

score and frequency of visualization strategy usage estimation was one of only two statistically significant positive correlation coefficients in the analysis (statistical significance was reported for AE score: negative correlation coefficients for analogy, step-by-step analysis, visualization; and for RO score: positively correlated with combining strategy). This result might explain why learners scoring high in AC are more likely to ask for more control over their user interface – this might be due to their tendency for using visualization as a problem solving strategy. This can be substantiated directly: restructuring as a feature of the visualization problem solving approach is exactly what is expected when adapting the GUI. It is reported by Nussbaumer and Guerin(2000) that convergers and assimilators exhibit better visualization skills measured by Isham's visualization skills test. Since visualization is understood as a vital component in problem-solving strategy (Khattapanm and Zaidel, 2010), and knowing that only convergers and assimilators can have high AC score, the fact reported by Nussbaumer and Guerin confirms our findings.

We found that having a preference towards a GUI is associated with AC score of Kolb's model. This implies that learners with a high AC score should be offered to personalize their GUI, which could lead to improved learner satisfaction with learning experience. Learning management system should offer such a GUI adaptation feature upon learning style detection. It would be beneficial to conduct learner satisfaction and learning outcomes measurement experiments that would put our research results to further test.

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