

fuzzy scale. The adaptive test dynamically adapts to the affective state of the learner in series of MCQ tests.

Thus adaptive test generation is designed on the basis of affective computing, cognition level, linear regression model and fuzzy logic. The experimental results validate the proof of concept.

References

1. Ramkumar Rajendran, Sridhar Iyer, Sahana Murthy, Campbell Wilson, Judithe Sheard, "A Theory-Driven Approach to Predict Frustration in an ITS," *IEEE Transactions on Learning Technologies*, vol. 6, no. 4, pp. 378-388, Oct.-Dec. 2013, doi:10.1109/TLT.2013.31
2. B. Woolf, W. Bursleson, I. Arroyo, T. Dragon, D. Cooper, and R. Picard. Affect-aware tutors: Recognising and responding to student affect. *International Journal of Learning Technology*, 4(3/4):129164, 2009
3. R. A. Calvo and S. K. DMello. Affect detection: An interdisciplinary review of models, methods, and their applications. *IEEE Transactions on Affective Computing*, 1(1):1837, 2010
4. Ibtihal R. Assaly & Oqlah M. Smadi 2015, Using Bloom's Taxonomy to Evaluate the Cognitive Levels of Master Class Textbook's Questions, *Canadian Center of Science and Education*, Vol. 8, N 5
5. R W Picard, S Papert, W Bender, B Blumberg, C Breazeal, D Cavallo, T Machover, M Resnick, D Roy and C Strohecker, (2004), *Affective learning — a manifesto*. *BT Technology Journal* Vol 22 N 4
6. Khan, F.A., Graf, S., Weippl, E.R., & Tjoa, A.M. (2010). Identifying and Incorporating Affective States and Learning Styles in Web-based Learning Management Systems. *IxD&A*, 9-10, 85-103.
7. Khan, F.A., Graf, S., Weippl, E.R., & Tjoa, A.M. (2009). An approach for identifying affective states through behavioral patterns in web-based learning management systems. *iiWAS*.