

Quality criteria of research perceived by academics in social sciences at higher education*

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Abstract: The purpose of this study is to examine the problem of research quality in social sciences at higher education. Quality of research produced at higher education started to be questioned more often as research became the major factor determining academics' promotion and fund allocation to universities. In the study, we aimed to reveal how academics perceive research quality and what they identify as the main problems that make it difficult to achieve quality in research. Data were collected through interviews with 25 academics from 7 disciplines (educational sciences, sociology, communicational sciences, law, history, management and political science) in 7 universities. Six of the academics interviewed were professors, 7 were associate professors, 10 were assistant professors and 2 were doctors. Interviews were carried out in 2006-2007 and 2007-2008 academic years, and each lasted about one hour on average. Data collected were analyzed through content analysis. Study findings revealed that academics referred most often to methodological issues as the most important quality criterion of research, followed by issues of theoretical background and originality. Academics definitions of sub-criteria related to these were tackled in more detail in the study. As the most important hindrances that make it difficult to achieve quality in research academics mentioned lack of a long-established research culture, problems of research resources and the pressure caused by academic promotion criteria. Some recommendations related to the problems were made to develop research quality in the light of the study findings.

Key words: research quality; social sciences; higher education; academics

1. Introduction

For many years, research efficiency of universities was assessed only quantitatively, taking the number of research done in an academic year. However, quality policies becoming prevalent in the higher education sector have been effective on research activities as well as teaching. That universities' prestige has become dependent on the quality of their research activities and that academic promotion and funding were started to be arranged accordingly have increased universities' concerns about research quality. This stirred debates about what good research should look like. Furlong and Oancea (2005) identified four dimensions in assessing quality in applied and practice-based research, which were epistemic, technical, capacity building and economic. The epistemic dimension involves such sub-dimensions as trustworthiness, reliability and propriety. Technical dimension has

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more to do with the value of research to do, which is to say it should have an impact. Capacity building dimension covers the contribution of research to personal and social development. Finally, economic dimension involves such matters as cost-effectiveness, marketability and feasibility.

Along with the approaches developed to research evaluation, what quality criteria to take into account for an evaluation, in other words, what quality research should look like were also discussed by many researchers. For instance, NRC (cited in Shavelson and Towne, 2001) suggests that research should have important questions, link research to theory, use suitable and a wide range of methods, have a coherent chain of reasoning, replicate and generalize across studies and disclose research to professional scrutiny and critique. Likewise, Wiersma (2000) suggests that research should be evaluated according to its significance and quality and that quality involves to what extent the writer has a knowledge of prior research, to what extent prior research is related to the proposed research, the comprehensiveness and appropriateness of the design, the appropriateness of the instrumentation and the methodology.

Main contexts where research is evaluated are scientific journals, fund allocation processes and dissertations. When main criteria followed in these three processes are examined, some common criteria used in research evaluation appear. One of these criteria is the contribution of research to theory and practice. Research mostly aims to solve problems faced in practice. One of the most important factors determining the value of research is that its findings solve a true problem encountered in practice. Another criterion emphasized in research quality is originality. Significance and originality are quality criteria related to research content. Alongside content, quality is also related to research method, main criteria of which are the appropriateness of data collection and data analysis method, use of triangulation, reliability and validity, appropriateness of sample and population and the way they are determined.

It is no doubt meeting all these criteria in research depends on some conditions. Most importantly, qualified human resources to do research should be trained, which is why the biggest proportion of research investment is made in training researchers. Other conditions for research quality include academic and material resources, a supporting research environment and effective mechanisms to evaluate research.

When the literature of quality at higher education is examined, it is seen that the problem is mainly tackled from the aspect of education rather than research. Moreover, instructor and student quality have also been found to be topics studied in many research. Research on research activities of universities focus mostly on research efficiency, research-teaching nexus and impact of research on teaching. However, it has been noticed that literature on the quality of research is not rich enough. This study, in which components of research quality and problems which make quality difficult to achieve are studied and accordingly solutions are developed, is expected to contribute to research especially for this aspect.

2. Purpose, method and the sample group

The purpose of this study is to examine the problem of research quality in higher education defined by academics. The main question we tried to find an answer to was how academics perceive research quality and what they identify as the main problems that make it difficult to achieve quality in research. Accordingly, our main objective was to reveal the main problems about the quality issue and develop various solutions to them. Data were collected through interviews with 25 academics from 7 different disciplines of social sciences at 7 universities in Istanbul in 2006-2007 and 2007-2008 academic years. Data collected were analyzed through

content analysis within qualitative method. We did not examine interviewees academic works for quality, did not include our definition of quality of research or determine any quality criteria pertaining to research, rather we preferred to have them defined by the academics with their own expressions.

3. Findings

3.1 Academics' definition of research quality

In this study, one of the questions we tried to find an answer to was how academics defined good quality research. The findings revealed that in their definition of quality of research academics most often mentioned the importance of methodology (11/25). Being based on a sound methodology (NRC, cited in Shavelson & Towne, 2001; Ashcroft, 1995; Nachmias & Nachmias, 2000), having originality (Anderson, 1990; Lester, 1996) and reflecting a strong theoretical background (Wiersma, 2000; Vollmer, 1965; NRC, cited in Shavelson & Towne, 2001) are qualities of good research often cited in the literature. In our study, academics mentioned methodology more often than originality and theoretical background. A correct design within a strong methodology is the main pre-requisite for research to be regarded scientific. Methodology, being such a critical factor determining some basics of research from how the research problem is approached, how data are collected and how the sample group is chosen to how valid the findings and conclusions of the study will be, it is thought that interviewees think it is the primarily effective factor determining the quality of research. Within methodology, the interviewees mentioned choosing the right method and applying it correctly to solve the research question, ensuring the reliability and validity of research, limiting the research question appropriately, answering the research question satisfactorily, using triangulation to increase the validity of research findings, explaining the paradigm through which s/he approached the problem and collecting data from a sample representing the study population as the most important criteria affecting research quality. All these criteria refer to the pre-requisite conditions for research done to be scientific. Being methodologically sound is the basic condition for any study to be named a scientific research before being a high quality one. That academics most often referred to methodology as the most important criterion of quality signals that there are serious problems for this respect. As the study carried out by Hall, et al (1988) revealed there may be serious methodological problems in scientific works. In their study, Hall, et al (1988) examined 54 published educational articles for their quality and found that 42% of them were either unacceptable or needed major revision before being published. The most commonly observed shortcomings were validity and reliability of data-gathering procedures not established and research design with weaknesses. In our study, the interviewees also brought up some shortcomings related to methodology of research that they most commonly observed. According to the interviewees' opinions, most important problems about methodology are that researchers fail to ensure especially validity of research instruments and do not give detailed explanations related to reliability and validity of the study, they do not interpret SPSS results effectively and just give the reader tables of statistics, they do not use triangulation, they do not set dependent and independent variables clearly, they copy research method from others' studies as they do not feel confident at it, and they do not inform the readers about the paradigm through which they approach the research.

Other attributes of research quality mentioned were strong theoretical background (8/25) and originality (5/25). About strong theoretical background, the interviewees most often referred to the criteria as basing the study on a comprehensive literature study, sourcing the research question from the literature, interweaving the research question into the literature, and contributing to the existing literature by adding something new to it. This

last criterion referring to originality of research is especially important as it means to contribute to the development of science itself. Marshall and Rossman (1995) state that literature study serves four main functions. First of all, literature study indicates the underlying assumptions behind the research question, it demonstrates that the researcher is knowledgeable about the related research, it shows the researcher detected gaps in the literature and that his/her study will fill a need, and finally, through literature study research questions are refined and redefined within larger traditions of inquiry. Academics in our study also explained the significance of theoretical background. Among the main points they mentioned are that theoretical background ensures that we do not start from the same point each time, it provides a background for the research, helps the researcher be knowledgeable about the material that may enlighten the topic and choose a research question that will fill a gap in the literature, and it indicates the frame in which the study is placed. They add that literature study should not be isolated from the rest of the study, rather be related to the problem. Listing previous research without discussing or criticising them, not relating the previous research to the study, writing a very limited review, not mentioning new, or up-to-date research in the review are major points interviewees criticised related to literature study.

Interviewees in our study mentioned originality as another criterion of research quality and defined originality mostly (18/23) as a new topic and a new contribution to literature and practice in the field. Guetzkow, Lamont and Mallard (2004), on the other hand, found that academics in social sciences and humanities mostly referred to originality as an original approach. In their study, other references to originality were as understudied area, original topic, original theory, original method, original data and original results. Originality in research, no doubt, is vital because scientific development depends on original research. As Dawson (2005; cited in Hustadt, 2006) states there is no point in repeating the work of others and discovering studies and finding what is already known. Originality, which is in general defined as doing what has not been done before, involves producing new knowledge, evaluating prior research critically, using new research design and methods, reaching new outcomes through existing data, making new theoretical interpretations, extending existing research and bringing new insights (Peelo, 2006). As to the reasons why originality is not achieved in most research, interviewees in our study stated that researchers do not study the literature enough and that they do not know methodology well. The opinion they repeated here was that academic promotion criteria put excessive pressure on academics as a result of which they tended to produce research being concerned only with quantity. This is thought to be the biggest problem making quality difficult to achieve. One of the interviewees expressed his/her opinions regarding the issue:

Academics do researches which are in fact copies of one another as they concern more about quantity than quality. They are more concerned about the number of researches they do and the points they get. It is just rubbish research that nobody reads. (6th interviewee)

Academic pressure to publish could be interpreted as one of the major barriers to achieve originality and, therefore, quality. This also reveals academics' worries that when allocating promotion the quality of the publications is not taken into consideration, which in turn results in a quantity-focused attitude to research. This again emerges as a problem related to academic promotion criteria.

Another criterion of research quality mentioned by academics in the study was contribution of research to practice. It is interesting that only two interviewees referred to this criterion in their definition of research quality. This could be due to the fact that in social sciences putting research findings into practice requires a long, complicated and indirect process. Whether research is expected to contribute to practice is a complicated question

with no clear answer. According to Marshall and Rossman (1995), in applied fields like education, clinical psychology and management demonstrating the study's significance to policy may be especially important. On the other hand, Atkinson and Jackson (1992) claim that not every research has to bring practical uses. For education, for example, research with theoretical contribution is as valuable for the development of education as those with practical contribution.

Objectivity (1/25) and good prior planning (2/25) are also among the attributes that a quality research should have according to the study interviewees. For credibility of research it is essential that the researcher keep his/her research free of his/her own worries, biases, perceptions and preferences. The researcher, instead of acting as a party, should be able to reflect all parties' opinions equally. Objectivity in research is a part of scientific criteria and ethical norms. Research where subjective attitudes are reflected would not be considered scientific or valid. Good prior planning, on the other hand, would help the researcher achieve what problems s/he aims to solve through research. Designing the research correctly to solve the intended problems taking potential limitations of methodology, academic and material resources into consideration would help minimize problems that may arise within the research process.

3.2 Academics' reasons to do research

It is a fact that doing good research in a way depends on whether the researcher likes doing or is willing to do research. Shim, et al (1998) stated that attitude toward research directly affected research productivity and some studies (Blackburn, Behymer & Hall, 1978; Fulton & Throw, 1974; cited in Tien & Blackburn, 1996) suggest that research interest highly correlates with research performance. Therefore, that more than half of the interviewees (17/24) expressed they did research as they wanted to learn more about issues they were curious about is quite a positive finding. One of the interviewees expressed her ideas as follows:

Doing research is such an exciting process from beginning to the end; starting from asking the research question to gathering data and reaching the results: what's going to come out? It is intrinsic motivation and professional excitement.
(8th interviewee)

However, three interviewees who were assistant professors stated they did research primarily for academic promotion. This seems natural as assistant professors have a limited time for academic promotion in Turkey, but further findings of the study also revealed that academic promotion criteria put excessive pressure on academics to do research. However, this is not the case exclusively for Turkey, it seems to be a problem of the whole academia. According to Tien and Blackburn (1996), researchers frequently note academic rank and faculty research interest as two major correlates of faculty research productivity. Related to why academics do research, another question examined was how they chose their research topics. Academics most often (9/21) answered this question as curiosity. Five of them reported they research issues that they consider as problems in their field. Other reasons as to how academics chose their research topics mentioned were by reading, interaction with students, and examining their interest areas. It is no doubt that curiosity, the most important source of scientific development, contributes to intrinsic motivation. However, it was found that academics also choose research topics taking methodological constraints and the potential reaction from the academic community into consideration. One interviewee also expressed that s/he could not research some issues in his/her field as s/he felt a political pressure not to delve those taboo issues. This points out to the fact that especially in some disciplines, academics do not feel completely free to research whatever subject they want. Methodological problems, academic community's expectations and political pressures are three main constraints that seem to limit academics' freedom in their

choice of research topics.

3.3 Academics' perception of organizational support for research

Undoubtedly, doing good research requires some conditions. Academics' thoughts on this subject were also examined in order to find out what sort of support is provided by the university. As a common support, academics told about the research funds, but adding that the process is loaded with too much bureaucracy. Besides, although some academics expressed that they had a good library system, it was revealed that libraries are generally problematic as the publications are inadequate and old, and working hours are inconvenient. 6 of the 24 interviewees stated their organization had a culture supporting research. On the other hand, 7 of 24 academics answering the question stated there was no support supplied to do research. They added that factors like the lack of a research culture, time constraints, excessive teaching load, scarcity of funds needed especially to attend international conferences, poor libraries, bureaucratic issues and interpersonal problems among academics like envy and jealousy made doing research even more difficult. One of the interviewees expressed his/her ideas as follows:

There is nothing supplied to support us. There is no motivating organizational culture. They even undermine our motivation. Research is done just to get promoted, not to get problems solved. (1st interviewee)

While 6 academics (of 22) mentioned the existence of a supporting research culture in their organization as the biggest support for their research activities, more than half of them (13/22) stated there was no supporting research culture in their organization. Although material resources are important for doing research, it is thought that the most important support is an encouraging research culture. According to Shamai and Kfir (2002), administration's attitude toward research is a significant factor and the more resources research bodies have and the stronger they are, the more important the research culture will be in the college culture. Academics' perception of lack of a research culture in their organization is for sure a big obstacle impeding research. Hazelkorn (2004) described major challenges of growing research, some of which are poor institutional infrastructure, organizations not traditionally resourced for research and academic workload tensions. These three are factors commonly brought up by academics in the interviews. Doing research requires academic, material and most importantly human resources. That researchers are supplied with necessary resources for research, which is important for two aspects, one to meet academic and material needs, the other to make them feel that the administration or the institution cares about and appreciates that they are doing research. The second one, needless to say, is a great motivation for researchers.

Hazelkorn (2004) suggests that greater research time, grants, enhanced facilities, salary increases and sabbatical leave would function as incentives and rewards to grow research. These suggestions point out that supporting research is not only limited to monetary resources, but that time is also a major constraint for academics to do research. One common complaint of the interviewees in the study was that having to teach many hours and doing bureaucratic tasks took up much of their time and the only time they could find to do research was in the evenings and during summer breaks. Easing heavy teaching loads and giving sabbatical leave would create more time and opportunities for research.

3.4 Academics' perception about the extent to which academic research is utilized in practice

19 of the 23 interviewees in the study stated that academic research is not used in practice. That academic research is not utilized commonly enough is discussed in many disciplines of social sciences. As to the reasons of this problem, Biddle (1996) suggests the idea that research in social science is approached with doubt and that no

agreement can be reached among social scientists on methodological and epistemological issues. According to Osborne and Rose (1999) some philosophers of the social sciences suggest that a key feature of the natural sciences is their capacity to create phenomena, and that the social sciences do not meet this criterion. The researchers object to this idea suggesting that the social sciences can and do create phenomena, but the creation of phenomena is a complex, technically difficult and contested process and its success is rare. On the other hand, Threadgold (1985) thinks the problem is due to the lack of communication between researchers and practitioners. Most of the time, these two group of people are disconnected from each other. Hallinan (1996), for example, speaking of the educational context, argues that researchers claim that findings of their studies are ignored or misinterpreted by school personnel, while educators argue that much research is incomprehensible or irrelevant to their concerns. In our study, the interviewees attributed the problem to two main reasons, one criticizing the researchers and the other criticizing the practitioners. Criticisms of researchers mainly include the ideas that not all academic research is worth trust, that no original knowledge is produced by academic research and that quantitative concerns of academics overrule their concerns of research quality. On the other hand, responses blaming the practitioners and policy-makers involve the ideas that politicians are not capable enough to make use of academic knowledge and that they are unaware of the scientific production, that bureaucracy does not value research and scientific knowledge, that politicians usually tend to work with researchers who are of their own political view, and that politicians prefer short-term solutions to academic knowledge. Another result revealed in the study is that researchers are discouraged as they are not sure whether the research they produce is somehow used in practice. Seeing their research results utilized, they stressed, is a motivating factor to do more research. Related to this issue, Hammersley (2003) stated that researchers very often want their research to be used, to have an impact on policy and practice and they also need their research to be taken up by policy-makers and other users to be able to get fund. However, he added that the nature of research may limit the extent to which it can be translated into practice for two aspects of what he calls a dilemma. He explains the first aspect as the complexity of research findings, which can be a problem for policy-makers and other users since they generally do not have enough time to absorb lengthy and detailed research reports. The other aspect of the dilemma is that users want research findings in a particular policy direction to legitimate policy decisions already made on other grounds. This second dilemma is reflected in one interviewee's opinion in our study that politicians usually assign academics with the same political view as they are to research particular issues.

Few of the interviewees in the study stated that academic research is utilized in policy and practice. One interviewee pointed out that it is the responsibility of the researcher to communicate the findings of his/her research to the related organizations. The interviewee explained his/her ideas as follows:

If you make an effort to communicate your research, politicians would care about it. In early 90s I did a research on gender discrimination in course books and gave many conferences and opened countless exhibitions about it. Therefore, my research attracted the attention of the ministry. (20th interviewee)

This idea is reflected in the literature by Atkinson and Jackson (1992) who argue that researchers should not expect their products to improve practice from a distance. Researchers should always be in contact with practitioners in their process of understanding, interpreting and applying research findings. Building this communication between researchers and practitioners plays a key role in putting the findings of academic research into practice.

3.5 Academics' perception about the effects of academic promotion criteria on their research activities

In the study, academics' perceptions about academic promotion criteria were also examined, and it was revealed that most interviewees (18/22) perceived this negatively. Some of the negative outcomes they identified were that academics aimed quantity rather than quality in research and that research process was bureaucratized. One interviewee expressed his/her idea on the issue as follows:

To tell the truth, I found myself in such a situation... Actually, academics do research just to get points. You find yourself counting the points you will get, which results in caring more about quantity than quality. (8th interviewee)

This idea is reflected in the literature by Smith (1961) who says since promotion is dependent on publication, the academic market is flooded with poorly presented products of competent, often useful, but uninspired and uninspiring scholarship, adding that the college instructors should not be measured by an absolute and inflexible standard of publication and should not be held back or penalized if their researches do not result in publication.

Other than these, interviewees also mentioned their worries about the emphasis put on foreign language knowledge in the criteria saying that although a challenging level of foreign language knowledge is expected of academics, they are not given the chance in the university to improve their language skills. They also mentioned that this criterion caused a discrimination among academics, creating a disadvantaged class which is thought to make eventually working in the academia exclusively for a small advantaged group who had a chance to learn a foreign language. Another major concern the interviewees mentioned about promotion criteria was related to the scoring system of academic works. The interviewees commonly stated that scoring international academic works higher than those published in national journals and conferences was unfair and even insulting. Related to scoring, another drawback of promotion criteria defined by academics in our study was that academic works other than research were not deemed as valuable, therefore, administrative responsibilities and excessive hours of teaching contributed to the pressure on academics caused by the promotion criteria. Court (1999) in his research revealed that academics think research has gone too far in determining careers. More than half of the respondents in Court's (1999) study stated appointments in their institutions placed too much emphasis on research. Reducing teaching hours and administrative tasks to a reasonable level, therefore, helping academics allocate more time to research is believed to increase both research productivity and research quality.

3.6 Academics' perception about ethics issue in research

Resnik (2007) explains the reasons why it is important to adhere to ethical norms in research as to promote the aims of research like knowledge, truth and avoidance of error, to promote values essential to collaborative work, such as trust and accountability, to ensure that researchers can be held accountable to the public, to build public support for research, and to promote other social and moral values. As seen, meeting ethical norms contributes greatly to both the trustworthiness and quality of research. Therefore, ethics was included in the study as another item to be examined. One interviewee related ethics to research quality claiming:

Ethics is one criterion I take into consideration when reading a thesis as it is an indicator of the quality of the research and the researcher. (9th interviewee)

In the study, not referencing the source (18/24) was the most often mentioned ethical violation. Copying others' research, replication of prior research without adding anything new to it, making more than one publication out of one study, manipulating questionnaire outcomes, failing to choose the right method and tools, and failing to ensure confidentiality of data were among other ethics violations that academics stated they observed. The most important factor in the occurrence of these violations was defined as not taking the issue seriously enough. One interviewee pointed out the poor sanctions regarding the issue:

Sanctions are not strong enough... Those who were involved in ethical violations became doctors, associate professors, professors, and even deans. (12th interviewee)

Interviewees mentioned other factors causing ethical violations as not teaching ethics as a separate class and advisors' not controlling ethics violations in their students' thesis. Enforcing stricter sanctions on ethical violations and training both undergraduate and graduate students about ethics more effectively would help to minimize ethical violations. Resnik (2007) states researchers commit misconduct due to environmental and individual causes as when people who are morally weak, ignorant, or insensitive are placed in stressful or imperfect environments. Pressures to publish or obtain grants or contracts, career ambitions, the pursuit of profit or fame, poor supervision of students and trainees, and poor oversight of researchers encourage people to misconduct. He also adds that many of the deviations that occur in research are caused by the fact that researchers simply do not know or have never thought seriously about some of the ethical norms of research. Resnik (2007) says in such cases a course on research ethics may help to reduce the rate of ethical deviations. It is no doubt a course on ethics would help clarify the ambiguities in researchers' mind; however, besides this, adopting organizational norms to reduce ethical violations is thought to contribute to the solution as well. Organizational values and beliefs reinforcing ethical behaviour should be influenced by administrators.

4. Discussion

Academics in our study defined quality of research using mainly the criteria of strong methodology, a sound theoretical background, originality, objectivity, good prior planning and contribution to practice. Methodology, no doubt, is the backbone of a study and having a strong methodology is the most important criterion that makes a study scientific. Being free of methodological weaknesses and errors is the first and the most important condition that any study has to meet to be considered scientific before being of high quality. That interviewees emphasized methodology as the most important criterion of quality more often than others shows that they think there are serious problems about methodology. Interviewees referred to problems such as poor training of researchers, adapting methodology of positive sciences to social sciences, researchers' limiting their research activities with a few techniques that they feel confident at and that organizations publishing academic work lack effective mechanisms of checking the methodological aspects of the research they publish as the most important problems related to research methodology. Minimizing problems related to methodology is of critical importance for a healthy research production, and thereby for research quality. Moreover, social sciences embody a wide range of research methods and techniques to tackle various complicated social problems. Researcher training courses at postgraduate level should teach philosophy of science, methodology and research techniques more intensely.

Other than methodology, the interviewees referred to theoretical background and originality as other major components of research quality and related these two criteria with contribution to science. As main problems hindering originality in research, they mentioned the pressure to publish caused by academic promotion criteria and researchers' weaknesses at research methods and literature study. Besides these shortcomings, it should not be overseen that doing original research requires academic and monetary resources and maybe more importantly, an atmosphere supporting research production, signaling an established research culture. In the interviews with academics, one common problem referred to in the discussion of all problems was lack of a long-established research culture. Academics stated that the biggest problem was that there was no supportive research culture in which doing research was considered valuable. Some of the problems mainly caused by this lack of research

culture mentioned were that research process at university is bureaucratized, university is perceived as an institution mainly for teaching, that universities cannot produce quality research, high rate of ethics violations and very limited allocation of resources to research, and failing to benefit from research in practice. Feuer, Towne and Shavelson (2002) emphasize the importance of research culture pointing out that nurturing and reinforcing a scientific culture of educational research is a critical task for promoting better research and that scientific culture is a set of norms and practices including how research quality is judged. Cheetham (2007) states that research is the basis of how a university education works, it is the intellectual life blood of university staff, and he adds that research culture is the structure that gives research behaviour significance and that allows us to understand and evaluate the research activity. Therefore, lack of a research culture as perceived by academics can be considered an important problem undermining research quality. When taken realistically, although it seems the problem cannot be solved at once, it is no doubt that a few steps can be taken.

First of all, designing school curricula from primary to undergraduate level in a way to enable students to do research is one major way of solution suggested by the academics in the research. Postgraduate level is too late to start research training. Carrying out research-oriented lessons from an early age would help raise generations with questioning and critically thinking minds to lay the basis for training effective researchers. On the other hand, for undergraduate students, researching is not a very attractive process. As Garde-Hansen and Calvert (2007) mention, undergraduate students' previous learning has often involved a passive and spoon-fed approach and the transition into becoming an assessment-driven student makes research pointless to most of them. They add that students did not engage in effective research practice from the outset because higher order skills of evaluation, synthesis and reflection were not expected of them in these early days. Improving the quality of research classes, adapting research-based curricula in undergraduate courses, motivating students to collaborative studies, holding small-scale organizations where they can present and share their studies would help them feel more positive about research. Undergraduate students should be encouraged to take part in research projects led by experienced researchers. This would contribute a lot to their training as researchers.

Lack of administration's support and interest in academics' research processes as academics defined in the study can be named to be another problem in achieving research quality and productivity. Effective leadership in research is a major factor on the motivation and productivity of researchers. Glueck and Thorp (1974) concluded in their study that administrators significantly influence satisfaction. According to them, when the administrators attempt to reward the researchers, this also influences their satisfaction, which in turn induces effort on the part of researchers. Ball (2007) referring to Kotter's (1990; in Ball, 2007) argument that leadership is concerned with "constructive or adaptive change" says for academic research this might involve giving a group of people a clear vision and a clear sense of direction, trying to take them forward, as a collective and as individuals in that direction and by initiating appropriate actions. He adds engaging people in the research agenda and stimulating or enthusing them are key components. Leaders can largely influence the research activity of the faculty. Leaders in the higher education like heads of departments, deans, rectors and the higher education board should concentrate on research quality besides teaching by providing time, motivation and necessary resources.

Another finding of our study is that promotion criteria create a pressure on academics, causing them to do quick research, focusing on quantity rather than quality. One concern academics mentioned about the issue was that their work was evaluated on the basis of quantity, not quality in the promotion process and that this affected the quality of research produced negatively. Promotion criteria should be changed from quantity—based to quality—based. There are no criteria available for the evaluation of academics' publications for quality in Turkey,

and promotion is made dependent on quantity. Clear criteria of research quality should be defined by the higher education board and academic works should be evaluated according to these criteria. Bringing quality criteria into the promotion system would have an effect on the improvement of research quality. Another concern raised about promotion criteria involved the way they were organized. Academics stated that the regulation cannot be the same for different disciplines from sciences and social sciences. According to these interviewees, those working in medicine faculty are, for example, already in a laboratory environment due to the nature of their discipline, therefore, they do not need to spare extra time or energy to doing research. In contrast, in social sciences, as researching cannot be combined with the daily work going on, academics in these disciplines feel they need to allocate extra time and energy to research. Another problem creating difference between sciences and social sciences in researching involves the language issue. Academics stated that writing an article, a paper or any kind of research production requires better foreign language skills in social sciences than in natural sciences. For these reasons discussed, academics think that promotion criteria should be organized differently for social sciences and sciences. However, this is not to say that there should not be any standards developed within disciplines. Bakioglu (2001) stated that having no standard criteria for promotion might lead to injustice, unfairness and create frustration on the individuals, leading to problems in the faculty; and that in order to reach contemporary approaches, criteria must be announced, and candidates should know whether or not their efforts and publications are worth promotion; any uncertainty about this issue might be the main constraint of the quality at universities.

Another suggestion made by academics participating in our study to improve research quality and create an effective research culture was to bring an accreditation-like regulation to evaluate research. During the interviews, academics raised their concerns saying that quality of the studies is not taken into consideration in promotion juries and that even refereed journals could publish articles under minimum standards taking personal relations rather than the quality of the work into consideration. It is certain that adopting clear criteria of quality besides quantity will help keep a level of quality in the studies carried out. If the quality of works were evaluated more effectively by thesis juries, journal evaluation processes or in promotion juries, we would have a chance to read studies of higher quality.

Besides lack of an effective research culture, other main problems academics are faced with when doing research are raised as having a heavy teaching load and scarcity of necessary resources. Ball (2007) states that research and teaching are usually considered complementary in a university's *raison d'être* but they may be in conflict as time spent on one may be at the expense of the other. What the academics most commonly complained about is quite well reflected in this statement. Academics expressed that teaching is considered as their main duty in the faculty, causing research to be underestimated. Academics in the study stated that they had to teach so long hours and carry out so many bureaucratic procedures related that they had little time left for research. What's more, they added that, teaching does not count in the promotion criteria, which makes the problem even worse. This clearly reflects the problem that teaching is still considered the most important function of university and this puts research activities in a disadvantaged position. This can be considered a big risk threatening research efficiency and quality in the higher education. Jarvis (2001; in Ball, 2007) points out that research has been regarded as the essence of university. Besides teaching young people and providing them with necessary qualifications to get a job, university is also responsible for creating and disseminating knowledge. This responsibility to science and society should never be underestimated and sacrificed to teaching. Moreover, as Neumann (1992) stated doing research improves the quality of teaching as well. Similarly, Barnett (1992; in Kogan, 2004) expresses it is very important that academics teaching at higher education have time and necessary resources as researching is a way

of preparing for teaching. As to the scarcity of necessary resources, academics mentioned problems about getting funding for their research. They emphasized that it's not only that funds are too limited, but also that applying for and receiving funding involves too many bureaucratic procedures, which discourage researchers from benefiting from the funding opportunities.

Ethics as part of research quality was also examined in the study. Common view of the academics in the study was that ethical violations were not handled seriously enough and that enforcing stronger sanctions would help minimize these violations. Organizational culture embodying organizational values and beliefs is considered a big factor in ethical research behaviour as it gives expression to what is appropriate and not appropriate (Gregory, 1983; Webster, 1990; cited in Akaah, 1993). Organizational culture is believed to exert more influence on employees' behaviour than written rules and regulations (Deal & Kennedy, 1982; Peters & Waterman, 1982; Schneider, 1980; cited in Akaah, 1993). This information in the literature is reflected in academics' view that those who violate ethical principles in their studies do not receive any punishment and that they continue to be promoted. This is an organizational norm allowing, or at least not banning ethical violations. Such an organizational culture plays an important role in the increase of ethical violations.

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