WCES-2011

Postgraduate students’ and university lecturers’ views about postgraduate education in the process of educating scientist

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Abstract

The aim of this research thought as a qualitative study are to present the university lecturers’ and the doctoral students’ profiles as scientists and to determine their views about the role of postgraduate education in educating scientist process. In this context, first the answer for the question “Who is scientist?” was tried to be found and then the characteristics which should be in a scientist were examined by the point of view of both postgraduate student and lecturer. The views of both lecturers and postgraduate students about the functions of postgraduate education were also considered.

In data collection “Interview Form Related to Scientist and Postgraduate Education” prepared with the help of expert ideas is used. 10 doctoral students from each university continuing their postgraduate education in Gazi University and Ankara University in the academic year 2010-2011 and 10 lecturers were taken into interview. Data were analyzed by using descriptive analysis and content analysis methods. It is considered that the results of this research are important as it shows different meanings between the views of university lecturers and postgraduate students about the roles of postgraduate education and higher education institutes in educating scientist process.

Keywords: Higher Education, Postgraduate Student, Doctoral Student, Scientist

Introduction

1. Introduction

It is undeniable reality that developed countries are in which individuals who develop themselves gradually, adopt changing knowledge, and follow technological developments, value scientific researches and results in information era. In order to accept this reality and to be a developed country, it is necessary to grow up individuals who can answer society’s needs. Constitutions, universities and scientist are the men who grow up these individuals.

In this context, scientists’ answers to the question what specifications of the science are like this below:

Science does not accept absolute accuracy and infallible. Science is dynamic, active and productive. Skepticism is an essence in science. To analyze events and facts logically is the most important provision of the science. (Ortaş, 2002; Düztepe, 2004). Science is objective. Science and collected data from scientific research are valid for all people without differentiating people as religion, language and nation. (Ortaş, 2002). Science estimates related to the future. Science should conjecture about future events that society can come to face by starting out society’s history,
social-natural events and taking into consideration today’s conditions. (Arseven, 2001). Science is critical. Science should suspect knowledge that is not collected scientifically and opinions which are not scientific. (Ortaş, 2002).

If we try to answer the question that who the scientist is and what his/her qualifications are:

Scientist is a person who draws on intellectual and international process by toeing to the line of scientific methods. (Yetim, 1996). Scientist is a person who analyzes events and fact in cosmos, searches the secret of the cosmos, tries to understand this secret and then simplifies these secrets in order to depict to the society via publications. (Ortaş, 2004).

Scientist is the subject position of the science on how and why science is going to be done. Scientist’s attitude towards science affects his/her scientific researches directly. Thus, scientist who directs science and scientific research should have these specifications below:

Scientist is the person who thinks internationally, is objective, and has a higher ethical responsibility and foresight. So, post graduate education has a valuable importance on growing scientist. Postgraduate education is defined as an activity in order to grow up scientist and lecturer who have a postgraduate degree at universities, contribute to the knowledge via research and then meet developing society’s needs. (Demirtaşlı, 2002).

Postgraduate education in Turkey can be defined as an education and studies that formed from master and doctorate education on the basis of graduate education, proficiency studies on art branches and necessary studies in proficiency of medicine. (Postgraduate Regulations Law, Item 3). Postgraduate education contributes countries in order to reach their aims and targets. These contributions can be ordered as to grow up lecturers and researchers, to find solutions to countries’ technological economic and cultural developments. (Karakültük, 2001).

2. Aim and method

Aim of the research is to examine doctorate students’ and doctorate students’ supervisors’ expectations from higher education foundation during growing up scientist process on different point of views in Educational Science Institutions of Ankara and Gazi Universities. Study’s sub aims in the direction of general aim are below:

What are lecturers’ and doctorate students’ opinions about scientist?
What are the lecturers’ and the doctorate students’ opinions about function of the postgraduate education on the process of growing up a scientist?

In this research thought as qualitative study, the survey method was used.

2.1. Participants

Interviews are done with 10 doctorate students and 10 doctorate supervisor lecturers who were doctorate supervisors at least once before from Gazi and Ankara Universities in 2010-2011 Academic years. Students their own supervisor lecturers are not chosen in interviews; available supervisor lecturers are preferred. Participants are chosen on the basis of being volunteer. 5 of the participants are male and 5 of them are female. 5 of the participants of the lecturers are male and 5 of them female.

2.2. Data collection, data analysis and coding

By collecting data, semi-structured method is used by taken experts’ opinions. Interviews are typed to the papers and each participant is numbered without using his/her names. (For students S.1,2,3; and for lecturers L.1,2,3 are used.) Data is analyzed by content analysis.

3. Results (Findings)

Findings that obtained from the research are: Students’ opinions on scientist, Lecturers’ opinions on scientist, Opinions on postgraduate education role on growing up a scientist, Expectations from higher education foundations on growing up a scientist. These findings are dealt with in 4 dimensions above.
3.1. Students’ opinions on scientist

In order to find out students’ opinions on a scientist, ‘Who is the scientist?’ and ‘What are the qualifications of the scientist?’ questions are asked to the students. Answers taken from the students are categorized as below:

<table>
<thead>
<tr>
<th>Coding</th>
<th>n</th>
<th>Category</th>
<th>Coding</th>
<th>n</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researcher</td>
<td>1</td>
<td>Producing information related to personal development</td>
<td>Be universal</td>
<td>1</td>
<td>Social Specifications</td>
</tr>
<tr>
<td>Interrogator</td>
<td>1</td>
<td></td>
<td>Ability of sharing the research</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Producer</td>
<td>2</td>
<td>To make the society conscious</td>
<td>Contact</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Producing information related to society’s benefit</td>
<td>Courage of defense</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Research beneficial for the society</td>
<td>1</td>
<td></td>
<td>Being ethic</td>
<td>3</td>
<td>Personal Specifications</td>
</tr>
<tr>
<td>To be critical</td>
<td>2</td>
<td></td>
<td>Availability</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

As seen on the table below, students’ responses on scientist are gathered in two categories as directed to personal development and producing scientific information beneficial for the society. Opinions on the specifications of the scientist are categorized as stress to being social and individual.

Some of the students’ responses who define a scientist as a person who produce information directed to personal development are below:

S.1: “...Scientist contributes personal development by problematizing events around his/her surroundings via scientific methods.”

S.7: “Scientist should investigate the information that is gathered by his/her own knowledge and skills and then take up with this information with a critical method.”

Some of the students’ responses who define a scientist as a person who produces information for benefit of the society are below:

S.4: “Scientist should contribute both science and society by making beneficial researches especially on his/her own living geography.”

S.10: “Scientist should obey ethical standards; know that plagiarizing or forgery in researches are against to ethic.”

As seen on the table above, students convey their responses about scientist on the shape of putting forward to social and individual specifications. Whereas students who put forward scientist’s social specifications attract attention on universal and contact dimensions on research results; students who put forward to individual specifications convey on defending his/her research on each environment, accepting critics, being ethic on research behaviors.

3.2. Lecturers’ opinions on scientist

To find out lecturers’ opinions on a scientist, ‘Who is the scientist?’ and ‘What are the qualifications of the scientist?’ questions are asked to the lecturers. Gathered responses are categorized as on the table below:

<table>
<thead>
<tr>
<th>Coding</th>
<th>n</th>
<th>Category</th>
<th>Coding</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makes scientific research</td>
<td>1</td>
<td>Ethical responsibility</td>
<td>Ethical responsibility</td>
<td>3</td>
</tr>
<tr>
<td>Lectures and grows up students</td>
<td>1</td>
<td>To supply society to be conscious</td>
<td>To supply society to be conscious</td>
<td>2</td>
</tr>
<tr>
<td>Objective</td>
<td>2</td>
<td>Being open to criticize and develop himself/herself gradually</td>
<td>Being open to criticize and develop himself/herself gradually</td>
<td>2</td>
</tr>
<tr>
<td>Finds solutions for social problems</td>
<td>4</td>
<td>Expresses his/her own opinions sincerely and obviously</td>
<td>Expresses his/her own opinions sincerely and obviously</td>
<td>2</td>
</tr>
<tr>
<td>Has a higher foresight</td>
<td>2</td>
<td>Uses suitable language to be understood by everybody</td>
<td>Uses suitable language to be understood by everybody</td>
<td>1</td>
</tr>
</tbody>
</table>
As seen on the table above, lecturers convey their responses about scientist that a scientist should make scientific researches, grow up students, find solution to the social problems; be objective and have a higher foresight apart from other people. In addition, some of the participants’ opinions are like this as below:

L.2: “Scientist should be responsible for his/her research results and share this with the society…”
L.10: “Scientist should be objective, neutral and honest. S/he should work for the sake of the society nor for someone else.”

Lecturers’ opinions on “qualifications of a scientist” focus on necessity of being ethic. Moreover, lecturers think that a scientist should be frontier to make people conscious, open to be criticized, develop himself/herself continuously and convey his/her opinions obviously. Some of the opinions related to this are below:

L.3: “Scientist should be ethic and s/he makes his/her research ethically.”
L.8: “Scientist should be frontier to make his/her own living geography conscious.”

3.3. Opinions on role of postgraduate education on growing up scientist

In order to find out participants’ opinions on a scientist, ‘What is the role of postgraduate education on growing up a scientist?’ question is directed to the participants. Gathered questions’ content analysis is like this:

<table>
<thead>
<tr>
<th>Students’ Responses</th>
<th>Lecturers’ Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding n</td>
<td>Coding n</td>
</tr>
<tr>
<td>Free and scientific opinion</td>
<td>Should have a science policy</td>
</tr>
<tr>
<td>Applicable Knowledge</td>
<td>Free and scientific opinion</td>
</tr>
<tr>
<td>Study Between Disciplines</td>
<td>Planning on postgraduate education</td>
</tr>
</tbody>
</table>

As seen on the table above, students express their opinions on “Role of Postgraduate Education on Growing up Scientist” as postgraduate education should be frontier for free and scientific opinions. Knowledge should be applicable, functional and adaptable into different disciplines. Some of the participants’ opinions are below:

S.2: “Postgraduate education should push the students to think freely. If postgraduate education is not free and scientific, scientist cannot be intellectual.”
S.8: “Knowledge should be applicable. Because if we can apply knowledge on our society, we can both contribute to our society and develop ourselves by using our research result.”

Lecturers’ opinions on “Role of Postgraduate Education on Growing Scientist” focus especially on that postgraduate education should have a certain science policy. They convey that researches should be done freely and on the concept of scientific opinion. Some programs that suitable for developing conjecture should be included in postgraduate education. If we overlook participants’ opinions:

L.3: “Western societies have a science policy but unfortunately we do not have a science policy. If intellectuals, politicians desire to take place in world policy and develop the country, they should form a science policy immediately.”
L.8: “Postgraduate education should not bother people’s free desire. It should have a construction that helps the students to develop their critical thinking and understanding.”

3.4. Expectations from higher education institutions on growing up scientist

In order to find out participants’ opinions on expectations from higher education institutions on growing up scientist, ‘What are your expectations from higher education institutions on growing up scientist?’ question is directed to the participants. Gathered questions’ content analysis is like this:

<table>
<thead>
<tr>
<th>Students’ answers</th>
<th>Lecturers’ answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding N</td>
<td>Coding N</td>
</tr>
<tr>
<td>Flexible programs</td>
<td>Using sources balanced</td>
</tr>
</tbody>
</table>

As seen on the table above, students’ expectations from universities are flexible programs and quality in education while lecturers’ expectations are using sources balanced, cooperation between institutions and increasing quality in education. Some of the participants’ opinions are below:

S.3: “Increasing quality of education, using technological opportunities and supplying these to the students in each environment will be more effective doubtlessly…”

L.2: “Using in hand sources balanced is the main problem of the universities. Especially, supplying these opportunities and giving lecturers extra payments will be beneficial to get technology individually and use these opportunities in class activities.”

L.5: “Especially, cooperation with private and local institutions is very important to supply the scientist to have experience on these institutions.”

4. Results and proposals

According to gathered findings from the research, students and lecturers answered these two questions “Who is the scientist?” and “What should scientist’ specifications be?” as a scientist should make research, interrogate, open to be criticized and especially a person who solves society’s problems. Scientist’s specifications should be ethical and obvious, then supply society to be conscious. On role of postgraduate education on growing a scientist, students focus on scientific freedom, applicable knowledge, changing and creative opinions whereas lecturers reference scientific policy, foundation that open free opinion and changing.

When we analyze our research’s 3rd dimension result that is expectations from higher education institutions on growing up scientist, both doctorate students and lecturers focus on increasing education quality. What more, lecturers express their expectations as using sources balanced, cooperation between institutions. Students’ expectations are flexible programs, then.

There are a few researches on meanings of scientist according to doctorate students and lecturer both in our country and in the world. In general, there are these kinds of quantitative and qualitative researches at primary and secondary steps of education in our country. In this context, we can give some samples from the world. Rampal (1992) made a research in order to define 199 teachers’ opinions about scientist in India. A questionnaire is applied to the participants as data collection instrument. When researcher examines the questionnaire results, he confirms that teachers accept scientist as decided, clever, patient, has the skill of reaching the accurate results and a social person. It is seen that these results support our research findings as well.

Higher education institutions in which scientists grow up should make some plans to increase education quality, supply students to produce applicable information in daily life. They should take notice of growing up scientist and meet with the skills and knowledge by using a program between disciplines.

References


