No middle ground, but many mansions: design features of effective mixed mode courses

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Abstract
In this account a model of communicative functions is used in an attempt to clarify the nature of mixed mode learning delivery. Formulated in research on communication in written mode, the model can be seen to offer insights into the nature of hypermedia communication, as well as helping to identify some key features of effective mixed mode course design. The model also suggests that blended learning should be viewed as a multiplicity of combinations rather than ‘middle ground’ in a continuum of wholesale adoption or rejection of ICT. The tentative hypotheses outlined in this paper are illustrated with reference to doctoral research on communication in written mode and reflective monitoring of mixed mode courses run at the Durban University of Technology from 2002–2006.

INTRODUCTION
The terms ‘mixed mode’ or ‘blended learning’ refer to course delivery which combines traditional classroom instruction with learning via the medium of the Internet. Mixed mode delivery is becoming more prevalent in South African universities, partly because it offers solutions to time and distance constraints, and partly in an attempt to ‘leapfrog’ over the lack of traditional resources in historically disadvantaged institutions (Nkwae 2003). While some authors represent the Internet and computers as a panacea for all educational ills (Bennet 1999), it is generally acknowledged that use of technology per se does not automatically result in more effective learning, and there is currently much interest in identifying key elements of effective mixed mode course design. The issue of quality has been dealt with in some detail, notably in the works of Reigeluth (1997) Mason (1998), Alley and Jansak (2000) and Herrington et al. (2001). However, while these authors have produced seminal works in identifying the characteristics of exemplary online courses, the field still lacks a satisfactory model of mixed mode learning, in particular, one which clarifies the nature of hypermedia communication in terms of how it might best be combined with traditional communication modes in blended learning delivery. Current models of online courses tend
to suggest how learning should take place rather than how it actually does, and the various rubrics available suggest that the effectiveness of an online course depends on its meeting certain external criteria. This does not take into consideration the fact that the same learning function may be fulfilled in a multiplicity of different ways, depending on course purpose and context.

As knowledge is generally agreed to involve the social construction of knowledge in learning interactions, it is suggested that the key to a satisfactory model of mixed mode learning lies in clarifying the nature of hypermedia communication. Spitzberg (2006) comments that one of the problems attending attempts to formulate models of CMC (i.e. computer mediated communication) competence is that there is no satisfactory model of communication. Condon and Cech (1999) conceded that their analysis of online communication was inconclusive in certain key aspects because they were unable to distinguish between features of written communication and features of Internet communication. In the interests of arriving at a satisfactory model of mixed mode delivery, this paper will attempt to address the problems noted by Spitzberg and Condon and Cech, namely:

1. the lack of a satisfactory model of communication
2. the fact that the distinction between hypermedia communication and conventional forms of communication is not clear.

A suitable model of communication might clarify more precisely how knowledge is constructed in computer mediated learning interactions, as well as offer some insight into the distinction between hypermedia communication and more conventional forms of communication. It might also provide the basis for a model of mixed mode delivery. Tentative solutions to the above problems will be presented as follows. Firstly, the formulation of the model of communicative functions will be described (Pratt 2005b). Next, an account will be given of the insights this functional model offers into the nature of written communication, followed by the implications of these for hypermedia communication. Finally, a model of blended learning (Gutteridge 2006) based on the model of communicative functions will be described, and will be used to analyse a representative sample of mixed mode courses run at the DUT (i.e. the Durban University of Technology) from 2002 to 2006. This analysis suggests that, far from being ‘middle ground’ between the pro- or anti-ICT positions, blended learning delivery offers an infinite range of possibilities, the ‘many mansions’ of the title. It is hoped that this account will help to explain why/how some mode-mix options lead to more effective learning than others, ‘effective’ being defined as the achievement of the specified learning outcomes in any given case.

THE MODEL OF COMMUNICATIVE FUNCTIONS

Doctoral research carried out at the DUT in 2005/2006 involved the formulation of a model of communication in written mode which could be used as the basis for a computer-mediated communication framework.
terised writing tutor program. Franck’s (2002) modelling process was used to postulate a system of communicative functions (i.e. theoretical model) underpinning the various communication modes. This modelling process employs a type of reverse engineering, or classical induction, to arrive the system of functions underpinning a social process (Franck 2002, 141). The theoretical model thus formulated is validated by means of an empirical model, which is compared with ‘real life’ social functioning. As the methodology used has been dealt with in some detail in previous accounts (see Pratt 2005b), here the emphasis will be on what insights the system of functions offers into hypermedia communication, particularly blended delivery. As shown in Figure 1, communication must be contextualised, which then both frames and drives the interaction. The latter generates ideational content, which has a social loading, the process being regulated by the reflexive function. This ‘architecture of functions’ is thought to describe the prerequisites for successful communication, and is what Franck terms a ‘theoretical model’ (Franck 2002, 245–248). According to Bhaskar, a theory is ‘a model conceived, and meant to be taken as true; i.e. a model in which the entities posited and mechanisms described are conceived as real’ (Bhaskar 1978, 192). In these terms the system of communicative functions is then a true theory, or model with ‘existential commitment’, as the functions can be seen to be carried out in actual instances of communication. In Franck’s modelling process the formal aspect of the mechanism lies in the system of functions, the applied aspect takes the form of an empirical model.

While one can hypothesise a theoretical model of communication in the abstract, the empirical models would necessarily be of its manifestations in the various modes (e.g. speech, writing, nonverbal communication, and so on). The contingent circumstances attending various specific instances of communication can be viewed as determining the choice of mode. In modelling terms, input into the system of communicative functions gives rise to different output in the form of the various modes (see Figure 2). The three key contingent factors appear to be the degree (and type) of distancing involved,
the code used (e.g. verbal, nonverbal) and the recording template (if any) used to overcome distance constraints. For example, communication using verbal code recorded on a two-dimensional template (e.g. a page) to an interlocutor who is geographically separated (spatial distancing) and will not receive the message until later (temporal distancing) ends up being by necessity in written mode. If one goes down a level in the systems (i.e. operating within the modes), further input in the form of the medium used can be seen to result in the various communication genres, for example, a letter or an email, both genres being in written mode, but taking a different form. This bears out Nellhaus’ (1996) contention that it is the ‘materiality of discourse’ – the material form which the interaction takes – which influences its various manifestations, and not social forces alone.

**COMMUNICATION IN WRITTEN MODE**

Communication in written mode can be seen to be underpinned by the system of communicative functions, which, however, have become adapted in response to specific input (i.e. distancing and choice of code and recording template) into the communicative system, in terms of the following:

- the separation of the communicative functions into distinct phases,
- the absorption of part of the ideational phase into the contextual phase, and
- the modification of the generally-applicable communicative functions into the specialised composing processes noted by teachers and researchers.
The form taken by communication in written mode is a temporally and spatially distanced interaction by proxy mediated by verbal text and usually occurring in a complex series of stages. During these stages the crafting of the verbal text takes place, the degree of crafting being determined by the extent of distancing involved. The composing system shown in the empirical model (Figure 3) can be viewed as the social mechanism effecting communication in written mode, where the material form of production, code and type of distancing results in the complex series of recursive stages observed by composition researchers. Internal variation can be seen to result from the fact that the system is infinitely open-ended and flexible, with the output of each stage affecting the performance of subsequent stages. A distinction can then be made between the operation of a generalised social function in composing (i.e. editing) and social factors which form input in specific instances of composing (i.e. contingent social factors). The operation of social factors both intra- and extra-systemically explains the current focus of researchers and teachers on social aspects of composing.
The infinite permutations and combinations afforded by internal variation as well as variable external input explains why composing have previously been considered too idiosyncratic to categorise.

The issue of synchronicity/asynchronicity has consequences for the performance of the communicative functions. For example, asynchronicity hinders the performance of the reflexive function, and hence, the maintenance of the interaction. But then again, so do other forms of distancing, such as spatial, and to categorise speech as ‘synchronous’ and writing as ‘asynchronous’ is considered to set in place a misleading dichotomy (see Tannen 1984, 21) which does not do justice to the range of genres available. For example, speech can be distanced and/or asynchronous, and writing can be immediate and synchronous – or distanced and synchronous, with none of these instances being a particularly special case. The reality is that the levels of complexity involved go beyond a linear continuum. Figure 4 shows only a small sample of communicative genres along only two axes, synchronous/asynchronous and virtual/actual (‘film’ and ‘broadcast lecture’ being problematic). Even this small sample illustrates that actual genres which might be viewed as mirror images in virtual form are in fact very different qualitatively. Immediacy – as opposed to distancing – should not automatically be equated with intimacy. Moreover, while ‘asynchronous’ suggests distancing, the synchronous genres in the virtual sector are of mixed quality in terms of being user-friendly and familiar.

The synchronous/asynchronous dichotomy also obscures some of the distance issues impacting on hypermedia communication, for example, the difficulties speakers experi-
ence presenting in discussion rooms at virtual conferences, technically ‘synchronous communication’, but often a daunting experience for presenters. An application of the system of functions to various instances of communication suggests that it is the degree and type of separation involved which affect the operation of the functions rather than mere synchronicity or asynchronicity. This may account for the anomalies provided by very formal speech or very casual writing, which cannot be fitted into stock generalisations about orality and literacy and contribute to the difficulty of establishing an oral/literate continuum (cf. Tannen 1982, 1984). At least three types of distancing can be seen to have impact on the way in which the communicative functions are carried out: temporal, spatial and valence distancing. The term ‘valence’ signifies the expected value of work outcomes (Fielding 1993, 39–40), and is used here for the value-loading of communicative outcomes, for example, on religious or formal occasions, or situations which are considered crucial turning points in life, such as marriage proposals or job interviews. This adds its own kind of distancing to interactions, and usually stimulates heightened rehearsal and review in the form of mental interactions-by-proxy before and after the critical moment.

Considering the implications of different kinds of distancing for hypermedia communication suggests that use of the Internet in education, commonly perceived as a ‘distance’ option, may in fact – paradoxically – be more ‘immediate’ than the on-campus education taking place in large institutions. This is because massed student numbers also cause a type of distancing. Before the advent of web-based learning most educational institutions were in fact using distanced communication modes by use of textbooks, notes and written examinations. These were not used merely because of the spatial and temporal distancing of those communicating, but because it was not feasible for teachers to deal with large numbers of students in an immediate capacity. ‘Massification’, then, can also be seen to act as a distancing factor. Large numbers also add the distancing effect of formality (i.e. valence distance), as in mass lecture situations. An online classroom with discussion forum or email for students in a large group can create a sense of intimacy and immediacy and offer far more opportunities for one-on-one communication than a ‘live’ mass lecture. Moreover, online quizzes and self-tests can give individual students far more personal attention in the form of detailed feedback than a teacher is capable of in an actual classroom.

**IMPLICATIONS FOR HYPERMEDIA COMMUNICATION**

While the models described above were not intended to provide a comprehensive field theory of communication or composition, they do throw some light on the apparent anomalies and offer tentative solutions. Firstly, the model of composing not only highlights the similarities between hard print writing and electronic writing, it also reveals some significant differences, because, while the same communicative functions must be performed in electronic writing as in hard print, the electronic medium adds its own flavour, enhancements and problems to the interaction. Next, because knowledge is
constructed in interactions, the system of communicative functions provides a principle which suggests how knowledge might be constructed in learning interactions, that is, a course design principle (Pratt 2005a, 138). This principle makes it possible to analyse or evaluate courses in terms of whether learning is likely to take place rather than in terms of what type of learning is considered desirable (Pratt 2005a, 141).

The key commonality between hard print writing and electronic writing is the complex recursive process in which the communicative functions are carried out in ways idiosyncratic to writing (see Figure 3). However, writing in electronic mode is more like a conversation than a hard text exchange in terms of offering the option for immediate feedback, with a resultant reduction in formality and reduced message content, as the writer does not have to re-explain the context each time, and the email envelope removes the necessity to write headings. The reflexive function can therefore be performed more effectively in email than in letter post: this moves the interaction forward, and, as a result, ideas are generated more effectively, apart from the fact that the message is now pruned of the deadwood of superfluous contextual details. Because the interaction is more like a conversation, the social function becomes easier to negotiate: SMS abbreviations, lower case punctuation and slang do not necessarily socially compromise an email message as they might a letter. The effects of Internet communication are not always positive, however. The very speed of the ‘instant send’ adds its own perils in terms of sending incorrect or unedited messages or, in retrospect, things which would have been better left unsaid, and our email inboxes overflow daily with unnecessary messages. The almost overnight effect of SMS messaging on the social function in terms of what some critics would consider mangled orthography is another case in point. Mobile phones enjoy overwhelming support over computer discussion rooms for voice messages, as the former are more user-friendly, economical and convenient.

The course design principle suggested by the system of communicative functions is as follows:

• **Contextual**: This function relates to the social context in which knowledge is constructed, and requires the course designer to decide how learning is to be contextualised.

• **Ideational**: This function relates to the source of the knowledge to be constructed, or the process whereby knowledge actually comes into being (it also raises the question of course content).

• **Interactive**: As knowledge is constructed in learning interactions (including interactions with resources), the course designer needs to anticipate how participants will interact in constructing knowledge.

• **Social**: The social parameters, conventions or constraints operating in a given learning situation need to be identified and made explicit to learners, particularly in respect of local assessment criteria.

• **Reflexive**: This relates to how participants will reflect on and assess their performance in constructing knowledge, and includes the issue of formal assessment (if any) and how it will be carried out, as well as course assessment (Pratt 2005a, 138).
Many of the above elements are echoed in the literature on online learning. For example, Jonassen (n.d.) uses the terms ‘active’, ‘constructive’, ‘collaborative’, ‘contextual’ and ‘reflective’, but they have not until now been identified as the functions necessary for constructing knowledge. The advantage of using such a generalised system to analyse mixed mode courses is that it does not place value judgements on how knowledge should be constructed, which means that it can be applied to courses within any paradigm or orientation.

A MODEL OF BLENDED LEARNING

The empirical model of blended learning delivery developed by my colleague, Rob Gutteridge (see Table 1), is based on the above design principle, and shows the various ‘blend effects’ which may be ‘complementary, compensatory or enhancing influences’ (Pratt and Gutteridge 2006). The intention is not to arrive at a ‘middle road’, but to exploit the strengths of each delivery mode as well as the combined force of various elements. It might help to set eLearning in context to note that a ‘web’ can involve many of the genres contained in Figure 4. A website is therefore not just a case of multimedia or hypermedia in terms of medium, but a ‘cluster’ or web of genres, and the web serves the same purpose as a classroom or college in being a delivery system. The term ‘web-based learning’, then, is not so much about the medium used, but about exploiting the potential of the delivery system it affords. A similar cluster system works in traditional teaching, which relies more heavily on distanced genres than is generally realized. In blended delivery we have a new cluster system comprising elements of both. The success of blended delivery, then, does not depend on any one formula or rubric, but on how effectively elements of each cluster (i.e. traditional and web-based) are integrated so as to complement each other in the new cluster system. The resulting educational habitats are constructed with elements from different temporal strata, as with a college building constructed out of a mixture of traditional and modern materials. The success of such habitats depends entirely on how successfully the elements are blended in terms of the desired effect. There is therefore no middle ground, or ‘ideal home’, but the intriguing possibility of ‘many mansions’.

Table 1: Gutteridge’s empirical model of blended learning

<table>
<thead>
<tr>
<th>BLENDING DELIVERY</th>
<th>Functions</th>
<th>Traditional delivery</th>
<th>Blend effects</th>
<th>eLearning delivery</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>contextual</td>
<td>Actual classroom</td>
<td>&lt;- comfort zone outer limits -&gt;</td>
<td>Virtual classroom</td>
<td>contextual</td>
<td></td>
</tr>
<tr>
<td>ideational</td>
<td>Oral/written texts</td>
<td>&lt;- limited resources unlimited resources -&gt;</td>
<td>Hypermedia texts [but: online discussion rooms]</td>
<td>ideational</td>
<td></td>
</tr>
</tbody>
</table>
As an analysis of courses using the design principle has been explored in some detail in previous papers (see Pratt 2005a), I shall highlight the key elements which appear to have made some of our mixed mode courses effective in terms of their intended purpose and context, attempting to identify the learning functions which have been most enhanced or emphasised by blended delivery (see Table 1). While the interactive function appears to have been most enhanced, it can be seen that other functions also feature. The following courses were selected because they are representative types: a staff induction workshop, a first year diploma course, a research module, a masters degree course, a learning resource website, and an undergraduate course. The courses have very different contexts, target groups and outcomes, and the functions necessary for learning are performed very differently, illustrating the versatility of Gutteridge’s model.

![Diagram of multiple interactions in Comm. Skills Online](image)

**Figure 5:** The system of multiple interactions in Comm. Skills Online.
WebCT for Dummies, ostensibly a ‘live’ workshop, introduces web-based learning to what is usually a very mixed-technical-ability learner group (i.e. teachers) by presenting them with a web habitat which they may enter while in an actual classroom. This means that, once the initial skills have been grasped, learners may explore virtual space at will, able to move back into the ‘actual’ habitat of the physical classroom to interact with the real teacher when help is needed. Even the initial skills are learned largely experientially by a kind of open-ended programmed learning, so that the technically advanced learners do not become bored. This kind of inspired multitasking on the part of both teacher and learner would not be possible without the distance potential of the Internet, which sets learners free to learn in their own space. Live instructor support is immediately available, however, as the course is set within the matrix of a real classroom for the duration of the workshop, with the bonus that learners may continue to explore the virtual habitat afterwards. The interactive function is enhanced here in ways which make it possible to accommodate the needs of a very diverse learner group, predominantly mature educators who might be threatened by the technology involved. But it must also be noted that the social function performed by the term ‘Dummies’ relaxes the atmosphere and makes the workshop something of a romp rather than an ordeal. Judged by any rubric, the online component of WebCT for Dummies would not be considered remarkable: judged on the overall effect, it is usually a runaway success, and has been used in the DUT Pioneers Staff Induction course and in outside workshops.

The CALT Research Module was designed as a prerequisite course for the coursework Masters in Language Practice, CALT (i.e. Computer Assisted Language Teaching). The module exploits the ideational potential of the Internet by showing students that most resources reside not within their research supervisor, but online, which frees the supervisor for consultation and makes the lecturer/student relationship more collaborative. The result is to expedite the development of students as independent learners and researchers, and to prepare them for the online aspect of the masters course, CALT Online. The latter would not score high on rubrics, as the web-based component is merely a communication nexus and platform for informing students of academic requirements, which is all that is required at this stage of the degree.

The ‘course’ ditcom would probably fail any rubric criteria outright, as it merely offers online resources to all of our Communication students, and does not pretend to be a course, containing hyperlinked Course Notes, Learner Guides, Communication facilities and a number of different learning resources ranging from website addresses, through revision slides and self-tests to virtual lectures using Vox Proxy (see Chandler 2003). Its purpose is to make Internet resources available to all students without their necessarily being registered in a specific mixed mode programme. The enhanced communicative facilities of the Internet help to bridge the gap caused by the geographical separation of seven campuses and the ‘mass’ distancing of a large student population. The learning functions thereby enhanced are mainly the ideational and interactive, in making quality resources available to all students and facilitating one-on-one communication with lecturers and peers.
*Comm. Skills Online*, used with our undergraduate Communication courses wherever possible, exploits much of the potential offered by blended learning. Here the focus will be on the ways the performance of the interactive function is enhanced and exploited by use of both group and individual work. Before integrated project work was recurruculated for mixed mode delivery, the small-group interactions of project teams not only involved students in more communication and active problem-solving than that offered by teacher/student interactions, but also acted as a deliberate distancing technique in terms of setting up multiple habitats for learning. This set the teacher free to facilitate learning more effectively, and scaffolded learning by having it supported by peers. It also ensured that learning continued after hours, and was no longer situated only ‘in’ the classroom. The main benefit, however, was that learning was enhanced by multiple learning interactions at different levels. The course was recurruculated for blended learning as it was thought that interactions with/via the Internet would enhance intellectual development, provided that academic themes were involved. According to Taylor (2006), we make sense of reality by enfolding the universe within our consciousness, and interaction with the Internet can be viewed as facilitating this process. As Figure 5 suggests, the result is that the interactive function is heightened and scaffolded in a kind of nested system: lecturer/students in the whole group, students/students in small groups, and students/the Internet, in individual browsing.

**CONCLUSION**

What I have attempted to demonstrate in this account is that the model of communicative functions has been used in two ways to clarify the nature of blended learning. Firstly, it has provided some insight into the nature of hypermedia communication: in particular, it has helped to distinguish between Internet communication and written (i.e. hard print) communication by showing how similar functions are carried out in different ways (and with different effects) in each medium. Next, the system of communicative functions has provided a course design principle outlining felicity conditions for effective course delivery. In other words, it suggests the prerequisites for effective course design, but the ultimate assessment of effectiveness is left up to the participants (teacher and students) to decide. The design principle is descriptive rather than value-laden, and thus can be adapted to suit the specific local values operating in a given learning situation. It is thus well-suited for use in multicultural educational contexts. It must be remembered, however, that the model of blended learning is work-in-progress, and may still be refined further in the course of the master’s research project in which it features (see Pratt and Gutteridge 2006). Its use in analysing a representative sample of mixed mode courses should help to demonstrate that blended learning is not just a mix of ‘some lessons on the Internet, some in the classroom’ with a postulated ideal mean between the delivery modes. It is rather a complex networking of the functions needed for learning, and course designers need to exploit the potential of the blend very carefully in terms of intended purpose and context. The Internet, while it provides...
a form of distanced interaction, has great cohesive and communicative potential, and can be used to bridge not only the distance caused by massed classes and separated campuses, but also the educational gap cause by lack of resources and under-prepared learners. Moreover, it can promote social cohesion in a multicultural student body by encouraging a global networking process. There are, of course, certain caveats: in *Comm. Skills Online*, for example, classes with time scheduled in tutorial rooms for face-to-face small-group work appear to achieve better results than classes run entirely in Computer labs. This is because the ‘multiple learning interactions at different levels’ are curtailed by learners retreating too far into inner space: the very seductiveness of the Internet as medium can as easily draw students away from academic learning as into it. Finally, it must be remembered that it is good course design which promotes learning, and not the Internet per se. Knowledge is a social construct, and while higher education stresses the intellectual development of the individual, this needs to be done in ways which are socially embedded and socially relevant if society is to be transformed by the agency of individuals. The model of mixed mode learning described in this account, while attempting to capture the effects of blending hypermedia with traditional communication, is primarily a social mechanism representing learning as a social process, which is why its use in mixed mode course design is recommended.

References


