

readers. The values to those annotating and subsequent readers are the acquisition of deep knowledge and increased reading efficiency. Furthermore, the implications of the work are that DL content grows dynamically as readers contribute knowledge, thus assisting in the development of a reading community on DLs. A more important issue is that annotated information from different readers has very high potential for value-added reading knowledge utilizing data mining techniques.

Although this work has presented several implications of the proposed tool for archiving and sharing reader knowledge in DLs, several other issues warrant further investigation. Categorizing annotations as public and private will be a significant issue in the future. Public annotations are for sharing knowledge, and private annotations can preserve personal reading outcomes for knowledge management. Providing a discussion board for comments or replies to annotations from readers can increase interaction among readers. This would also prove helpful in creating a learning community for a DL. Mining reading knowledge based on reader annotations with ratings is a potentially fruitful research direction. Finally, the Taiwan library history DL with the proposed annotation tool may benefit e-learning.

References

- Curran, K., Murray, M. and Christian, M. (2007), "Taking the information to the public through Library 2.0", *Library Hi Tech*, Vol. 25 No. 2, pp. 288-97.
- Frumkin, J. (2005), "The Wiki and the digital library", *OCLC Systems & Services*, Vol. 21 No. 1, pp. 18-22.
- Goh, D.H.L., Chua, A., Khoo, D.A., Khoo, E.B.H., Mak, E.B.T. and Ng, M.M. (2006), "A checklist for evaluating open source digital library software", *Online Information Review*, Vol. 30 No. 4, pp. 360-79.
- Hwang, W., Wang, C. and Sharples, M. (2007), "A study of multimedia annotation of web-based materials", *Computers and Education*, Vol. 48 No. 4, pp. 680-99.
- Jody, L.D. (2007), "Choosing software for a digital library", *Library Hi Tech News*, Vol. 24 Nos 9/10, pp. 19-21.
- Marshall, C. (1997), "Annotation: from paper books to the digital library", *Proceedings of the Second ACM Conference on Digital Libraries*, available at: <http://csdl.tamu.edu/~marshall/dl97.pdf>
- Ovsiannikov, I.A., Arbib, M.A. and McNeill, T.H. (1999), "Annotation technology", *International Journal of Human-Computer Studies*, Vol. 50 No. 4, pp. 329-62.
- Petri, N., Miiikka, M., Jaakko, K., Patrik, F. and Henry, T. (2005), "A shared document-based annotation tool to support learner-centred collaborative learning", *British Journal of Educational Technology*, Vol. 36 No. 5, pp. 757-70.
- Rau, P.L.P., Chen, S.H. and Chin, Y.T. (2004), "Developing web annotation tools for learners and instructors", *Interacting with Computers*, Vol. 16 No. 2, pp. 163-81.
- Tansley, R., Bass, M., Stuve, D., Branschovsky, M., Chudnov, D., McClellan, G. and Smith, M. (2003), "The DSpace institutional digital repository system: current functionality", *proceedings of the 3rd ACM/IEEE-CS Joint Conference on Digital Libraries*, pp. 87-97.

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