

**KESAN INTERAKSI ATRIBUT PERSEMBAHAN MULTIMEDIA,
GAYA KOGNITIF, PERINGKAT PENGAJIAN DAN BIDANG
PENGAJIAN KE ATAS DAYA INGATAN VISUAL PELAJAR
INSTITUSI PENGAJIAN TINGGI**

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Kebenaran Mengguna

Dalam membentangkan tesis ini, bagi memenuhi syarat sepenuhnya untuk ijazah lanjutan Universiti Utara Malaysia, saya bersetuju bahawa Perpustakaan Universiti boleh secara bebas membenarkan sesiapa saja untuk memeriksa. Saya juga bersetuju bahawa penyelia saya atau jika tiada kebenaran mereka, Penolong Naib Canselor, diberi kebenaran untuk membuat salinan tesis ini dalam sebarang bentuk, sama ada keseluruhannya atau sebahagiannya, bagi tujuan kesarjanaan. Adalah dimaklumkan bahawa sebarang penyalinan atau penerbitan atau kegunaan tesis ini sama ada sepenuhnya atau sebahagian daripadanya bagi tujuan keuntungan kewangan, tidak dibenarkan kecuali setelah mendapat kebenaran bertulis. Juga dimaklumkan bahawa pengiktirafan harus diberi kepada saya dan Universiti Utara Malaysia dalam sebarang kegunaan kesarjanaan terhadap sebarang petikan daripada tesis saya.

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Abstrak

Kepelbagaian atribut persembahan multimedia menyumbang kesan positif yang berbeza kepada daya ingatan visual disebabkan faktor seperti bidang pengajian, gaya kognitif dan tahap pengajian yang berlainan. Kesan positif ini tidak dapat dioptimumkan sekiranya kombinasi faktor yang paling berkesan tidak dikenalpasti. Kajian ini bertujuan mengenal pasti kesan utama dan kesan interaksi atribut persembahan multimedia (lukisan garisan, gambar hitam putih, gambar warna, animasi, animasi-audio), gaya kognitif (bergantungan medan, bebas medan), peringkat pengajian (tahun satu, tahun tiga) dan bidang pengajian (asas lukisan, bukan asas lukisan) ke atas daya ingatan kembali visual di kalangan pelajar institusi pengajian tinggi (IPT) Malaysia. Sampel terdiri daripada 400 orang pelajar IPT. Kajian eksperimen ini menggunakan reka bentuk faktorial $5 \times 2 \times 2 \times 2$. Dapatan kajian menunjukkan kesan utama atribut persembahan multimedia, gaya kognitif, peringkat pengajian dan bidang pengajian ke atas daya ingatan kembali visual adalah signifikan. Pelajar yang menonton persembahan animasi memperoleh min skor ingatan kembali visual lebih baik berbanding atribut persembahan yang lain. Pelajar kecenderungan gaya kognitif bergantung medan didapati mengingat kembali visual lebih baik berbanding pelajar gaya kognitif bebas medan, sementara pelajar bidang pengajian bukan asas lukisan mencapai skor daya ingatan visual lebih baik berbanding pelajar bidang pengajian asas lukisan. Pelajar tahun satu pula didapati mempunyai daya ingatan visual lebih baik berbanding pelajar tahun tiga. Kesan interaksi atribut persembahan multimedia dan peringkat pengajian ke atas daya ingatan kembali visual adalah signifikan. Kesan interaksi tiga hala antara gaya kognitif, peringkat pengajian dan bidang pengajian serta interaksi antara atribut persembahan multimedia, peringkat pengajian dan bidang pengajian ke atas daya ingatan kembali visual adalah signifikan. Dapatan kajian ini menyokong keberkesanan persembahan multimedia menguatkan daya ingatan visual. Namun, atribut persembahan multimedia yang paling berkesan perlu sejajar dengan gaya kognitif bidang pengajian dan tahap pengajian pelajar agar hasil pembelajaran yang diinginkan tercapai.

Kata kunci: Atribut persembahan multimedia, Gaya kognitif, Ingatan kembali visual

Abstract

Various multimedia presentation attributes contribute different positive effect on the visual recall memory due to factors such as different cognitive style, field of study and level of study. The positive effects could not be optimised if the most effective combination of the factors is not identified. This study aimed to identify the main effects and interaction effects of multimedia presentation format or attribute (line drawing pictures, black and white pictures, colour pictures, animation, animation-audio), cognitive styles (field dependence (FD), field independence (FI), level of study (year one, year three) and field of study (art-based, non-art-based) on the visual recall among students in higher education institutions (HEIs) in Malaysia. The sample consisted of 400 year one and three university students. This experimental study used 5 x 2 x 2 x 2 factorial design. The findings showed that the main effects of format of multimedia presentation, cognitive style, level of education and field of study on visual recall were significant. The results showed that students who viewed animated presentation obtained better mean scores on visual recall than students who viewed other presentation formats. Students with FI cognitive styles were found to recall better than the FD students, while students from non-art-based field obtained better scores than students from the art-based field. Year one students were found to have better visual recall than year three students. The interaction effect of format of multimedia presentation and level of education on visual recall was significant. The three-way interaction effect between cognitive styles, level of education and field of study as well as the interaction effect between format of multimedia presentation, level of education and field of study on visual recall were significant. Findings of the study support the effectiveness of multimedia presentation in enhancing the visual recall memory. However, the most effective attribute should be aligned with the students' cognitive style, field of study and level of study so as to achieve the intended learning outcomes.

Keywords: Multimedia presentation attributes, Cognitive style, Visual recall memory

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BAB SATU

Pengenalan

1.1 Latar belakang

Semua perkara yang dilalui dan diketahui seharian akan disimpan dalam tempat penyimpanan mental yang luas dan sesetengahnya kekal lama iaitu ingatan. Ingatan ialah proses akal, proses menyimpan pengetahuan dan maklumat pembelajaran (Abd Fatah Hasan, 2001; Hamzah Mohd Daud, 1990; Cullis, Dolan, & Groves, 2002). Ingatan yang baik membolehkan kita mengenali siapa kita, benda, perkara dan aktiviti di sekeliling kita pada bila-bila masa sahaja. Proses ingatan bermula sebaik sahaja kita bangun dari tidur dan pancaindera menerima rangsangan. Ingatan menyediakan kesinambungan hidup yang penuh dengan kegembiraan dan kesedihan, pengetahuan dan kemahiran, kejayaan dan kegagalan, mengenali orang-orang di sekeliling dan tempat-tempat dalam kehidupan kita (Klein, 2002).

Ingatan diukur menerusi kaedah *explicit* (melibatkan kaedah ukuran ingatan yang jelas (dilihat) dan kaedah *implicit* (kaedah yang tersirat dengan menilai ingatan secara tidak langsung). Kaedah *explicit* mempunyai dua ukuran ingatan iaitu mengingat kembali (*recall*) dan pengecaman (*recognition*). Ukuran mengingat kembali (*recall*) memerlukan seseorang mengeluarkan kembali pengetahuan yang disimpan dalam ingatan jangka panjang (Buzan, 1991; Klein, 2002). Manusia mampu mengingat kembali antara 7 ± 2 item dalam satu masa (Miller, 1956). Ukuran mengingat kembali ini menjadi variabel bersandar dalam kajian ini.

Penyimpanan maklumat dalam ingatan terdiri daripada penyimpanan pendaftaran deria (*sensory memory*), ingatan jangka pendek (*working memory*) dan ingatan jangka panjang (*Long term memory*) (Atkinson & Shiffrin, 1968).

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