each.

### **2 Why teach the EAE module?**

In the past 20 years (large scale) standardized tests have come to be a widespread tool in the field of education. For example international surveys such as PISA (Programme for International Student Assessment), PIAAC (Programme for the International Assessment of Adult Competencies) or PIRLS (Progress in International Reading Literacy Study) have been conducted. The number of national and international tests administered in schools in Germany has increased considerably (Zedler & Döbert, 2009, p. 29 et seq.). Standardized tests are either used to diagnose learning and teaching conditions or aim to optimize educational processes by coordinating, regulating and governing. Whereas diagnosis for instructional improvement has a long tradition, accountability testing in this form is a new phenomenon in the education system. The developments of the last 20 years demonstrate how strongly standardized testing is often linked to economic aims.

A common principle in society is cost-benefit appropriateness. How much something costs and what it monetarily benefits are substantial arguments in decision-making processes. Standardized tests are a tool to bring forward such arguments. When circumstances are unknown, commodification and quantification through standardized tests subserve rational decision-making.

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An increased socio-political demand for rational governance (Stockmann & Meyer, 2015) explains the growth of standardized testing. *New Public Management* techniques, evolvement of *Globalisation* and appearance of *Governance* structures are important key moments of this rational governance in the educational system.

Standardized tests are used by neoliberal nations as a *New Public Management* technique in every area of society. In the educational system these tests are often administered to overturn the imbalance of information between different stakeholder. The obtained value of public and individual choice in democratic systems causes the need of transparency and therefore information. In combination with tight interactions of the nations on the international level, standardized tests became nationally and internationally the first source for public information.

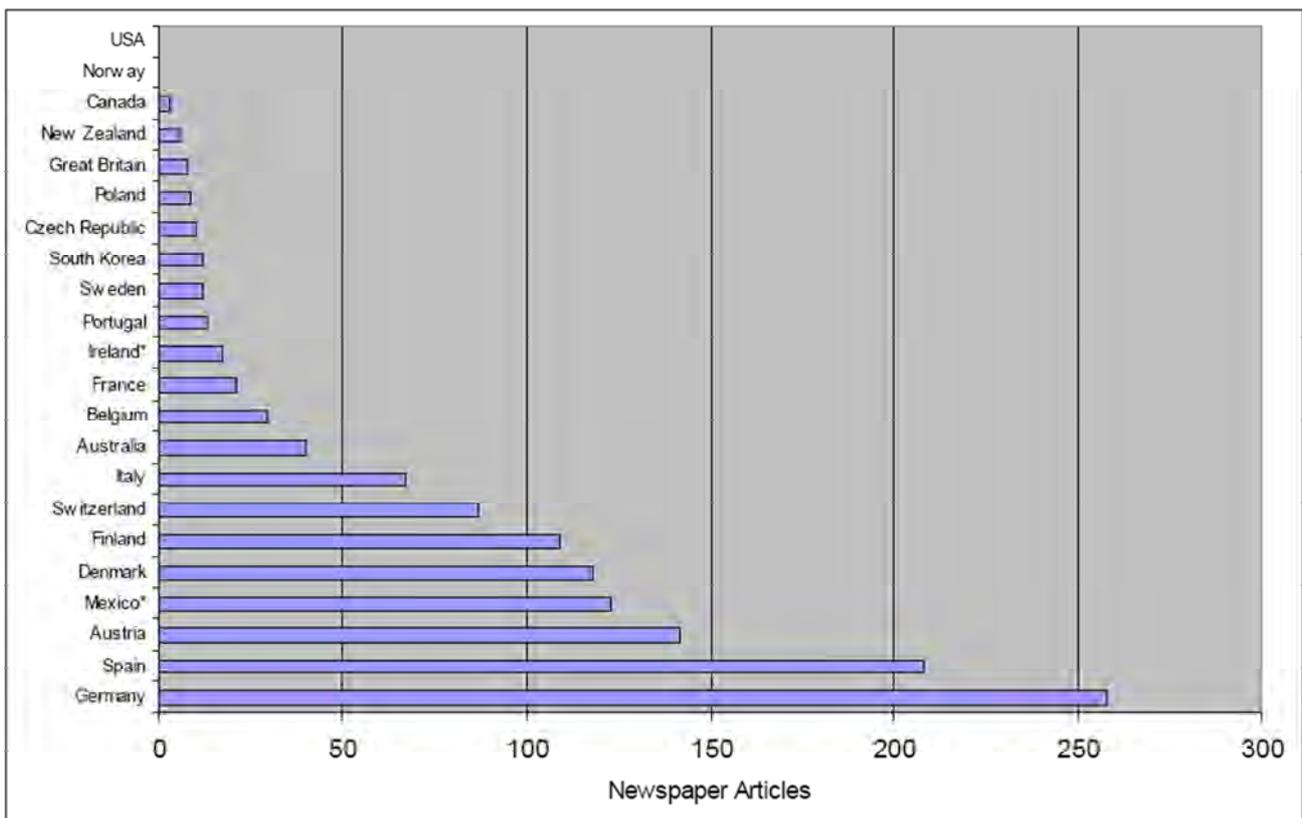
The former perception that national or subnational institutions coordinate procedures in the educational sectors has been overcome. Since standardized tests have been used to inform and depict, these procedures interacted with procedures to coordinate, regulate and govern educational systems. In fact, it shows that even standardized tests which are administered by corporations with no official mandate to govern the system, have an impact – or better say regulate procedures in the educational system (Cussò & D’Amico 2005, S. 211). In present times teachers are faced to acknowledge and dispute these different governance structures through standardized tests.

In a workshop at the AEEE conference (Aix en Provence, 2014) I presented the EAE training programme and I explained the relevance of standardized tests in Germany and therefore why it is important to educate prospective teachers. Participants from different European countries explained to me, that external standardized testing in other European countries has not the same public relevance as in Germany. Surprisingly even PISA – in which every European country participates – seems to be more or less unknown and seems to have different roles in different countries. Whereas the PISA results are highly discussed in Germany, other European countries take little notice of the results. For clarification figure 1 displays how often reporters wrote about the PISA study in the most important newspapers in different countries. The figures explicitly show how important the role of PISA is in some European countries (Germany, Spain, Austria, Denmark, Finland Switzerland and Italy).

PISA is one example of external testing. In contrast to other countries Germany is forcefully implementing this evidenced-based regulatory tool in the education system. This is why many teachers in German schools are experiencing external standardized tests first hand, as they are repeatedly asked to administer these tests. Sometimes they receive results either from their school’s administration or from the newspapers. Thus they become acquainted with external standardized tests as a tool that governs their workplace from outside.

During the EAE training module, students discover that standardized tests can be used as a tool to coordinate education. They become familiar with management

Figure 1: Number of articles reporting on PISA in selected quality newspapers [Anzahl der Artikel zu PISA in ausgewählten Qualitätszeitungen] (Knodel et al. (2010) S. 17).



strategies and they develop their own views on how to handle difficult decisions, in which standardized tests are used to govern their own teaching habits and their student's or their school's performance.

### 3 What is the EAE training programme?

The EAE training programme aims to professionalize teachers with regard to testing procedures and prepares them to join the school's quality control team; it also aims to sensitize economics teachers to rational governance in general. The EAE training programme increases knowledge of economics and at the same time aims to teach economics teachers how to handle and value economic patterns while working as a teacher. Both economic theory and economic action patterns are covered in the EAE training module. On the one hand the EAE training module educates teachers how to teach economics by presenting economy theories such as property rights theory and principal agent theory, on the other hand it trains teachers how to react autonomously and reasonably when they are externally tested in school. The main topic of the programme: *standardized testing in schools* enables teachers to develop their own strategies for how to use or refuse economic systems in the form of external tests in the school system.

The EAE training programme uses up-to-date expert interviews to develop holistic views on standardized testing in schools. Because the use of standardized tests in schools is developing fast and the reasons why they are implemented are shifting rapidly, the EAE training programme delivers the most current views on this topic by providing up-to-date interviews. The interviews enable the students to recognize contemporary trends, to analyze the criticism of governance by standardized tests, to learn the functions of standardized tests and to develop their own viewpoint on how standardized tests (results) should be used in practice.

In addition the EAE training programme also provides a reader (in English), through which students understand and analyze core terms of the field. Different didactical methods such as think-pair-share, role play and short lectures provide a group dynamic in which students can gain an insight into standardized tests at a macro level. Students learn what is involved in standardized tests and they develop the ability to make a critical judgement about how they will use or refuse standardized tests in schools.

The training programme is content based and includes suggestions on how the following topics can be taught successfully. The main topics are: Standardized tests (divided into internal and external tests), the cost-benefit equations of tests, outcome-orientation, controlling and accountability, liberalism, neoliberalism, teacher professionalization, educational governance, principal-agent relationship, public-choice decisions, and transactional costs. The topics are from different disciplines, thus students are required to change their perspectives continually between sociological, political, educational and economic ways of thinking.

In order to illustrate the EAE training module in detail, below I describe my experiences from the semester 2014, in which the EAE training was taught for the first time in this form. I begin with how to teach the EAE training programme. Then I explain its purpose and finally I explain the impact and limitations of the programme.

### 4 How can the EAE training programme be taught?

The EAE training programme aims to provide students with an overview of standardized testing in schools. This aim is achieved through different learning paths. The students should learn how to a) classify different test consequences, b) explain the rise in external testing and c) model a systematic overview of test consequences.

To teach such a new and changing topic the EAE training programme provides an active learning environment. It offers the students different teaching materials so that they can develop up-to-date perspectives on the topic. The training materials are comprised of two parts. Firstly, there are three different articles to enhance basic knowledge on standardized testing in schools. Secondly, there are 20 up-to-date interviews on standardized testing, to give current insights into this ever-changing topic.

To gain a foundation of knowledge on standardized tests the students read and discuss three different focus articles. With Haertels: "How is testing supposed to improve schooling?" the students become acquainted with diverse test uses (Haertel, 2013). To comprehend, why standardized testing is becoming a common method, they read Olssens and Peters: "Neoliberalism, higher education and the knowledge economy" (Olssen & Peters, 2005). To sharpen the students' awareness of governance structures through tests, the training includes Dales article: "Globalisation, knowledge economy and comparative education" (Dale, 2005). During training the students are instructed to use the think-pair-share method, so that they successfully work through the text material. To understand these articles students first consider the new content on their own, later they discuss it with one or two other students and finally share their thoughts with the class as part of a formal discussion. During this step teachers can add their opinions and clarify misunderstandings. To revise students' basic knowledge collaborative study groups are used. In small groups students prepare talks on key terms such as Educational Governance, Measurement Driven Instructions, New Public Management, Liberalism, Neoliberalism, and so on.

To enable broader insights the programme includes 20 interviews from well-known experts in the field of educational testing. With the up-to-date opinions of these 20 experts from universities and the testing industry the students actively develop a systematic overview of standardized testing. The interviews are excellent teaching aids to encounter and analyze the field of standardized testing.



In the interviews the interviewees answer the following questions:

1. What is the first thing that comes to your mind when you hear the word educational testing?
2. What do you think about state or nation-wide testing in secondary schools?
3. What do you think is the main purpose of standardized testing in the US (other country)?
4. Is there a difference between how standardized tests are supposed to work in theory and how they actually work in practice? (If yes: Why is there a difference?)
5. What do you think is the main purpose of a comparison or a ranking of student scores?
6. In an ideal world, how would you like to see standardization and testing in education used?
7. Why do you think experts conduct international comparisons like PISA or TIMMS?

The interviews are informative and diverse. The students are instructed to work in three steps through these interviews. In step 1 every student receives an interview. Using the interview worksheet they analyze the opinion of their expert. In step 2 students compare the opinions of the experts they listened to and analyse the opinion their expert gave in comparison to other experts. At the end of this step they should be able to discuss questions on different levels from their experts' point of view. In step 3 the students work together to design a systematic overview (cf. appendix). They understand, analyze and synthesize the views and explanations of the term *standardized testing* in schools as expressed by the experts.

For example interviewee 1 explains:

"Well standardized testing in schools is really an American adventure. It became popular in the United States oh 60 years ago or more in the middle of the last century. And at that point the purpose was to help teachers and administrators diagnose what students knew ... Now the main purpose of testing is to hold people accountable and to to to pressure teachers to to to to improve students to to supposedly improve students."

And interviewee 7 clarifies:

"So the first thing I'd like to see with testing is less attention to it in general. Second I think there is a serious imbalance between external-standardized testing and ahm ... and classroom-level-testing, testing for instructional improvement. A test that can be used by teachers to inform the date-to-date decisions and can be used by students themselves to see, where are meaningful expectations. So in an ideal world, I would see ... less formal classroom-tests ... And ahm the most important thing would be, the tests to be used for improvement".

And interviewee 15 highlights:

"Ahm, there is a great deal of interest in trying to learn from successes of, ah, of other nations, and, PISA and TIMMS are a way of comparing the performance of students across nations that then is a starting point for looking at what, how education is organized in different countries."

In the middle of the EAE training programme the didactical course shifts from instructional teaching to teaching through cooperative design. At the beginning the training is very article-based and concentrates on important key words such as test mechanisms, educational governance, measurement driven instruction, New Public Management and so on. After entering the subject through these methods the programme enables the students to study the field collaboratively. Arising from discussions about the experts' views in class, students work together to design a systematic, up-to-date overview of standardized testing in schools. To initiate the class discussions three key questions are asked: Which causes and consequences do your expert mention? What should standardized testing be used for? And what else does you expert emphasize?

To design these overviews students analyze and synthesize the experts' interviews. The experience shows that students identify themselves with their expert and collect different perspectives on standardized testing. They arrange their reflections in diverse headings or phrases. Together they arrange these headings in rubrics. Some results are presented in the appendix. Figure 2 shows (an example of the training) a systematic overview in progress and figure 3 (as well an example of the training) represents a final systematic overview from an EAE training module.

### 5 Why should the EAE training programme be taught?

Sociological analysts argue that neoliberal actions in the form of New Public Management techniques will remain and foster in the educational system (Dale, 2005; Olssen & Peters, 2005). Rational governance will become more meaningful in Europe and external standardized testing will occur more frequently. Therefore external standardized tests will play an important role in the teaching profession. With this development in mind the faculty of education at the University of Kiel implemented the EAE training module as part of their training programme for economics teachers, so that future teachers can handle, use and judge external standardized tests in schools.

In the last few years *New Public Management*, *Globalisation* and *Governance* changed educational procedures and in these processes many teachers in Germany faced external standardized tests. Teachers experienced different external testing processes, for example international surveys such as PISA, PIAAC, PIRLS and so on, or national tests (in Germany) such as VERA, LAU etc. or even local or state wide tests. As evaluation procedures with standardized tests are now relatively common, teachers tell diverse stories about how they experienced participating in such procedures.



They report, that sometimes these tests pass by without being noticed. Others report that test results occasionally provoked discussions between colleagues, making some teachers feel uncomfortable or others feel proud depending on how successful their students were. Occasionally teachers state that school administrations were overwhelmed by the impact of external testing on their school system. Some school administrations started to implement internal quality control groups to handle these testing processes and to evaluate the testing results and their consequences. In many cases the school administrations asked economics teachers because of their knowledge to join the quality control groups. Quantification and commodification is a core element of the economic science. What impact standardized tests should have on the educational system, is in contrary a question of value. Especially in the educational system it is a question of interpersonal value. The training attempts to provide learning opportunities how to achieve cooperative value judgments.

Although there is no standardized test specifically designed to measure economic literacy in Germany, many economics teachers are requested to lead, handle and judge external quality controls in their schools. But until now there has been no training within teacher training in the field of standardized testing. Economics teacher have an interesting position in the field of standardized testing. They are actively made participant in rational governance procedures.

### **6 Impacts and limitations of the EAE training programme**

The EAE training programme ends with an oral examination as it is of interest to see whether students can actively use their new knowledge or not. The oral examination simulates the pro and contra arguments for standardized testing in a school. The students are asked to imagine being part of this discussion and to evaluate and argue their standpoint and ultimate decision. The experience shows that students can give reasonable arguments why they chose to cooperate with a standardized test or why they refused to participate. The exam simulates situations, in which colleagues argue for standardized tests. Students have to evaluate the situation and to reason about why they choose to participate in or refuse this test. Thus far these examinations have substantiated, that most students from the EAE training module can give reasons why they either choose to take part in and use an external standardized test or why they choose to refuse to participate in it. The EAE training module enables students to learn to make well-founded decisions.

The training module professionalizes students so that they can decide autonomously. The module aims to empower prospective teachers to overcome the constraining principal-agent relationship between external test-authorities and internal test-takers. Thus, the EAE training module will enable teachers to act autonomously in situations involving compliance, monitoring and accountability.

The practical experience to date also displays the limitations of the module. As the teaching materials contain diverse perspectives on the subject, it was difficult for the students to assimilate such differing perspectives in such a short time. Due to the fact that many of the students were not well grounded in sociology and political science it was very challenging for them to understand the interdisciplinary relationships, which shape the field of standardized testing.

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**Appendix:**

Figure 2: Overview in progress (students' additions are in script print)

Effects / Function	Causes	Non intended consequences	conflicts	Concepts (also causes)
<b>Efficiency</b>	Principal-Agent Theorie	Selection	Globalization	Neoliberalism
<b>Diagnosis</b> <i>Single diagnostics</i>	Selection as aim of tests	Control	Governance	Property-Rights-Theory
<b>Selection</b>	Globalization → Technical progress allows big studies	Outcome control (without prior intention)	Lobbying	Globalization
<b>Feedback</b>	Governance	Standardizing of curricula / material	Standardized vs. holistic education	Federalism
<b>Measurement driven instruction</b>	New Public Management	Competition	Misuse	
<b>Information</b> <i>Competition arises</i>	International actors	Teaching to the test		
	Control	Narrowing the curriculum		
	Efficiency as aim	imperfect personal selection		
	Checking standardized curricula / material	<i>Evaluation deficit</i>		
	Lobbying	<i>Cheating to the test</i>		
	Information deficit	<i>Learning to the test</i>		
	<i>Accountability</i> <i>Creating competition</i>			

Figure 3: Systematic overview of standardized testing

Causes	Consequences	Test mechanism	Ideal test-attributes	Currents	Criticism
impact through globalization	justification on discourse	selection	school-specific support student specific support	globalization	no comparability in secondary schools (different Input)
government decision	providing teaching practices  improves concentration	information function: school, government, teachers, researchers, institution Educational level	restraints on purposes	neoliberalism	government uses test to
justification discourse	comparability	sorting mechanism	single diagnosis as opposed to large-scale test	new public management	doubts on test purpose
design for objectivity	teaching to the test narrowing of the curriculum	out come-control	fairness idea (observation of subgroups 1. Same test for all 2. Same design /implementation	foster research culture	fraud
cost-benefit balance	new standards (also lead to new tests)	quality assurance efficiency control		governance (?)	lobbyism of test industries
	- fraud (administrators/ teachers / students)	- incentive function			power on educational system (OECD) governance power
	- improves concentration				what are competencies?