

E-learning in the Science of Electricity in HE in terms of Environment and Energy

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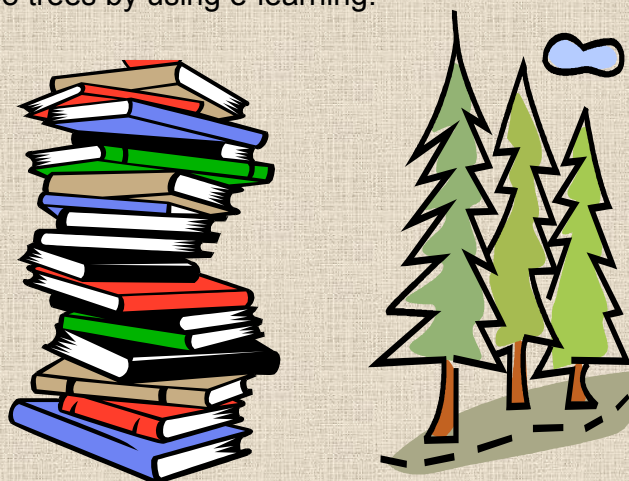
Introduction

- E-learning has impacts on environment and energy by reducing carbon footprint and energy, solving residential issues, and thus saving the planet.
- The research investigates impacts of e-learning in the science of electricity in HE in Turkey in terms of Environment and Energy



E-learning Saves the Planet

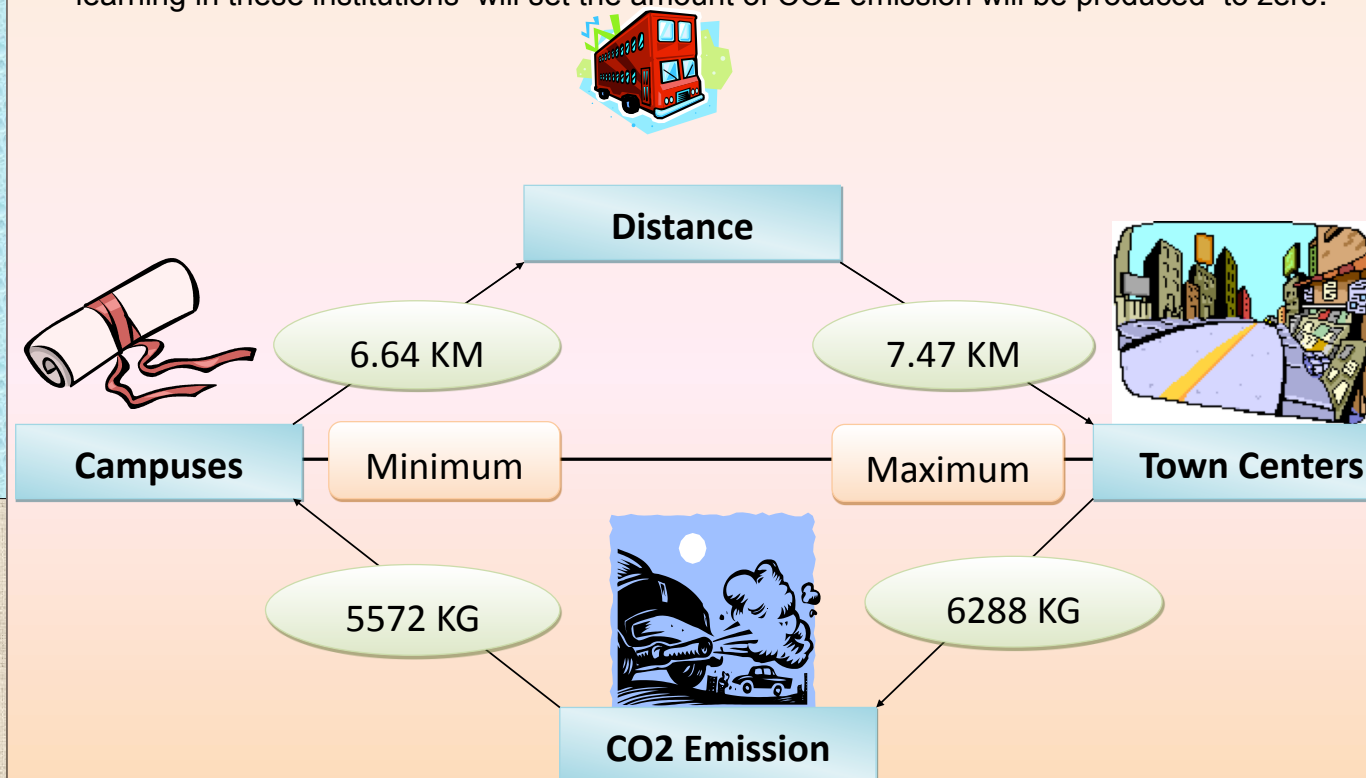
- Textbooks and notebooks are the main element of education and training in a traditional way.
- 16873 in 417 HEIs have to study 833215 textbooks.
- Additionally, the more or less the same amount of notebooks is also necessary for drawing and writing.
- We have opportunity to save $71,829 \times 2 = 143,658$ trees by using e-learning.



833215 Textbooks = 71,829 Trees

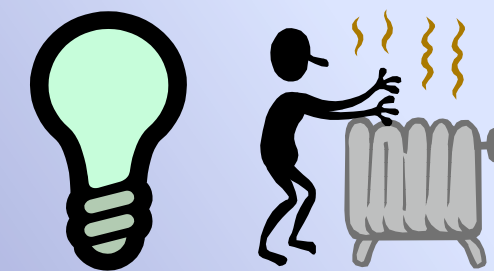
E-learning Reduces CO2 Emission

- Individuals in the HEIs associated with the science of electricity in Turkey have to travel at least 6.64 km and at most 7.47 km on average from town centres to campuses twice per a day.
- The amount of CO2 emission produced by the students' bus journeys in the 226 HEIs until they graduate will be at least 5,572.3 and at most 6288.4 kilogram CO2. Using e-learning in these institutions will set the amount of CO2 emission will be produced to zero.



E-learning Reduces Energy Consumption

- Universities are a large consumer of electricity and gas because of the usage of heating, hot water, lighting and all electrical equipment.
- 629,790-hour electrical energy needs to be consumed for lighting up their classrooms and 196,000-hour electrical energy to light up their labs.
- The more or less same amount energy should be spent to operate electrical equipment in classrooms and labs and to heat labs and classrooms.



825,790-Hour Energy

Conclusion

- E-learning obviously helps us to reduce CO2 emission, to set the usage of printed materials to zero and to reduce the consumption of energy on campuses.
- This research can change the perspective of students and teachers in the institutions associated with the science of electricity.