

Mental tactility: The ascendance of writing in online management education

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A qualitative study of online management education and the role of writing as an indicative measure of thinking and learning. Established educational models, such as Dale's Cone of Experience, are expanded and redeveloped to illustrate the central role of writing as a critical thinking process which appears to be increasing, rather than decreasing, with the advent of online multimedia technology. In an environment of increasing reliance on audiovisual stimulus in online education, the authors contend that tertiary educators may witness an ascendance or re-emergence of writing as central to the academic experience. This may be both supply and demand driven. Drawing on a study of two undergraduate units in the Bachelor of Commerce and applying hermeneutics to develop challenging insights, the authors present a case for educators to remain conversant with the art of teaching writing, and to promote writing to improve educational outcomes.

Key words: writing, thinking, online, management, communication, skills, words, language, cone of experience

Introduction

How can I know what I think until I see what I say? E.M. Forster

Expanding on Forster's sentiment, this paper critically addresses the issue of learning through writing. The growth of multimedia technology has elevated the awareness of audiovisual media in online learning. However, learner success in the tertiary online environment particularly requires reading or decoding and reproduction or encoding of written words. The implications of this dynamic are examined in context of Management units delivered within Deakin Studies Online (DSO), a course delivery platform. Examples of effective online writing practice are examined and analysed with reference to Dale's Cone of Experience. The concept of mental tactility, the active use and manipulation of text as a thinking tool, is presented. Supporting models and theories are also discussed. A case is made for ensuring writing remains elevated in tertiary education as a strategy and a skill to improve educational outcomes. Recommendations for enhancing online teaching practice are suggested based on analysis of the model.

Methodology

The paper describes a qualitative, interpretive study of online management education in a WebCT platform provided by Deakin University in Australia. The platform is called Deakin Studies Online (DSO). Deakin University provides all its students with online access. The authors conducted, catalogued and compiled online interactions and applied hermeneutic principles in establishing conclusions. The span of data gathering was across 2 semesters and in 2 separate management units, MMM240 and MMH299, delivered online as part of the Bachelor of Commerce. Combinations of enrolments represented included:

- On campus with access to online classroom
- Off campus with access to online classroom

The study further developed current models of education and learning with examples drawn from the period of study. New models were identified for understanding the writing process in an online environment. Implications were explored and strategies proposed for improving educator engagement with writing as a teaching and assessment tool in the academic setting.

Experience

Dale (1969; p.108) promoted experience as the greatest of educators. He believed that people remember most what they experience. It is proposed that in tertiary education the experience we most want learners

to have is academic engagement. The role of an academic is to critically process, analyse and challenge human thought. The product of a tertiary education system ought to be people who are adept at achieving this objective. The experience most defining of academia is reading and writing words. The use of words, their interpretation, their organisation, their context, meaning and implications, is critical to learning and assessment in higher education. It is an essential experience in itself. Now that online education is expanding, it may be prudent to ensure this objective does not become lost.

Multimedia capability in tertiary education is burgeoning. Audiovisual experiences are more frequent in online classrooms, and they can certainly be emotionally charged. Video grabs and animations are useful demonstration tools. However, it can be suggested such viewings are simulated experiences. Where academic learning is the primary objective, there needs to be much deeper engagement with presented material, ideally through verbal or written language that critically analyses and reprocesses the material. In the tertiary education context, wordplay is the real experience that creates the most effective learning. Watching sights and sounds is passive. Writing critically about sights, sounds or other stimulus is vitally academic and is the core of learning and assessment in higher adult education.

The models

Dale's conception of the Cone of Experience has been updated to portray the influence of online education tools. Figure 1 brings to the foreground the common practices in tertiary online education in the management units being studied.

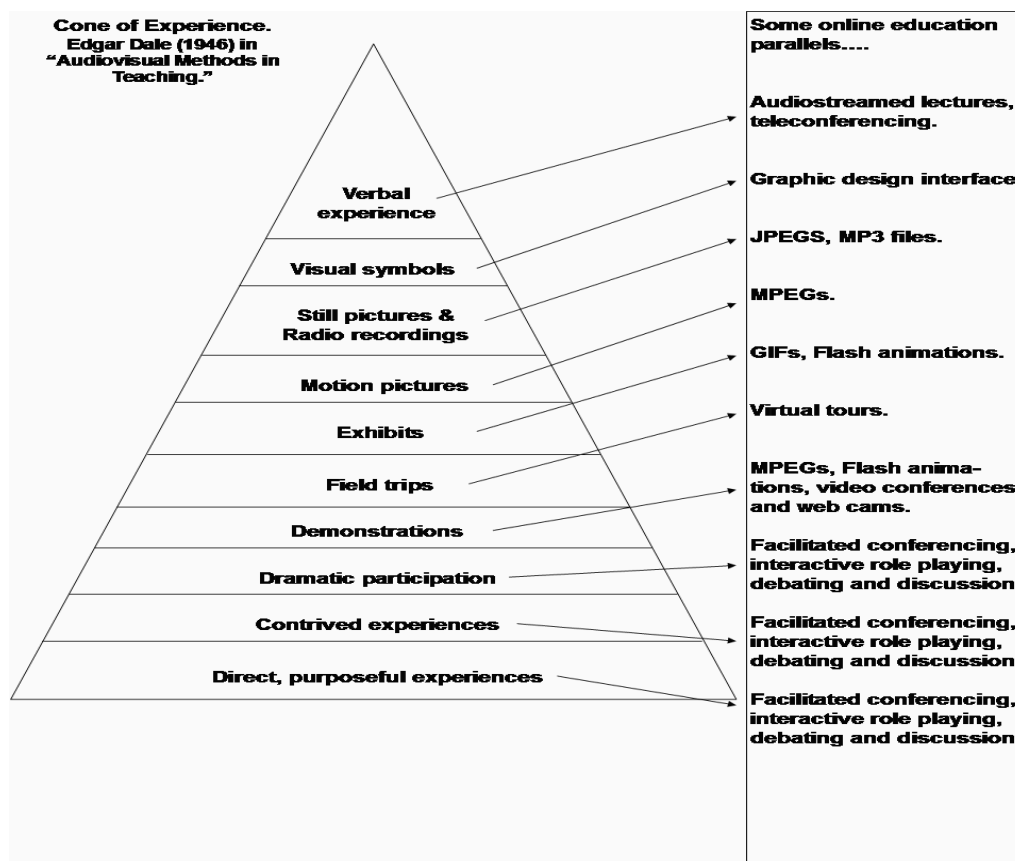


Figure 1: Foregrounding online education

The common summary of Dale's work has become:

People generally remember

- 10% of what they read
- 20% of what they hear
- 30% of what they see

- 50% of what they hear and see
- 70% of what they say or write
- 90% of what they say as they perform a task

The bottom three levels of Dale's Cone of Experience are foundational and, in the context of online education, the emphasis is heavily upon academic tools requiring active educator participation and learner demonstration of specific language capability.

The implication is that features of online management education currently receiving strong attention by developers and marketers, such as quality of the graphic design interface, multimedia exemplars, audio and video streaming, Flash animations, and other learning objects, while not without informational impact, do not have the strongest educational value unless used in conjunction with educator intervention especially requiring learners to engage with written and verbal analysis of such objects. Further, the absence of quality multimedia features in a unit may not significantly diminish educational outcomes, especially where an educator continues to engage learners in active conferencing, interactive role playing, debating, and discussion. These latter educational tools are heavily reliant upon language comprehension and manipulation skills. These conclusions appear supported by experiences in MMM240 and MMH299 where some audiovisual resources were deployed in the learning process but final assessment depended largely, and appropriately, upon written evidence of learning.

Applying Dale's cone to emphasise this issue, the authors developed a model in which the thinker is portrayed as the metaphorical worker who must use words as if hands to toil. The words must be at least proximal, certainly shaped, and persistently applied and reapplied. Metaphorically speaking, written words are hands which reach and grip and strain to achieve their task. The task is to experience mental tactility of the object of study. The method used can be complex depending on the object. The right hand needs to know what the left hand is doing. The words have to be appropriately shaped to the subject matter - to the ideas and information being considered. Words also have to be close to the subject being described. Experience is related to contact. Contact transmits understanding. This is the central theme of the paper.

Notice that the foundational levels of Dale's original cone of experience each require active participation. This equates with the aim of grasping the object with the mind of the academic thinker in our model.

The students in the units under scrutiny for this paper almost unanimously agreed that the assessment tools, which included written assignments and written examinations, were hard work. There was grappling, moulding and mental stress to be endured to write well. The task of writing continues to prove strenuous. The achievement of skilful mental tactility is rarely a revelation and frequently the result of sweat, struggle and close engagement with the subject matter. Anecdotally, the best writers in history are consensual about the hard work associated with good writing. Indeed, Bruner (1971; p.102) strikingly observes, "As between reading, listening and speaking, one falls asleep most easily reading, next most easily listening, and only with the greatest difficulty while writing or speaking."

The minor role of passive experience

In *Amusing Ourselves to Death*, Neil Postman laments that, "... Americans have moved far and fast in bringing to a close the age of the slow moving printed word, and have granted to television sovereignty over all of their institutions." (1986; p.156) Ironically, a writing environment with a TV screen seems to have re invigorated writing and reading at its most fundamental level. It just is no longer primarily on paper. The graphic media with its passive and fleeting nature that gave Mr Postman grave and legitimate concerns is quite secondary in the online learning environment.

Identifying graphic design, audiovisual tools and other multimedia objects amongst the more passive educational experiences to some resource developers and marketers seems counterintuitive. For instance, there are undeniable emotional responses elicited by good video presentations. The academic value of emotion is not realised, however, until the individual encounters, engages and transforms the emotion via intellectual analysis. Until that time, there is passive receipt and acceptance. Critical understanding of why a certain emotion is conveyed by a certain media presentation is the core of academic experience and is not generally achieved by presentation alone.

In *To Think*, Frank Smith (1992; p.125) suggests that, "... educational institutions ... should be places where relevant and worthwhile thinking is embedded in every activity of the day, not as an exercise or subject matter, but as the way things are done." Student surveys in DSO consistently show the courses where educators provide opportunities for creative writing or debate and successfully stimulate learners to engage with the material in written exchanges achieve the highest ratings for student perceptions of valuable learning. The two courses studied for this paper correspond with this observation.

The role of writing online

While not a "panacea" for commercial promoters, a platform such as WebCT is an environment that will enhance writing skills if administered to that end. The ascendancy of the word processor over the typewriter may be as significant as Gutenberg's movable type press was over lithographs but people still need to engage in the act of writing. The educational value of the online learning environment is that it is getting fast enough to respond more effectively to the psycholinguistics of what is now known as the "writing process." Students can "see what they think" quickly and revise as rapidly as if revisions were nothing more than a second thought. As an English teacher of 25 years, it is this author's experience that the clumsy encoding and text manipulation facilities of paper and pen have kept all but the most impelled or talented students from engaging in thinking through writing.

Writing is a way of thinking. In *How Writing Shapes Thinking* (1987; p 3), Langer and Applebee define the role of writing in thinking as "... resulting from combination of (1) the permanence of the written word, allowing the writer to rethink and revise over an extended period; (2) the explicitness required in writing... (3) the resources provided by conventional forms of discourse for organising and thinking through relationships among ideas; and (4) the active nature of writing, providing a medium for exploring implications entailed within otherwise unexamined assumptions."

In spite of all the possibilities being wrought by digital media, the written word dominates as the substantive experience of online learning. Pre-packaged online materials are replacing not the teacher as a mentor and guide but the lecture and the textbook. Interaction with the professor continues to be the centrepiece of education, no matter what the medium. And, of course, that interaction continues to take place on campus if they have the means and the mobility to attend a college. If not, the virtual campus has its place but not as some abstract, isolated experience. Instead, the best practice in off campus education is a simulation of classroom interaction with a pivotal central position facilitated by the Professor. Without devaluing the best kinds of off campus education, this implies that real classroom interaction may be a preferred mode of learning for many.

There is some evidence that students share this view despite the marketing hype for distance learning. In its first weeks, after \$9.5 million in expenditures, the Western Governors University had only 10 enrolments. This disappointing start for a major initiative in online education may have been due in part to embarrassing technical difficulties, but it also signals that, whatever its usefulness, distance learning is unlikely to be the panacea claimed by its commercial promoters.

Essentially writing is an "activity", not a passive experience, and it is an activity that is learned by doing. It is common knowledge that there is no difference between writers and non writers except the fact that writers write. The following framework of the writing process reminds us that the act of writing is better described as reformulation. It is a creative activity, a laborious reconstruction that reinterprets knowledge into a new understanding of the thing under review. This is essentially the academic education experience and it needs to be remembered amidst the daily bells and whistles of online education. Many pundits of writing theory agree that writing occurs within the framework illustrated in Figure 2. (Rackham, 1980)

The framework implies each section of the quadrangle affects the others in a continual interpretive and re-interpretive process. The online environment creates motivation for clear, effective writing within this paradigm like no other in the educational environment. As the frequency and maturity of the online writing shows, students are immersing themselves in the act of writing. As academics involved in teaching various content, we are not so much concerned with teaching writing unless it is directly related to the content of the course or in an effort to assist students accomplish assessment tasks. So, our excitement about the amount of writing in online learning is more about the fact that something considered a dying art is experiencing resurgence. When the objective becomes assessment of academic performance, this resurgence is increasingly relevant.

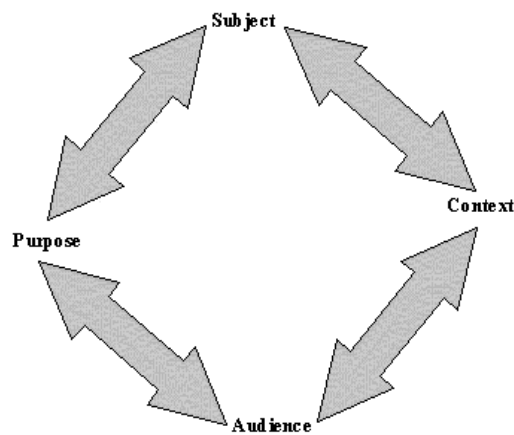


Figure 2: The active framework of writing

Dale's Cone of Experience has at its foundation, "direct, purposeful experience." This merges with the general literature on writing that says to encourage the beginner to start to write there needs to be some preconditioning. They need to expect a real world audience, have a genuine purpose to write, and have a mode in which to write. The online environment provides a useful mode. Online management education is entered into with purpose. The online classroom encourages synchronous and asynchronous discussion, which equates to an audience ready to read what the writer formulates.

Indeed, the earliest evolutions of the Internet were commonly news groups, bulletin boards and email tools. Even today, as bandwidth increases and multimedia capacity burgeons, simple textual exchanges by email and online conference tools continue to be popular. Even the most sophisticated entertainment sites still provide subscribers with textual communication interactivity. This is demand driven, even in the interactive entertainment industry. Demand for the ability to exchange written messages is further demonstrated in the growth of SMS technology utilisation. Young people especially remain interested in symbolic written communication. As a precursor for further development of writing skills and techniques, SMS is an interesting phenomenon that may warrant further study.

Tertiary adult education in the online environment enables learners to continue the development of writing skills. Even sophisticated delivery platforms such as WebCT, with accompanying multimedia technology are utilised more for their textual communication tools, like conferencing and email, than for playing or downloading audiovisual objects, although that use has increased. The point is that the educational value of a learning delivery platform continues to rest in its ability to stimulate written exchanges. Perhaps such exchanges are motivated to some extent by audiovisual stimulus, but the role of facilitator remains critical to bring it out, and the role of writing as the expression of academic analysis of the stimulus is central. The point that learners also keep demanding text driven learning tools may be worth noting.

The accessibility factor

Developers of online learning resources are increasingly aware of the centrality of text through the W3C accessibility guidelines. World Wide Web Consortium (2004). Even the most stimulating audiovisual creations must be provided online with a text alternative. This provides access advantages not just for the sensorial challenged, but also for those having technical difficulties (eg; the text alternative describes what would normally be at the broken link). Text is the foundational strut in development of multimedia online learning resources. Metaphorically, text is a programming code that underlies an audiovisual online interactivity. From an educational perspective the most adept people in online learning are those who understand the base code, take it, manipulate it, and reformulate it to demonstrate their mastery of the material.

The role of the educator and assessment

Since the online education environment provides ascendancy for the written word, the relationship between the student and online teacher is returning to a relationship between a reader and a writer. Even if

graphic and video materials are placed in the classroom, written communication must ensue to enhance and assess student understanding. Effective online teaching is much more than simply posting announcements, or sharing an emotional experience. There must be some objective processing of the event through words to elevate it into academic experience.

The type of textual interaction also appears to be important. For example, multiple choice tests compel a student to a score whereas the written analysis compels a student toward an understanding. How many students remember a multiple choice item compared to remembering details of a written piece? The point here is that the mere reading of text is but one small aspect of comprehension. It is only once what is read is reinterpreted and restructured by the thinker as a writer that valuable academic learning occurs.

Daphne Jameson discusses the conceptualisation of the reader/writer relationship in terms of textual identity, vision, and voice, and shows how these rhetorical and elements interact. She says that “even when processing a text silently readers imagine a person speaking, a linguistic consciousness. To that imagined speaker readers attribute personality, attitudes and emotions.” Knowing this, teachers of online courses who want to move their students beyond the comfort zone must express themselves in a way that is engaging toward the subject matter and inviting to the student. “If readers infer the voice of a text is pretentious or condescending, the writer reader relationship will be harmed.” (2004; p.241)

Assessment in the two units studied for this paper was predominantly by written assignments and examinations. Multiple choice was utilised for some aspects of review, which was a stimulus to thinking and memory, and students widely commented on their enjoyment of this tool for that purpose. Of course, satisfaction levels are not necessarily good indicators of learning outcomes, and the difficulty of generating blanket assessment is a general weakness plaguing this and many other studies of educational outcomes. The authors as conductors of the units endeavoured to heed the call of Frank Smith (1992) to make the classrooms places where relevant and worthwhile thinking is embedded in every activity. Constrained by university custom and policy, assessment creates a special challenge in this regard, however, the research findings suggest the ascendance of writing in the online environment may fortuitously support these ancient traditions. Writing may be resuscitating rather than receding as an assessment tool.

Additional examples

Swanson:

Most of the off campus students who study Business Communication at Deakin University are involved in paid professional work. CEOs, secretaries, aging sports figures, businessmen and even share farmers make up an overwhelming percentage of this cohort. Most of them are effective, independent learners so it seems easy to communicate as ‘knowledgeable peers’ creating a pedagogical intensity and immediacy in the online classroom. In a recent semester of 13 weeks there were 1,513 messages between about 80 students posted in the main discussion area. Students also write a journal of 1,400 words, 7 short business documents such as memos and letters, a 1000 word section of a business proposal, and also write in response to final exam questions.

On top of this, students were placed into 21 work groups of 6 members each. In the process of completing the groups’ set project, 2,772 messages were exchanged, many with attachments of substantial length. The fewest messages exchanged by any of the groups was 36, the most was 385. There was a direct correlation between those groups that wrote frequently and a high level of success in the project was a formal written business proposal. Nonetheless, the sheer amount of time spent composing messages and completing assessment tasks bodes well for students. When Janet Emig discusses the “unique correspondences between learning and writing”, she states that, “If the most efficacious learning occurs when learning is reinforced, then writing through its inherent reinforcing cycle involving hand, eye, and brain marks a uniquely powerful multi-representational mode for learning.” (1977; p.126)

Creed:

The creation of a debate in the asynchronous conferencing tool in DSO for MMM240 stimulated significant interaction by students. Pedagogically, the debate provided weekly writing practice sessions consistent with the assessment aim of developing critical analysis skills to be demonstrated in assignments and examinations.

The provision of a competition which encouraged students to critically assess company performance in the asynchronous conferencing tool aroused significant learner interaction. A prize was offered as stimulus but, pedagogically, the competition encouraged critical analysis in written form and prepared learners for written assessment tasks in MMM240.

Tracking numbers of student interactions across all online facilities in MMM240 at the conclusion of the course revealed the interpretive complexity of online education in this context. For example, if writing has to be practised to be of good quality, a reasonable hypothesis may be the students with the greatest number of words posted online might be the highest scoring on the final assessments. In general this proved to be the case, but there were occasional cases of really high scoring students who hardly ever utilised the online facility. Of course, we have not tracked those latter students and can only speculate about their writing process. Conversely, those students who did not engage at all with online discussions in all cases fell within the group that failed. This group is composed of some who simply failed to practise their writing and some who simply did not commit to completing the course.

Table 1: Implications and recommendations

| Implications | Recommendations |
|---|--|
| Educators may need to remain wary of relying on streaming audio or video for educational value in the absence of further analysis through written thought. | Think carefully during instructional design about the real educational application of audiovisual resources so as to draw learners into mental tactility with the learning objects. |
| Educators should continue to see themselves as teachers of writing, since this has been challenged in the flood of multimedia technologies. | Regardless of the tertiary discipline being taught, the teacher has to pay significant attention to helping learners engage with the writing process. |
| The quantity of writing in the online environment is a contributor to but indirect indicator of academic success. | Quantity of online words is only one measure of engagement with the writing process. Helping students with rewriting is even more important and can lead to fewer but better quality words. |
| Administrators should identify the cost of visual design in online education may need to be assessed against real educational value, especially in times of budget constraints. | When out of money remember Dale's Cone of Experience which suggests the most important mechanisms for helping learners learn are not all that expensive. |
| At the policy level, the position of writing as a core academic skill and value may need to be reiterated, especially in the face of increased vocational emphasis and competency based hiring policies in the broader economy. | If the goal of tertiary education is greater than in individual job outcome for a learner, be sure graduates have improved their writing skill, because this is the most tangible ongoing benefit for all vocations. |
| Resource developers and assessment specialists may wish to note the importance of mental tactility in this model as an indicator of achievement of academic outcomes. | Understanding writing as a craft requiring hard work, subject proximity and reworking of learning matter means the design of learning can better facilitate this tactile process. |
| The online learning environment must not be seen as the second class citizen of the traditional lecture hall. It must be recognised as a unique opportunity for many students and as a positive evolution in the delivery of educational experiences. | Online education must be designed and facilitated carefully to release its main benefits. This is the same for all kinds of traditional education. |
| All units should have an accessible, non judgemental forum for free flowing online discussion and students should be encouraged to take part in it. | Harness the generic networked power of online communication for valuable learning opportunities which rely deeply on development of written skills. |
| Online educators must be aware of the tone of their interactions with students and remain engaging and encouraging. | Avoid becoming an online educator who lacks understanding of the power of written words to offend as well as educate. |
| Online educators must strive for immediacy of feedback to student questions, assertions, and interactions. | Learners require feedback for a learning cycle to be complete. Responsive teaching can create enthusiasm for more and better writing, which leads to better student outcomes. |

Implications and recommendations

Interpretive analysis of genuine online management education experiences yields a range of practical implications which may be extrapolated to other online disciplines as general considerations (Table 1).

While this paper embraces a number of themes encountered in online teaching and learning; the role of the academic, the role of the learning community, accessibility, and the need for a variety of experiences to enhance learning, the *cantus firmus* of the paper, mental tactility with language, informs each of these aspects of online learning. The heart of the title's analogy refers to a writer's and readers distance from the ideas being encoded and decoded and how experience with writing tasks is a proven method of decreasing that distance. The danger in the online environment is that the level of chronological and technological mediation between writers and respondents has the potential to de-humanise relationships due to impersonal and delayed feedback.

Conclusions

Recent experiences in online management education have been studied and interpreted in context with educational theories especially related to the role of writing in thinking. Advocates and facilitators of online tertiary management education are cautioned to consider carefully the fundamental importance of writing as a learning and assessment tool in the midst of growing use of multimedia technologies. This caution may reasonably extend beyond merely management education.

All texts have power and "even when business prose seems ordinary, we should remember that it provides what Chatman (1978) called a rich kaleidoscope of perspectives, pre-intentions, and recollections that can influence readers in unexpected ways." The texts that results from online learning are reversing the trend away from the act of writing and embracing, requiring, and facilitating it. As pointed out in a number of areas, writing reinforces powerfully learning. Its benefits are numerous and manifold. As more students adopt online learning and more lecturers provide for the increased enrolments we should celebrate and encourage writing in the online environment. Such an educational evolution puts to rest the fears that new technologies will diminish the traditional skill of writing that creates critical, intelligent thinkers.

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