

Educational Content Quality Prediction for Personalised Learning Recommendations

Gábor Kismihók

TIB

Gabor.Kismihok@tib.eu

Mohammadreza Tavakoli

TIB

Reza.Tavakoli@tib.eu

ABSTRACT: This challenge focuses on Open Educational Resources (OER) quality predictions. These predictions are critical to offer high-quality learning resources effectively for learners in personalized open learning environments. In this challenge we will work together to set up an OER quality prediction framework, and prototype a quality prediction model.

Keywords: OER, educational content quality, recommender systems

1 BACKGROUND

For effective personalised learning recommendations in open learning environments, it is critical to put emphasis on the process of Open Educational Resource (OER) quality evaluation (Elias et al. 2020). This area currently receives little attention despite the fact that such quality based learning content filtering can potentially enhance the learning experience (Tavakoli et al. 2020a). This is particularly true for open learning recommender systems, which rely on vast amounts of OERs and other freely available learning content to aid learners to further educate themselves towards their desired jobs and skills (Kismihok et al. 2020, Molavi et al. 2020). Therefore learning content evaluation and filtering methods, which consider multimodality as a key feature, and assess technical quality, learning content quality, and metadata quality of open learning content (Tavakoli et al. 2020b) should receive significant attention both from researchers and practitioners alike.

2 RESEARCH QUESTIONS

For the above mentioned reasons in this challenge we address OER quality prediction in relation to an open learning recommender prototype¹ to seek an answer for the following questions:

- What are the key features of high level OER quality?
- How can we combine these features to create an automatic quality assessment model?

¹ The prototype is available here: <https://labs.tib.eu/edoer/>

3 EXPECTED OUTCOMES

As an outcome of this session we expect to create a conceptual plan (abstract-level solution) for an OER quality prediction framework, which includes the codification of the following issues:

- Potential OER features which are related to quality
- How important certain learning content quality related features are?
- How these features relate to multimodality?
- What combinations of the features (feature-set) could potentially predict the quality of OERs?
- How can required sets of features be retrieved/collected?
- How can these sets of features be measured/evaluated?
- What are the limitations of the proposed conceptual plan? And how can we face these challenges?
- What resources do we need in order to implement the conceptual plan?

If time and available resources allow, participants will be motivated to build, visualise, and evaluate a prototype of a possible prediction model.

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