Marie curie research paper example

Sociology, Poverty

Marie Curie is polish-born French physicist. She is most famous for her work on radioactivity. Besides she is twice a winner of the Nobel Prize. Together with her husband Pierre Curie and Henri Becquerel she was awarded the Nobel Prize for Physics for the first time in 1903. In 1911 she became the sole winner of the Nobel Prize for Chemistry. Thus, she became the first woman in the world history who won the Nobel Prize and the only female to win this honorable award in two different fields.

Marie Curie (born Sklodowska) was a talented, thirsty for knowledge and gifted from the very childhood. However she started to make her most valuable and meaningful discoveries together with her friend, partner and beloved husband Pierre Curie. Their marriage of July 25, 1895 became the starting point of their partnership that soon resulted in the researches of the world significance, especially the discovery of polonium (that got its name in honor of Marie's native land). Few months later radium was discovered and Marie decided " to find out if the property discovered in uranium was to be found in other matter", and " she discovered that this was true for thorium at the same time as G. C. Schmidt did". (Encyclopædia Britannica)

Marie Curie preferred to turn her attention to minerals, especially pitchblende, as it attracted her attention with its activity, which is superior to that of uranium, and could be explained " only by the presence in the ore of small quantities of an unknown substance of very high activity". (Encyclopædia Britannica) She was joined in her researches by Pierre Curie and their common work led to great discovery of such new elements as polonium and radium. While Pierre Curie mainly devoted himself to the study of the physical aspect of the new radiations, his wife put all her efforts to

obtain pure radium in its metallic state. That goal was later achieved with the help of Pierre Curie's pupil – the chemist André-Louis Debierne. Due to the results of this research Marie Curie obtained her doctorate of science (1903) and later she and her husband were awarded the Davy Medal of the Royal Society and the Nobel Prize for Physics.

After marrying Pierre Curie, Maria succeeded him as the Director of the Laboratory of Physics (the Sorbonne). In 1903 she gained the degree of the Doctor of Science. Later on, in 1906 after the death of her husband Pierre Curie Marie Curie became the Professor of General Physics (the Faculty of Sciences). Thus she became the first woman to hold this position. Besides she was appointed the Head of the Curie Laboratory (the Radium Institute, the University of Paris).

She made her early studies and researches with the help and support of her beloved husband. These researches and experiments were very often performed in poor conditions and in difficult circumstances. The existing laboratory arrangements at that time were very poor and both of them Marie and Pierre had to give a lot of lessons trying with teaching in order to earn means for their living. In 1896 Henri Becquerel discovered radioactivity and that give a huge push of inspiration to the Curies. Their brilliant analyses and researches " led to the isolation of polonium" that consequently was " named after the country of Marie's birth, and radium". (Nobelprize. org) Marie Curie made a great research in the development of the radium separation from radioactive residues mainly in the sufficient quantities. She gave them characterization alongside with the very thorough study of its properties (therapeutic qualities in particular).

Throughout her whole life Marie Curie performed an active promotion of radium usage in order to alleviate people's sufferings, especially during the World War I she entirely devoted herself to the difficult remedial work assisted by her daughter Irene. During her life she was a devoted enthusiast of her work. In the city where she was born she established a radioactivity laboratory. In 1929 she was donated with $50, 000 by the American friends of science. The money was presented by President Hoover so that Marie Curie was able to purchase radium for usage in the Warsaw laboratory. Marie Curie was a " quiet, dignified and unassuming" woman who was " held in high esteem and admiration by scientists throughout the world". (Nobelprize. org) From 1911 till her death she was a member of the Conseil du Physique Solvay. Moreover since the year 1922 Curie was a member of the Committee of Intellectual Co-operation of the League of Nations. Numerous papers published in the scientific journals recorded her works that she created: Investigations on radioactive substances (Recherches sur les Substances Radioactives), Isotopy and isotopic elements (L'Isotopie et les Eléments Isotopes) and Treatise on radioactivity (Traité de radioactivité) that already became classic.

Madame Curie was awarded numerous prizes that reflect the importance and significance of her work and researches. Marie Curie " received many honorary science, medicine and law degrees and honorary memberships of learned societies throughout the world". (Nobelprize. org) In 1903 her husband and she was awarded the Nobel Prize for Physics. They studied the spontaneous radiation, the notion that discovered by Becquerel (he and the Curies got the Nobel Prize together). In 1911 she was honored with her

second Nobel Prize (in chemistry this time) when her work in radioactivity was recognized. In 1913 together with her husband she received the Davy Medal of the Royal Society. Also in 1921 on behalf of the American women she was presented by President Harding of the United States with one gram piece of radium as the recognition of her great and valuable service to science.

In 1936 her elder daughter Iréne together with her husband Frédéric Joliot were joint recipients of the Nobel Prize for Chemistry. Her younger daughter Eve is the author of the famous biography of Marie Curie (Paris, 1938) that was translated into many languages.

It is a wise thought that in science we must be interested in things, not in persons. However without great people like Marie Curie who made many wonderful discoveries some things in science could not have been possible. Her daughter Eve wrote these words about her mother: “ The life of Marie Curie contains prodigies in such number that one would like to tell her story like a legend. She was a woman; she belonged to an oppressed nation; she was poor; she was beautiful”. (Mahanti) The powerful volcano of life summoned her from Poland – her motherland – to Paris, where she found the genius who granted her happiness and his loyal support as a husband. Together their common work “ not only gave birth to a new science and a new philosophy” but also “ provided mankind with the means of treating a dreadful disease”. (Mahanti)

Works cited:

“ The Nobel Prize in Chemistry 1911. Marie Curie”. Nobelprize. org. 08 May 2012. Available at http://www. nobelprize.

org/nobel_prizes/chemistry/laureates/1911/marie-curie-bio. html

Mahanti, Subodh. “ Marie Curie The First Woman Nobel Laureate”. 08 May 2012. Available at http://www. vigyanprasar. gov. in/scientists/MCurie. htm

“ Marie Curie”. Encyclopædia Britannica. 08 May 2012. Available at http://www. britannica. com/nobelprize/article-9028252