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An investigation of the Consulting Styles of Training Planning Specialists in a Government Sponsored Training Consulting Service

Thomas Gram
Mariela Tovar

Abstract: In 1986 the Ministry of Skills Development in the province of Ontario launched 'Ontario's Training Strategy' to help companies and organizations use training as a strategic tool for economic success. A major component of the program is the 'Training Consulting Service' which provides advice and expertise to organizations in the area of training and human resource planning and implementation. The Training Consulting Service is staffed by training consultants skilled in training planning and design at offices across Ontario. A study was conducted to determine the consultation styles of the training consultants working within the Training Consultlng Service. A Training Consultation Style Survey was sent to all training consultants whlch required them to indicate their likely behavioral responses to a series of typical consulting scenarios. Responses were categorized into three different consulting approaches or "styles'; product orientation, prescriptive orientation, and process orientation. Results Indicated a mixed use of consulting style with a tendency towards process oriented consulting except in the evaluation phase of consultation and when clients are perceived to have training experience. In these conditions product oriented consulting dominates.

Resume: En 1986, le Ministry of Skills Development en Ontario lança une strategie de formation pour aider les compagnies et les organisations à se servir de ta formation comme un instrument strategique pour la reussite economique. Une piece majeure de ce programme est le Training Consulting Service qui fournit un consell et une competence aux organisations en ce qui concerne la formation, l'execution et la planification des ressources humaines. Le Training Consulting Service se compose de conseillers qualifies habiles dans le domaine de la formation, de la planification, et de l'elaboration a travers l'Ontario. Une etude s'est tenue pour determiner les genres de consultation utilises par des conseillers qualifies travaillant au Training Consulting Service. Un sondage Training Consultation Style fut envoye à tous les conseillers qualifies leur demandant d'indiquer leurs comportements plausibles à des scenarios typiques de consultation. Les reponses furent classees par categories de trois façons differentes ou "genres" de consultation: une orientation de resultat, une orientation normative, et une orientation de methode. Les resultats indiquent un emploi variable envers un genre de consultation et une tendance envers une consultation d'orientation methodologique, sauf lors de la periode d'evaluation consultative et lorsque les clients ont une pratique de formation. One voit la predomlnance d'un resultat oriente consultatif dans ces circonstances.

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Interest in the consultation process as it applies in instructionaldesign has grown over the past several years, Authors have begun to point to the need for more research in the area (Durzo et al 1979; Rutt, 1980; 1984; Hedberg, 1980) and professional associations have recognized the importance of "consulting skills" as a key competency area for the profession (Nadler, 1980; Bratton, 1984; Deden-Parker, 1979; Schiffman, 1986). With the recent interest in consulting as a profession, there has been renewed interest in consulting approaches to instructional design in the training field (e.g., Phillips & Shaw, 1989; Champion, Kiel, & McLendon, 1990). In general, there seems to be an increased recognition that application of the instructional design process does not necessarily guarantee an appropriateand successful solution to an instructional problem. The human system, specifically the consulting relationship, must also be fully considered (Davies, 1976, 1979; Rutt, 1984).

If we are to effectively apply the instructional design process we must understand the consulting relationship in which it is practiced. One aspect of the consulting relationship that previous research suggests influences the instructional design process is the consulting style of the ID practitioner. The purpose of the study described in this article was to investigate the consulting style used by training specialists working in a very specific environment: the 'Training Consulting Service" provided by the Ontario government to businesses in Ontario. This service is part of the "Ontario's Training Strategy," a series of programs designed by the Ministry of Skills Development to provide advice and expertise to organizations in the area of training and human resources planning.

The Consultation Process and Instructional Design

Consulting is a general classification which includes thevariousstrategies and tactics used for establishing a helping relationship (Rutt, 1980). Authors from different disciplines (psychology, organizational development, counselling, management) have suggested definitions of consulting (Gallessich, 1974; Caplan, 1970; Schien, 1988; Block, 1981).

Steele (1976) defines consulting as ". . .any form of providing help on the content, process or structure of a task or series of tasks where the consultant is not actually responsible for doing the task but is helping those who are" (pp. 2-3). Bell and Nadler (1985) concur that consultation is fundamentally the act of helping but add that it is in fact a two way process of seeking, giving and receiving help: "It is the provision of information or help by a professional helper (consultant) to a help-needing person or system (client) in the context of a voluntary, temporary relationship which is mutually advantageous" (pp. l-2). Both Steele and Bell and Nadler emphasize that consultation is aimed at some improvement in the future functioning of the client system rather than simply at getting the immediate task completed.

Given these definitions, we can consider instructional designers working in education or training as consultants. Consulting may not be a strict occupational role, but rather a function that can be applied within various

occupational capacities (Lippitt, 1985). The instructional designer usually works in conjunction with a subject matter expert (SME) on an instructional problem. Designers also help managers of ***client*** departments analyze and solve human performance problems and make recommendations for appropriate training or non-training remedies. They can then assist in the implementation and evaluation of whatever solution is recommended (Laird, 1985). In all of the above cases designers provide help in the context of a temporary and mutually advantageous relationship as defined by Bell and Nadler (1985). The application of the instructional design process whether provided by internal or external consultants involves the development of a ***consulting relationship*** with a client or client system.

Models of Consulting

Given that instructional designers must indeed enter a consulting relationship with a client or subject matter expert, what models of consulting can they draw upon? Several authors have proposed consulting models which reflect various professional points of view (e.g., Kurpius, 1978; Kurpius & Brubaker, 1976; Hedberg, 1980; Schien, 1969; Tilles, 1961). Each consulting model differs in the assumptions that are made concerning the roles and needs of the client and the consultant as well as the ultimate goals of the professions in which they are applied. Davies (1975, 1979) has preaented the most extensive theoretical discussion of the instructional designer/client relationship. He discussed the relationship in terms of dominant assumptions (or models) that the consultant brings to the interaction. These dominant assumptions are: Product Oriented, Prescription Oriented and Process Oriented. Their associated behavior assumptions will now be discussed.

Product model behauior. As the label suggests, this consulting style is heavily product-oriented. Very often the client has made up his/her mind about the best solution in advance and is searching for a ***product*** that will meet the identified need. The consultant is expected to "deliver the goods" as requested which will usually take the form of information, a service, or a product (e.g., identify training sources, design a training plan, produce training materials) In all cases it is assumed that the client has correctly identified the problem and objectively identified the appropriate solution (Davies, 1975).

This model may be appropriate if the problem has, in fact, been clearly diagnosed by the client. The consultant can simply provide what is necessary to implement the solution. If, however, the goal is to influence the long term behavior of the client organization, there are problems inherent with this model. It is unlikely that the client would become constructively and collaboratively involved in the consulting process and, thus, he/she may not become committed to purposeful change in the organization (Butt, 1979).

Prescription model behaviors. Under the prescription model the client generally presents the consultant with a problem and asks the consultant to diagnose and suggest a solution. It is assumed that the consultant has the authority and skills to carry out a diagnosis and that the solution will be accepted by the client.

The model, based on a medical model, can be potentially difficult for the consultant. As Schien (1978, p. 350) points out, the model assumes that the client has correctly interpreted the ***symptoms,*** that the client is willing to accept and implement whatever ***prescription*** is given and that the ***patient/*** client will be able to remain healthy after the ***doctor/ consultant*** leaves. When the client is unable or reluctant to accept or implement the suggested solution, any long-term effects upon the client organization may be minimal.

Hedberg (1980) suggests that many instructional design/training consultants, by virtue of their specialist training, tend to operate in the prescriptive mode and many clients prefer the prescriptive or product models.

Process model behaviors. The shortcomings of the above models in achieving long term organizational outcomes suggest the need for more an approach which relies on greater client involvement. The essence of the process model is that the client is involved in the diagnosis of the problem and the generation of the solution. It is assumed that the client requires help with the diagnosis of the problem and will benefit from participation in the solution (Schein, 1969). The instructional designer/training consultant helps the client (who still owns and controls any changes in the project) to view the relationship as a ". . .process directed towards the achievement of some mutually agreed and valued instructional result in accordance with the organization's mission" (Davies, 1975, p. 359). The process involves a system of decisions which are reached by agreement concerning what is expected to be achieved, the nature of the help required and the changing roles that will be exercised (Rutt, 1979).

The goal of this model is to increase trainee achievement consistent with organizational objectives. A second equally important goal, however, is to enable the client to apply the skills learned during the performance analysis/ instructional design process to future performance and instructional problems. This will hopefully reduce and eventually eliminate the need for consultant involvement in future projects. Problems can arise in the use of this model in situatons were the scope of the project or the time available is limited, and when the client or the consultant are not receptive to the collaborative demands of the relationship.

Although the process model is clearly favored in most consulting literature, instructional designers must select an appropriate consulting role based on the organizational situation, the characteristics of the client, the characteristics of the consultant and the client-consultant relationship.

Rutt (1980, 1984) investigated the consultation models used by instructional design practitioners through the use of a consultation style inventory developed by the author. He identified four models which he felt most accurately represented and communicated the role of the instructional designer. They were Product model, Prescription model, Collaborative/Process model and Affiliative model (a model that describes consulting relationships where the consultant is mostly concerned with avoiding conflict with the client). The major finding of the study was that, in general, instructional designers working in higher education environments equally favoured the product,

prescriptive, collaborative/process and affiliative models. When an instructional problem was at the curriculum or system level, however, instructional designers tended to use the product model. If the problem was at the unit level and involved some sort of media augmentation then collaborative/process models were used. Also, instructional designers chose to move from a product model orientation to a more collaborative/process orientation with the client as the relationship progressed.

The research literature in the client- instructional designer relationship has largely involved consulting behaviors of instructional designers in higher learning institutions (Coscarelli & Stonewater, 1980,1984; Rosenberg, 1978; Price 1976,1984). No studies have investigated the consultation models used by training consultants in business environments. There are many other accounts which provide *tips* or suggestions for skills that can be employed to improve client interactions (Leitzman et al 1979-80; Lippitt & Lippitt 1978; Price, 1984; Spottswood 1980; Deden-Parker, 1979; Bratton, 1984; Bellman, 1983). Although much of the literature on the consulting process proposes using a process/collaborative model as the model of preference (Block, 1981; Bratton, 1980; Davies, 1975,1979; Schein,1978, 1988), there is no evidence that the process model is in fact what is actually being used by instructional design/training consultants. In fact, Rutt (1979) found that a significant amount of "model switching" takes place. Hedberg (1980) suggests that most instructional design consultants would tend to operate within the prescriptive mode by virtue of their specialist training.

Ontario's Ministry of Skills Development promotes the goals of transfer of training planning skills and client self sufficiency for the Training Consulting Service (Ontario Skills Development Office operating guidelines, 1988). The consulting model required for the goals to be achieved is the process model. There have been no studies conducted, however, to determine if the training consultants administering the service are in fact providing process oriented consultation.

It is reasonable to assume that there will be factors within the consultants task environment that could have an influence on the consulting models used. This study looked at two of these: phases within the consultation process, and the perceived expertise of the client in training planning skills. The literature on consultation styles in instructional design has not studied the possible influence of various client dimensions on consulting styles used by consultants. Rutt (1984) has in fact suggested that client factors would be an important area for further research.

Considering the preceding discussion, this study had the following goals:

1) To provide an initial investigation of the consulting models used by training consultants in a business environment.
2) To determine the extent to which Ontario Skills Development Office training consultants are using theprocess model of consulting as pre scribed by the Ontario Ministry of Skills Development.

3) To identify any relationships between consulting model used and the phase of consulting in which the consultant is engaged.
4) To identify any relationships between consulting model used and consultant's perceptions of the client's training and development expertise.

METHOD

The Training Consulting Service of Ontario's Training Strategy

The Training Consulting Service goal is to "...provide expert advice to firms to create competitive training strategies for their workers. The service helps firms identify training needs and develop training plans" ***(Breaking New Ground,*** 1986; p.18). To meet this goal, the training consulting service provides professional advice and assistance with the following training and development tasks: Conducting needs analysis; human resource planning; developing and validating training plans; training plan implementation, and evaluation of training (Ontario Skills Development Offices 1988-89 Operating Guidelines, 1988). These services are delivered through a network of Ontario Skills Development Offices (OSDO) managed by community colleges throughout Ontario. The consulting service is consistent with the definitions of consulting provided earlier in that the help provided by the consultant is temporary and aimed at some improvement in the future functioning of the client system rather than simply getting the immediate task completed.

The Ontario Skills Development Offices are staffed by training consultants skilled in the application of instructional planning and design methods. Though not explicitly stated, the trainingconsultingservice as described above is based on the process model of consultation described earlier. Client participation is seen as essential to successful change and the goal is self-sufficiency on the part of the client. The consultant works with the client as facilitators and information sources to help develop client skills and awareness of instructional planning and design methods.

Subjects

The population for this study was Training Consultants employed at the Ontario Skills Development Offices at each of Ontario's 22 community colleges. The entire population of 192 Ontario Skills Development Office Training Consultants were mailed training consultation style survey described below. The questionnaire was returned by 147 subjects for a return rate of 76.6%.

The background and experience of the training consultants ranged from individuals who have worked in the college system for a number of years to those who have had extensive private sector experience. Educational backgrounds of the subjects were equally varied. Many have college or undergraduate university education in business or social sciences but a significant number also have less formal education and extensive business experience. All were

involved in a professional development program designed by the Ministry of Skills Development to develop consulting, needs analysis, human resource planning and basic training design skills.

Measurement Instrument

The ideal way to assess the behavior of consultants is to observe their interaction with clients. This method, however presents practical limitations in terms of time involved and the lack of control that is possible in field situations. An alternative approach is to develop a survey instrument that provides training consultants with a number of scenarios they might encounter with clients and a range of possible responses to the scenario. The concern of inferring behaviours from self reports can be reduced by taking steps to ensure the validity of the instrument, Previous studies have relied on such instruments e.g, the ***Intervention Style Survey*** (Arbes, 1972); the managerial grid developed by Blake and Mouton (1978) and the ***Instructional Development Consultation Survey*** (Rutt, 1979). Rutt's survey served as the model for the instrument developed for this study: The Training Consultation Style Survey

The Training Consultation Style Survey (TCSS) was designed to accurately assess the variables of interest in this study. These variables and their levels are:

1) ***Consulting Models:*** Product orientation; Prescriptive orientation; Process orientation.
2) ***Consulting Phases:*** Entry; Analysis; Solution; Evaluation.
3) ***Client Expertise:*** Inexperienced; Moderately Experienced, Experienced.

The TCSS presented subjects with three familiar client situations. After reading each client situation the subject was required to select one of three possible statements which most closely described his or her actual behavior given that client situation. The statements described behavior consistent with each of the three consulting styles prevously described. The subject was required to choose 1 statement (from 3 presented) for each of the 4 phases of the consulting process. Identical prompts were provided for each scenario to clearly identify each phase of the consulting process. For each client situation, then, the subject was presented with four groups of three statements each (see the Appendix for an example of one of the three cases presented).

The phases of consulting used in this study were based on those proposed in the consulting literature (Bell & Nadler, 1985; Block 1981; Davies, 1975, 1979; Hedberg, 1980; Lippitt & Lippitt, 1978; Rutt, 1979; Schein,
They were defined as : Entry, Analysis, Solution, and Evaluation. Each phase corresponds directly to a step prescribed in the OSDO consulting service.

It was important, when developing the TCSS scenarios, that they reflected real consulting situations OSDO training consultants encounter. To ensure this, the scenarios were written based on actual case studies developed by

OSDO training consultants as part of a professional development seminar they attended. Three case studies were selected to reflect a diverse range of client consulting situations in various economic sectors. The case studies, once selected were edited into a format suitable for the TCSS. Based on Rutt (1979) the following contextual factors were taken into consideration in the design of the scenarios to ensure a uniform presentation:

1) ***Background:*** The background of the performance/instructional problem was provided.
2) ***Client:*** The name of the client was included along with information about the client's experience/expertise in training and development.
3) ***Organizational Level:*** All scenarios were written in a way to make it clear the client was an individual with decision making empowerment (e.g., management level).
4) ***Time:*** Each scenario was written so as not to suggest a crisis situation.
5) ***Problem:*** Each scenario contained a reference to the problem situation and a suggested solution advanced by the client upon which the consultant is expected to act.

These five points of information ensured that the same type of response cues existed in each case scenario. The last two items, time and problem, were particularly important. A crisis situation was not suggested because it might cue the subject to assume that a comprehensive consulting intervention was not required. Having the client define the ***problem*** and ask for help from the consultant, set up an action orientation on the part of the subject which was required for the TCSS questions that followed. The three client scenarios that were created all contained the above contextual factors. Client scenarios were presented on the final TCSS in random order.

The client scenario descriptions were also used to manipulate the "client expertise" condition by embedding key information about the client's experience in training and development. One scenario described a client with no training and development expertise, another with moderate expertise and a third with extensive expertise.

Face Validity Pilot Test. In order to ensure that the TCSS response statements had face validity a draft TCSS was presented to six validity judges (five OSDO training consultants and one educational technologist). Beside each response statement the judges were asked to indicate whether the statement accurately communicated behavior representative of each model of consulting (yes/no). The judges were instructed on the assumptions underlying each model and were provided with a consulting model summary sheet to assist them in making their judgments.

After the results of the validity test were reviewed, a discussion was held with each judge to identify appropriate changes or modifications. At least 2 of the 6 judges had to indicate a problem with a response statement before it was changed. If the modifications were serious enough to warrant changes in

content rather than style, the revised statement was again discussed with each of the six judges. As a result of these discussions, three statements were changed in content and one in style. The consultation scenarios, being based on actual case studies developed by OSDO Training Consultants, were considered valid.

Procedure

The TCSS with cover letter briefly explaining the study and instructions for completion was mailed to 192 Training Consultants working at Ontario Skills Development Offices across Ontario. A package of TCSS's each with return envelopes attached was sent to the Office Manager with a cover letter explaining the study and a request for help in distributing and returning the surveys. Adeadline of three weeks was given with a follow up phone call after the first week.

Data Analysis

The TCSS was designed to ellicit responses which allow the training consultant to be categorized according to consulting style. The forced-choice format of the questionnaire resulted in nominal data. Since the study was descriptive in nature and sought to classify behavior into categories, only descriptive statistics were applied. The specific analyses that were conduced are as follows:

Overall response rates for each model of consulting. In order to determine the overall consulting style tendencies of the population, the frequency of product, prescriptive and process responses were collapsed over phase of consulting and client experience conditions.

Determination of individual consulting styles. Another approach to help determine the general use of consulting styles is to categorize each subject by their personal consulting style. This provides a more individualistic assessment of the types of consulting models being used. Each subject in this study was therefore defined (categorized) ***as*** one of ***product oriented, prescriptive oriented orprocess oriented*** if at least 7 of 12 responses (58%) fell into any of these categories. They were defined as "mixed if they did not choose at least 7 responses in any one category. This categorization was arbitrarily determined. It was assumed that 58% of responses falling into any one category indicated a clear orientation towards that consulting style.

Multiple response analysis. The above analyses were designed to provide an indication of overall consulting style independent of the other variables of interest in the study (phase of consulting and level of client expertise). Cross tabulations were also conducted to determine if there are any trends in consulting style depending on the phase of consultation the consultant is engaged in (entry, analysis, solution, evaluation) or the level of training expertise of the client (inexperienced, moderately experienced, experienced).

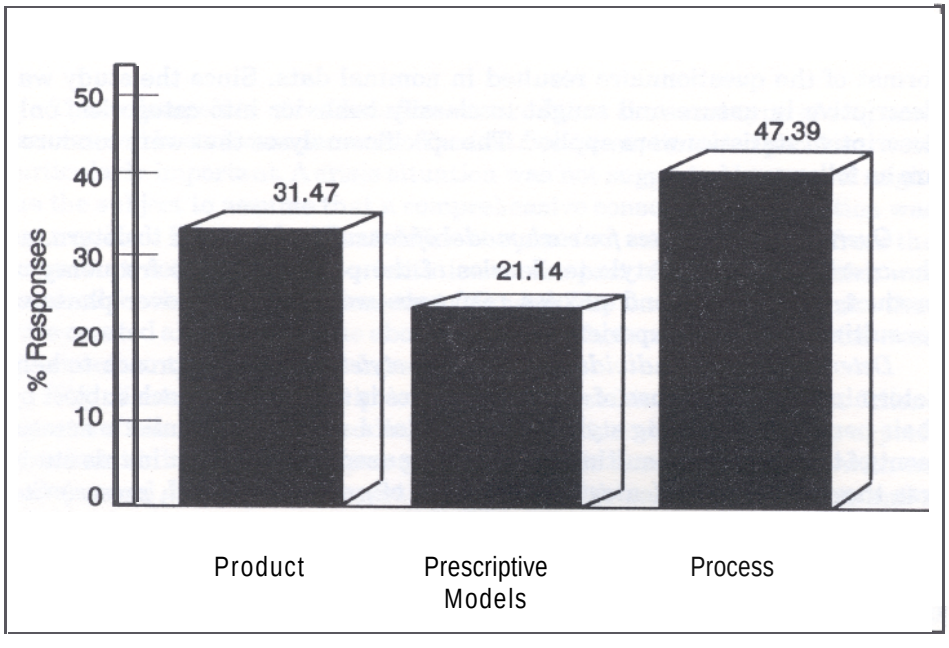
Finally, cross tabulations were conducted to determine the trends in consulting model responses made during each phase of theconsultingproceas within each client condition.

RESULTS

Overall Response Rate

The overall response frequencies for each consulting category are provided in Figure 1. The analysis indicates a mixed use of consulting models (product, prescriptive, and process) with a tendency towards a process orientation model.

Figure 1.
Frequency of Responses for Each Consulting Model Collapsed Over Conditions.

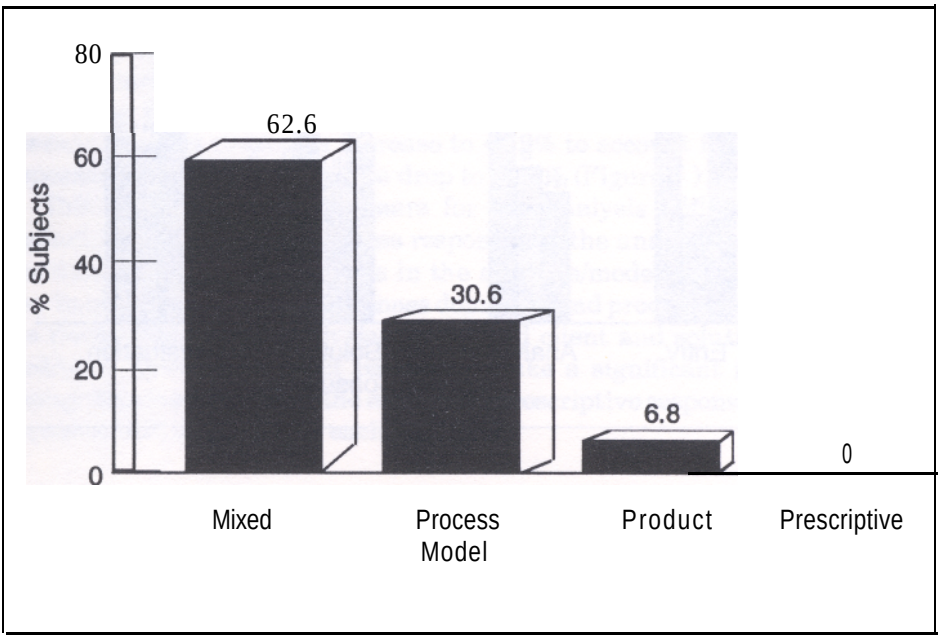


Individual Consulting Style

The results of the individual consulting style analysis are presented in Figure 2 (see following page). They reinforce the results of the overall response analysis presented in Figure 1 in that it seems most training consultants are using a variety of consulting models. The majority of consultants (62.6%) did not choose at least 7 responses that were consistent with any consulting model category and therefore have a ***mixed*** consulting style. It was found that 30.6%

of consultants were process oriented, 6.8% were product oriented and no consultants were prescriptive oriented.

Figure 2.
Percentage of Subjects Consistently Operating Within Each Consulting Model.



Multiple Response Analyses

The above analyses clearly indicate that OSDO consultants are using a variety of consulting models. The next obvious question is under what conditions does a consultant choose one model or style of consulting over another? To answer this question, multiple response analyses were conducted on the data to determine the percentage of product, prescriptive, and process responses in each level of the independent variables of this study - phase of consulting and client expertise.

Figure 3 (see next page) presents the percentage of product prescriptive and process responses in each phase of the consulting process, Process responses dominate in the entry, analysis, and solution phases (50.1%, 59.6%, and 54% respectively) but drop significantly in the evaluation phase where product responses dominate (49%).

Figure 4 (see next page) presents the percentage of product prescriptive and process, responses for each client experience condition (no experience, moderate experience and experienced). Once again process responses domi-

Figure 3.
Percentage of Consulting Model Responses in Each Consulting Phase.

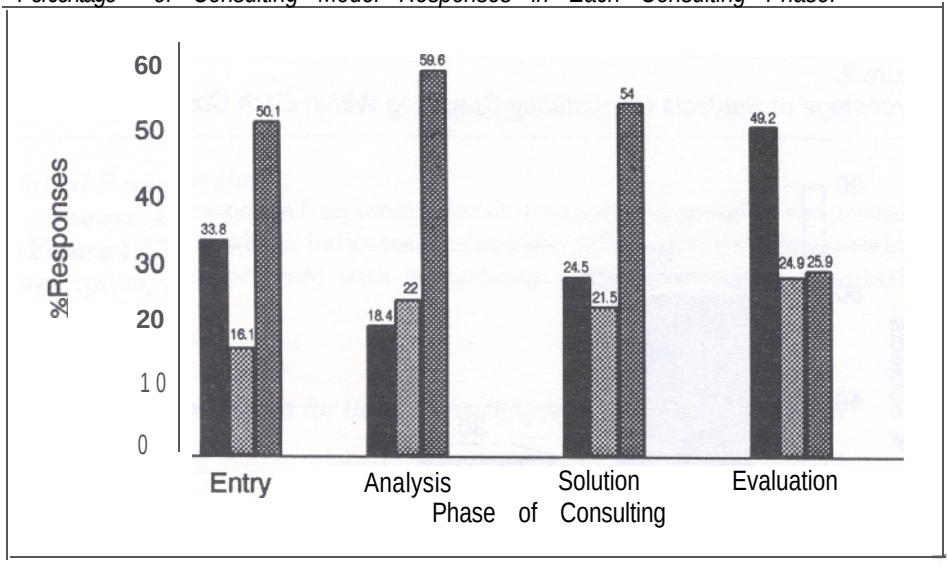
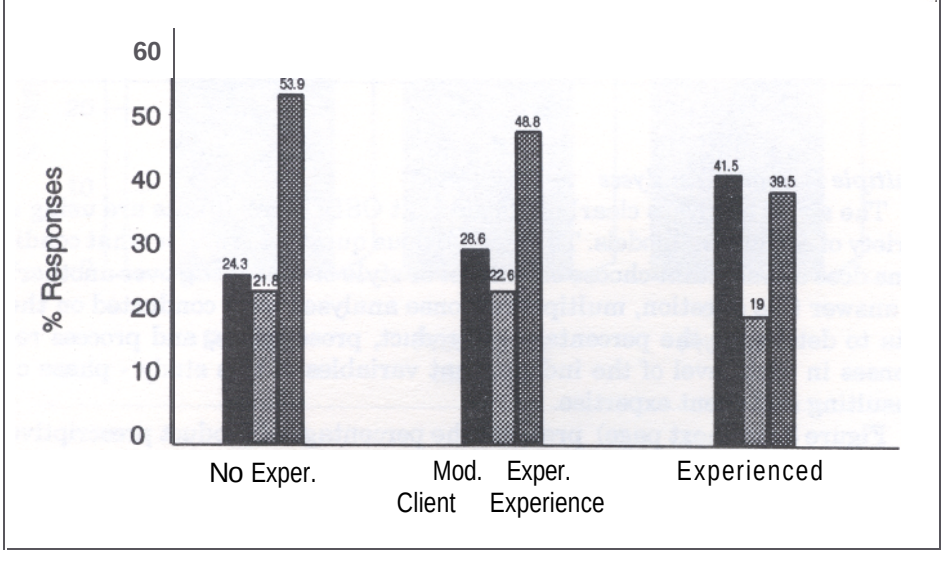


Figure 4.
Percentage of Consulting Model Responses in Each Client Experience Condition.



nate in the no experience (53.9%), and moderate experience (48.8%) conditions, but falls slightly below product responses in the experienced condition (product, 41.5%; process 39.5%).

Figures 5,6 and 7 present the results of the cross tabulations conducted to determine consulting model trends during each phase of the consulting process within each client condition. These results indicate that in the entry phase process responses dominate in both the non-experienced (Figure 5) and moderately experienced (Figure 6) client conditions (57.8% and 55.8% respectively). In fact, product, prescriptive and process responses are almost identical in these two conditions. In the entry phase/experienced client condition however, product responses increase to 46.9% to account for the majority of responses and process responses drop to 36.7% (Figure 7).

This same trend also appears for the analysis and solution phases, Product, prescription and process responses in the analysis/non-experienced condition parallel the responses in the analysis/moderate experience condition, In both cases process responses dominate and product responses occur in less frequently. In the analysis/experienced client and solution/experienced conditions however, product responses make a significant increase in frequency. This is primarily at the expense of prescriptive responses since process responses still dominate in each condition.

Figure 5.
Consulting Model Responses Made During Each Phase of Consultation in the Non-Experienced Client Condition.

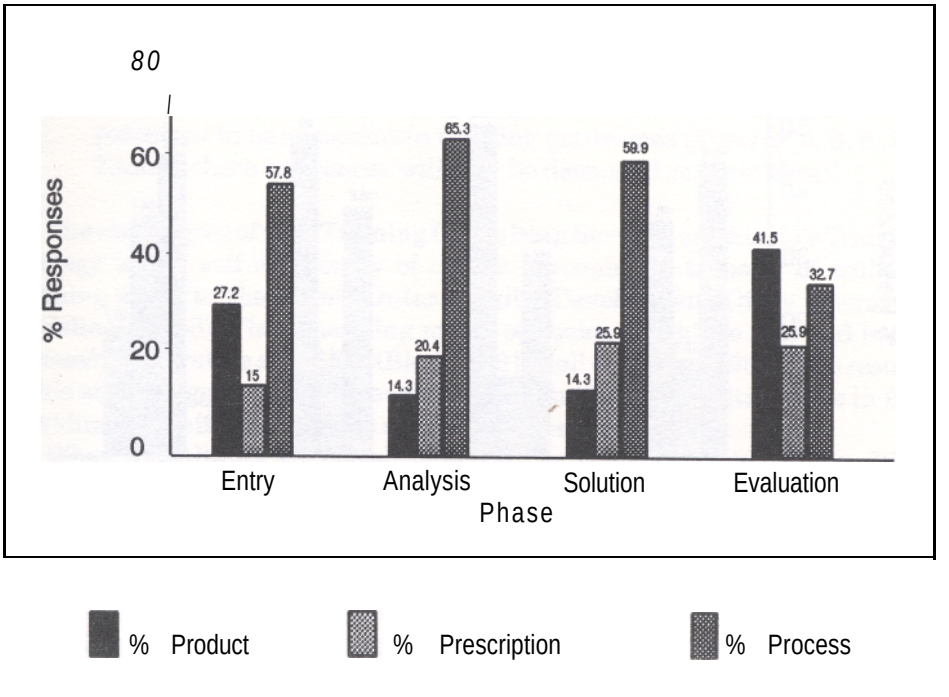


Figure 6.
Consulting Model Responses Made During Each Phase of Consultation in the Moderately Experienced Client Condition.

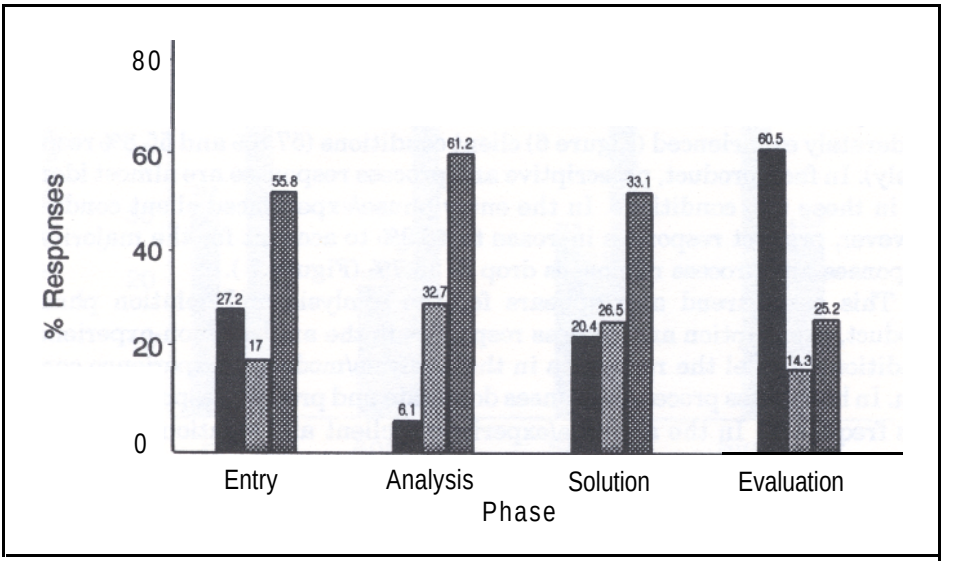
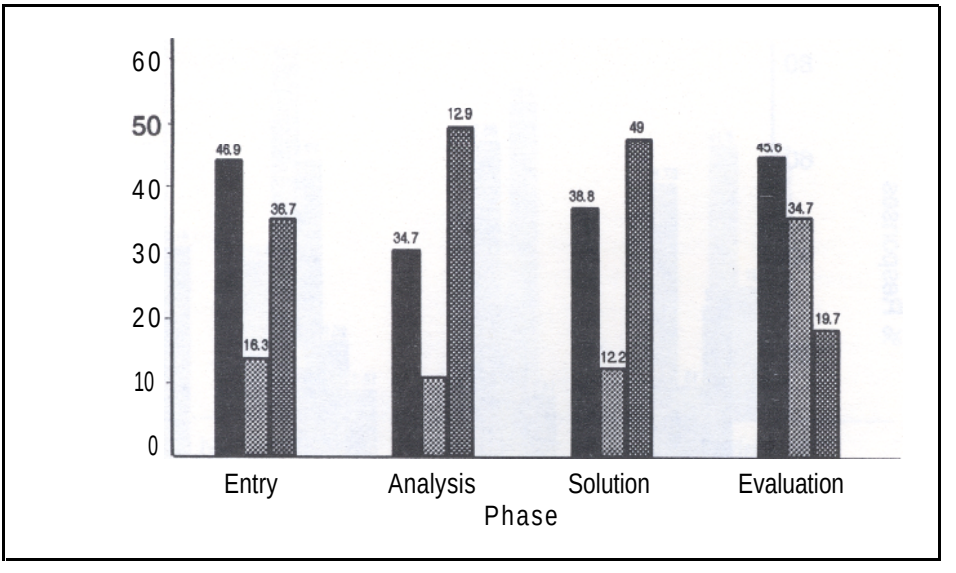


Figure 7.
Consu/ting Model Responses Made During Each Phase of Consultation in the Experienced Client Condition.



In the evaluation phase, product responses dominate in all three client conditions and are particularly pronounced in the moderately experienced client condition (60.5%). Also of note is that prescriptive responses are at their highest frequency (34.7%) and process responses are at their lowest frequency (19.7%), than at any point in the study, in the evaluation/experienced client condition.

DISCUSSION

Taken together, the results presented above support the following inferences about the nature of the consulting offered by the 'Training Consulting Service":

1) OSDO clients are receiving primarily process oriented consultation services (Figure 1).
2) Most OSDO training consultants are not operating consistently within one model of consulting but rather seem to be "model switching' depending on specific consulting circumstances (Figure 2). The remaining points describe those circumstances.
3) Clients who are perceived to be experienced in training are receiving slightly more product oriented services than either moderately experienced or non-experienced clients (Figure 4).
4) Clients perceived to be experienced in training are receiving primarily product oriented consulting services during initial consultations (entry phase, Figure 7).
5) Clients are receiving primarily product oriented consulting assistance in evaluation of their training programs, especially those clients perceived to have moderate training experience (Figures 4,5,6,7).

Each of these inferences will now be discussed in more detail.

The stated goal of the "Training Consulting Service" of Ontario's Training Strategy is the self sufficiency of clients through the transfer of training planning skills to the client (Ontario Skills Development Office Operating Guidelines, 1988). The consulting model of choice to achieve this end is the process/collaborative approach (Block, 1981; Bell & Nadler, 1985). The results of this study suggest that, in general, OSDO training consultants are in fact providing a significant amount of process oriented services.

When consultants are classified according to their individual consulting style however, it becomes clear that they are often switching to product or prescriptive approaches or can be said to have a "mixed" consulting style. This finding is consistent with the results of Rutt (1979,1984) who determined that instructional designers did not adhere to one particular consulting model and in fact equally favoured the product, prescriptive, collaborative/process and affiliative models. The finding is inconsistent, however, with the suggestion by

Hedberg (1980) that training consultants would tend to be ***prescriptive*** oriented by the specialist orientation of their training and professional development. In the present study ***prescriptive*** oriented responses were the lowest in frequency in all client scenarios. Rutt (1984) also found a very low percentage of prescriptive responses in most conditions. It would be reasonable to expect that at certain points in the consulting relationship it would be appropriate to tell the client the best course of action. Why OSDO training consultants do not do this often may be due to some feeling on the part of the consultant that it is not their professional responsibility to tell the client anything, or alternatively, that they do not feel professionally secure in doing so.

When consultants are not providing process oriented consultation they seem to be switching primarily to product oriented consultation. This switch is determined by the phase ofconsultation the consultant is engaged in, by the perceived expertise of the client in training issues, and by the interaction of these two variables. Each of these will now be discussed.

In analysing the effect of consultation on consulting style Rutt (1984) found that instructional designers moved from a product model orientation to a collaborative model orientation with the client as the relationship progressed 1984). The results of the present study were not consistent with this finding. In fact, the opposite seems to be true for OSDO Training Consultants. The data indicates that product responses increase as the relationship with the client progresses (i.e., as the consultant moves through the phases of consultation) and are at their highest in the evaluation phase where product responses dominate. There are a number of possible explanations for this:

1) Consultants are not comfortable with their skills and knowledge level in the area of evaluating training programs and therefore tend to accept client wishes more readily in this area.
2) The Training Consulting Service as designed by the Ministry of Skills Development does not place a strong emphasis on the value of evaluating the effectiveness of training delivered or the success of the consulting services they provide. It therefore becomes easier for the individual consultant to accept client wishes in regards to evaluating a training program rather than working collaboratively with the client to establish an effective methodology to determine the organizational impact and effectiveness of training that has been delivered.
3) The Training Consulting Service also requires OSDO training consultants to meet a quota of clients during the course of the year and given the situation described in number 2, the evaluation phase may be the easiest step to pay less attention to in order to allow time to meet quota requirements.
4) Many clients are traditionally resistant to thorough evaluation of training programs and might be less accepting of collaborative approaches to this stage of training development.

The most plausible explanation is likely some combination of the above. For example, if the Ministry of Skills Development program does not emphasise or demonstrate a strong commitment to evaluating the effectiveness of training then the consultants have likely not had the requirement or opportunities to develop a strong skill base in evaluation methods and techniques. Further studies focusing on the evaluation phase of the OSDO consulting process would be required to determine if the above interpretation is in fact the case.

One factor not investigated by the Rutt (1979) study was the influence that various client dimensions might have on the choice of consultation model. He suggested that it was an important area for further research for a full understanding of client-consultant relationships. The present study clearly indicates that this is an important factor indeed, at least in terms of perceived client expertise in training planning. Clients experienced in training received much more product oriented consultation than inexperienced or moderately experienced clients. Product responses increase and process responses decrease as consultants move from non-experienced to moderate experience to experienced clients.

The most likely explanation for this is that consultants perceive more experienced clients as competent (possibly more competent than themselves) in the area of training planning and therefore defer to that expertise during the consultation process. Many training consultants have only recently been hired to the program and to the training profession in general and therefore may be somewhat insecure about their competence especially when confronted by a client with significant experience in the area.

The influence of client expertise becomes even clearer when it's effects are examined in interaction with phase of consultation. It seems that experienced clients are receiving predominantly product oriented consultation in the entry phase of consultation, whereas non-experienced and moderately experienced clients continue to receive process oriented consultation in this phase. The explanation for this may again be found in the lack of confidence on the part of the consultants to question the initial assessment of a training problem provided by a client with considerable training expertise. Also, if an experienced client rebukes a consultants attempt at a more collaborative approach, the consultant may be less willing to pursue it than with less experienced clients.

Block (1981) has described consulting styles or *roles* more from the client perspective than the consultant perspective as presented in this study. He suggests that when clients consider themselves expert in a particular area they tend to seek consulting assistance in the form of an "extra pair of hands". This parallels the product approach described in this study and supports the interpretation of the findings described above. It also suggests, however, that the analysis stage would also be more product oriented with expert clients which was not the case in this study Perhaps experienced clients, after initial consultation, are agreeing with the approaches/strategies suggested by the

consultants and are more accommodating to the process approach during the subsequent analysis and solution phases.

The consulting phases by client expertise interaction also confirmed the finding, which has already been discussed, that all clients are receiving primarily product oriented assistance in the evaluation of their training programs, The interaction analysis however suggests that this is especially true with moderately experienced clients. Why this is true is unclear. It may reflect the fact that experienced clients recognize, to a greater extent than less experienced clients, the value of evaluating training programs (both in terms of learning and organizational impact) and may therefore be more willing to work collaboratively with consultants in this area. This interpretation is also supported by the high percentage of prescription responses found in the experienced client/evaluation condition. In general, experienced clients may have a slightly more "open ear to the evaluation process. The results of this study indicate that client variables may have a much stronger influence on consulting style than past studies have considered.

Two promising directions for future research in the area of consultation in instructional design arise from this study The first is further investigation into the impact that client expectations might have on consulting style of consultants. Secondly, it would be interesting to determine the consulting styles used by experienced vs. inexperienced consultants. If the consultant's confidence in his or her consulting and training planning skills do influence consulting style as this discussion has suggested, then more experienced (and therefore more skilled) consultants might have the confidence in their skills and in the value of the process approach to consulting to apply this approach in a larger number of consulting situations.

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APPENDIX

Client Situation#2

New Styles Ladies Wear is a small independently owned chain of live retail stores selling women's fashion clothing and sportswear.

The owner, Robert James, is concerned because his business is growing rapidly but he is experiencing a significant turnover rate of his store managers. Mr. James feels that if he could provide management training to his current sales staff and subsequently promote them to store managers, this would significantly reduce his turnover problem.

He is determined to solve this problem but has had no experience in planning training programs and is not sure what type of training is require

During the initial consultation with this client I would:

Help Mr. James clarify the goals he has in mind for this project so we will both have a clearer understanding of what will be involved.

After listening to Mr. James' concerns on the situation, outline for him the problem as I see it.

Ask Mr. James the nature of the help he expects from me for dealing with the turnover problem.

In conducting the needs analysis, I would:

Work with Mr. James to help him analyze the situation to identify factors which may be causing the turnover problem.

Ask Mr. James to summarize the cause of the problem as he sees it.

Explain to Mr. James my analysis of the causes of the problem after collecting the required data.

Assuming training is an appropriate solution, I would next:

Develop a training plan for the management training as suggested by the client.

After mutually deciding that management training would be an appropriate solution, help Mr. James determine the best approach to plan and implement the training.

Inform Mr. James how the training would best be planned and implemented with an explanation of possible consequences, both positive and negative for not following my advice.

In conducting an evaluation of the training I would:

Inform Mr. James of the beet methods for evaluating

ment training and proceed to do so.
Work with Mr. James to determine and implement an evaluation method discussing the advantages and disadvantages of each method.
Meet with Mr. James and ask him how he would like me to conduct the evaluation.

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Formal Features of Canadian Sesame Street Segments

Richard F. Lewis

Abstract: The CBC *Sesame Street* program aired In Canada contalns segments produced in all regions of the country. The study sought to determine production differences in segments produced in the regions. Using a stop-frame VCR; the author performed a detailed content analysis on the 1985 production year, consisting of 41 segments. The average segments lasted 103 seconds but larger production centres had longer segments than the smaller ones. Eleven of the segments contained cues which identified the city or region. Narrative or demonstration formats were used for most segments. Twenty-eight segments used an urban locale, eight used a rural one. in the segments which presented French, many different formats were used. Regions should continue to produce segments which reflect their character and which inciude multicultural and bilingual content.

Resume: La Soclete Radio-Canada *Sesame Street* essale de nous montrer la diversite regionale au Canada, les segments sont produits dans ces régions, Cette etude determiner, a l'aide d'une illustration d'une diversite regionale, Jusqu'à quel degre l'objectif a pu être realise. L'annee 1985 a ete choisie pour ces segments. Le nombre de photos par mlnute, la distance entre le sujet et l'apparell-photo, le genre de production (narratif ou subjectif) et l'emploi des effets particuliers -ont ete utilises pour comparer les variables de production. Les segments moyens durent 103 secondes. Les prises de vue moyennes et en gros plan etaient servies pour la plupart des segments. On utilisait un genre d'effets partlculiers pour plusieurs morceaux. Le lieu n'etait pas: donc la question se pose à ce qui concerne le but d'une representation régionale. Des images des mlnorities vlsibles comprenaient plusieurs segments. Des recommendations pour le renforce. ment d'une representation regionale dans les segments sont indiquees à la fin de ce resume.

With increasing realization that television imposes a form on its content, research emphasis has shifted to forma1 features of the medium, i.e., characteristics which mold and shape a message (Rice, Huston, and Wright, 1983; Calvert, et. al., 1982). Forma1 features signal production conventions: a code which a literate viewer can use as a guide to interpret content (Huston and Wright, 1983). They form the grammar and syntax of television. Formal features can serve as organizational aids for attention, information acquisition and affective aspects of messages (Huston and Wright, 1983). Formal features include types of camera shots, visual effects and soundtracks. US. television

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programs have been analyzed so that their formal features can be documented (Huston et. al., 1981; Mielke, 1990). Other studies have linked formal features to attention and comprehension (Anderson and Levin, 1976; Strommen and Revelle, 1990; Lovelace, 1990; Link and Cherow-O'Leary, 1990).

This study had three objectives: to describe the formal features of one production year of CBC Sesame Street, to determine differences between the segments produced in the regions and to determine the degree and methods of regional reflection used in the various segments.

A content analysis of Sesame Street segments produced from 1972 to 1982 described the length and format of segments, the goal area which the segment addressed and the region in which segments were produced (Caron-Bouchard and Bouchard, 1982). Based on the production location, the authors concluded that Sesame Street represented regional diversity and Canadian culture. Since the study was not based on segment content, but on the number of segments produced at each location, a more detailed analysis was needed to determine whether segments actually reflected their region.

CBC Sesame Street

The CBC has aired Sesame Street for 18 years. Each year, the previous year's production is purchased from the Children's Television Workshop. In Winnipeg, an editor removes content which is irrelevant to Canada, such as references to American coins, the U.S. flag, US. national holidays etc. All segments containing Spanish are deleted along with alphabet segments (because they use the American pronunciation of the letter Z). The program is reassembled using 12- 15 minutes of Canadian content, consistingof segments produced by CBC studios in six locations: Halifax, Montreal, Toronto, Winnipeg, Regina and Vancouver. The segments focus on the goals of the program, decided each year by the CBC and its Advisory Board. Many of the goals reflect the goals of CTW Sesame Street; however, some are unique to the CBC. Unique goals include the teaching of French, Canadian history and geography, how Canadian children live, multiculturalism and regional diversity. Program segments last between nine seconds and four minutes. Some segments are animated, some are live. Most segments are filmed although some are videotaped. Segments include location shooting and studio shooting. Almost all segments feature children. Most contain music expressly composed for the program.

In 1972, all segments were produced in Winnipeg. Toronto was added in 1973, Montreal in 1976 and Vancouver in 1982. Since 1982, Halifax, Regina, Edmonton, Ottawa and Yellowknife have been added as production sites. Presumably, one of the reasons for producing segments in the regions was to increase the regional reflection process. Previously, the Montreal crew had filmed segments in the Atlantic region. The Pacific region and the Prairies had been filmed by the Winnipeg crews.

The Segments

The 1985 production year was used as the subject matter. To seek regional differences, all segments shot on film or videotape and showing actors in non-studio settings were analyzed. Segments shot in the studio and animated segments were not analyzed. Of the 173 segments produced in 1985, 41 segments met the selection criteria. Of the 41 segments selected, Montreal produced 20, Vancouver produced nine Regina produced eight, and Toronto and Halifax each produced two. During 1985, none of the Winnipeg segments met the selection criteria.

Method

The author watched each segment six times using a stop-frame VCR, noting all relevant information. Each segment was then formally coded on two different occasions. If a discrepancy was discovered, the segment was coded again.

DEFINITIONS

Type of Shot

Shots were coded as Extreme close-up (ECU), Close-up (CU), Medium close-up (MCU), Medium Shot (MS), long-shot (LS) or extra long-shot (ELS). The following definitions were used.

ECU	Any part of the face, e.g. nose ear or object of similar size.
C U	Chin to forehead face shot, or object of similar size.
MCU	Top of head to mid-cheat.
MS	Head to waist.
LS	Head to feet.
ELS	Any image showing more than a long shot.

Special Effects

The following special effects were coded: camera movement, dream sequences, dissolves, pixillation, animation, still frame shots, and dream sequences. The following definitions were used:

Camera movement	Pan, zoom of dolly
Dissolve	Fading one picture out while fading another in.
Pixillation	Unnatural movement of people or objects.
Animation	The presence of non-studio or non-live content.
Still-frame	A single frame which is repeated without change.
Dream sequence	Visual special effects used to connote a dream.

Identification Cues

There were several ways in which a segment could reveal its regional identity. These included identification features, oral cues or signs and Canadian cues. Identification cues would allow either a native of the region or any Canadian to name the location of the segment. If the segment was coded with an oral cue, the name of the city or region was mentioned. If the segment included a sign with the name of the city or the region, it was coded as having an identification cue. If the segment included a Canadian cue, such as a flag or other Canadian symbol, it was coded as positive.

Multiculturalism

The number of seconds in which any member of a visible minority (oriental, native, black, or east Indian) was on the screen was counted. In addition, the number of seconds in which a cultural characteristic appeared was also counted. Cultural characteristics included the presentation of foods, games or dress.

Presentation of Language

Segments vary in how language is presented. English and French are presented in several forms with accompanying visuals. The segments were classified into one of the categories below:

English only	No French was presented.
French only	No English was presented.
Bilingual	English and French were presented.
Question / answer	Either English or French was used as a question. The answer was presented in the other language.
Translation	The same content was presented in both lan guages.
Cue to French	The French word was labelled as French.
Running French	The narrative was in English while the back ground dialogue took place in French.

RESULTS

Length of Segments

The average length of a segment was 103 seconds (See table 1). When regional differences were examined a different picture emerged. The two Halifax segments were 54 seconds long, just over half the length of the average segment. Regina segments were 88.1 seconds long, Vancouver segments were 95 seconds long. Toronto's two segments averaged 102 seconds, Montreal's 20 segments were the longest at 117.8 seconds on average. On the surface, it appears that the larger production centres have more money to spend on a

segment, hence the longer segments from Montreal, Toronto and Vancouver. Since a longer segment contains more subject matter, it must use more sophisticated production techniques and increased dialogue to sustain its length.

Table 1
Summary statistics by production location

	Halifax	Montreal	Regina	Toronto	Vancouver	Ail
Number of segments	2.0	20.0	8.0	2.0	9.0	41.0
Average length (in seconds)	54.0	117.8	88.1	102.0	95.0	103.0
Shots per segment	11.0	26.4	33.9	27.5	26.3	27.2
Shots per Minute	11.3	14.8	25.0	16.3	17.2	17.2

The segments analyzed here are longer than those produced in the period from 1972-1982, when 70% of the segments were less than 90 seconds long (Caron-Bouchard and Bouchard, 1982). Between 1982-1985, more than 80% of the segments were less than 90 seconds long (Caron-Bouchard, 1985). Anderson and Levin (1976) used a special Sesame Street program in which the average segment length was 87 seconds. These studies were based on animated and non-animated segments. Since animated segments are generally shorter than live ones, the length of live segments has not increased over the years.

Number of Shots and Shots Per Minute

The average number of shots per segment for all segments was 27.2. Halifax was well below the mean at 11 shots per segment. Montreal, Toronto and Vancouver were all very close to the mean. Regina at 33 shots per segment was substantially above the average for all segments. The number of shots in a segment indicates its complexity Segments from Regina were more complex than segments from other centres. The Halifax segments were the least complex.

The average number of shots per minute for all segments was 17.2 (See table 1). Halifax had the lowest number of shots per minute at 11.3. Each Halifax shot lasted more than five seconds. Montreal had 14.3 shots per

minute. Toronto and Vancouver were very close to the mean at 16.3 and 17.2 s/m respectively. Montreal, Toronto and Vancouver segments had shots which lasted between 3-4 seconds each. Regina had the highest number of shots per minute at 25. Regina had the most complex segments in which most shots lasted just over two seconds.

Sesame Street segments have shots which last three to four seconds. This editing pace is quicker than programs like ***Mister Rogers Neighborhood*** or ***Mr. Dress-up*** but considerably slower than most television commercials.

Types of Shots Used

To arrive at comparable statistics, the number of shots of each type which made up the segment were expressed as a percentage of the total number of shots. Close-ups made up 25% of all segments (See table 2 on following page). Vancouver used the highest number of close-ups (30%). Montreal used 29.8% close-ups. Halifax segments contained 21.9% close-ups; Toronto and Regina segments contained 12.2% and 11.0% respectively. Medium closeups made up 12.8 percent of all shots used. Regina and Toronto used close to 18% medium close--up shots. Montreal, Halifax and Vancouver all used fewer MCU's. Extreme close-ups constituted only 35% of all shots used. ECU's were used only by Montreal, Regina and Vancouver.

Twenty-two percent of all shots for all segments were medium shots. Halifax used the most medium shots (32.5%). Regina used 25.1%; Montreal used 23.2%. Toronto and Vancouver used 10.4% and 17.9% respectively. Long shots constituted 29.1% of all shots. Toronto used 44.3% long shots; Vancouver used 34.6%. Montreal used 25.1%. Halifax and Regina used less than 16% long shots. Extra long shots comprised 7.3% of the shots used. Halifax used 19.2%; lbrontoused 15.2%. Montreal, Regina and Vancouver used less than 10% extra long shots.

Use of Special Effects

Thirty-three of the 41 segments used one or more special effects. Eighteen segments used camera movement (pan, zoom or dolly). Five segments used dissolves. Three segments used a dream sequence in which some visual special effect tried to convey an imagined scenario. Three segments used pixillation. Two segments used animation within the live action. Two segments used still-frame shots to end the segment. Halifax and Toronto used a special effect in each segment. Regina used effects four times. Vancouver segments contained 10 special effects; Montreal segments contained 15 special effects. Special effects are more costly and difficult to produce than simple editing and camera work. Regina, Vancouver and Montreal all used many special effects but fewer than might have been expected.

The literature on the effects of visual effects like zooms, pans and quick cuts presents contradictory findings. Although brief zooms and pans increased attention (Larch &Anderson, 1979), earlier studies suggested that quick cuts, zooms and pans were unnecessary (Anderson & Levin, 1976) and that changes in the soundtrack would be most elicitive of attention.

Table 2
Percentage of Each Type of Shot by Production Location

	Halifax	Montreal	Regina	Toronto	Vancouver	All
Number of segments	2	20	8	2	9	41
Shots per Segment	11.0	26.4	33.9	27.5	26.3	27.2
Type of Shot						
Close-up	21.9	29.8	11.0	12.2	30.0	25.0
Medium CU	10.5	12.5	17.7	17.8	8.7	12.8
Extreme CU	-	3.5	4.9	-	3.9	3.5
Medium Shot	32.5	23.2	25.1	10.4	17.9	22.2
Long Shot	15.8	25.1	12.8	44.3	34.6	29.1
Extra LS	19.2	6.0	8.5	15.2	4.8	7.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Age of Speakers

Twenty-one of the 41 segments used only an adult voice for narration. Eight segments presented an adult and child in conversation. Six segments used both adult and children's voices, five segments used a child talking to another child or to a group of children. One segment had no voices. In its two segments, Halifax used one adult alone and one conversation between adults and children. In its two segments, Toronto used adult voices. In six of eight segments, Regina used adults. In the other two Regina segments, conversations between adults and children were used. Vancouver used adults in four segments and adult/child conversations in five segments. Montreal had the most variety Eight segments used only adults. Six segments had a group of people. One segments had an adult child conversation, four segments had a child/child conversation. One segment had an adult/child conversation and one segment had no speaking or singing.

Previous research (Anderson, et. al., 1979) found that high attention was related to the use of children's voices. Huston et. al. (198 1) found that Saturday morning educational programs made great use of children's voices. The segments analyzed here did not make wide use of children's voices since more than half used only adults and since eight of the remaining segments used adults and children together.

Identification Cues

It was expected that segments would contain cues which would help to identify their shooting location. Eleven cues were discovered in the 41 segments (See table 3). Eight segments contained a cue which identified the city in which they were shot. In one Halifax segment, the clock on the Citadel was shown. In the Montreal segment which identified the city, the SPCA office in a Montreal suburb was pictured. The Regina segment presented the RCMP training college which Regina parents and children would probably identify as their home town. One of the Regina segments featured a boy and his Appaloosa horse. This segment appeared to convey the locale as somewhere in the west without identifying Saskatchewan, It reflected the region but not a province or city. The five Vancouver segments featured scenes of parts of Vancouver or the Vancouver aquarium. One sign appeared in Vancouver segment. Two segments contained oral cues. In both segments, a voice identified the cities as Vancouver or Halifax.

Table 3
Segment Characteristics by Production Location

	Halifax	Montreal	Regina	Toronto	Vancouver	All
Types of Cues						
Identifiable Cues					5	8
Signs					1	1
Oral Cues					1	1
of Segment						
Participatory		4				4
Narrative	2	6	5	2	4	19
Demonstration		10	3		5	18
Setting						
Urban	2	14	3	2	7	28
Rural		1	2		2	5
Inside		5	3			8

These findings were surprising. Producing a segment in a particular location provides an ideal opportunity to reflect the region by using landmarks and scenes which clearly identify the location. It appears that producers are neglecting an opportunity to exploit the segments they produce to show their city, province and region. Most segments were produced outside with backgrounds of parks or buildings, The producers should include characteristics which both local people and other Canadians would identify as that city The problem would be to perform this task without appearing stereotypical. The CN tower clearly identifies Toronto, the Stampede, Calgary. However, it may not be desirable to have such a symbol in every segment.

Television creates a reality where none exists. Comstock et. al. (1978) suggested that where the environment provides no cues about a certain topic, the child will gain such information from television. Since most Canadians cannot see or travel to all parts of the country, Sesame Street could provide such information in its segments. Moreover, this information could be presented as part of a segment on counting, the alphabet or other content.

One Winnipeg segment produced several years ago, showed ice-skating on a rink near Winnipeg's city hall. This segment provided a glimpse of Winnipeg in Winter which Winnipeggers could readily recognize. By subtle identification, other Canadians could also have been cued to this feature of the city Many Montreal segments have used the same park as the locale. Cues which identified it could help all Canadians to recognize this locale.

Segment Style

Segments were coded as participatory (encouraging the child to answer), narrative or demonstration. In a narrative segment, a verbal or visual description of action was presented. A demonstration segment showed a process or situation without any narration.

Four segments (9.7%) were coded as participatory (See table 3). All of these segments were produced in Montreal. Nineteen segments (46.3%) were coded as narrative. Both Halifax and both Toronto segments used narratives. Six Montreal segments, five Regina segments and four Vancouver segments used narratives. Eighteen segments (43.9%) were demonstrations: ten from Montreal, three from Regina and five from Vancouver.

Sesame Street strives to involve the child. It was surprising; therefore that only four segments (all from Montreal) encouraged overt participation. By encouraging overt participation, segments encourage children to respond to the set instead of being passive viewers. Research studies have confirmed that children have increased attention to segments which encourage participation (Lorch & Anderson, 1979).

Locale

Segments were coded as having an urban, rural or inside shooting locale. Twenty-eight segments (68.3) used urban settings (See table 3). Five segments (12.2%) used a rural location. Eight segments (19.6%) were shot inside. All

Toronto and Halifax segments were urban. Fourteen of Montreal's 20 segments were urban. In Regina, three of the eight segments were urban. Seven of Vancouver's nine segments used urban settings. Of the five segments using rural settings, one was from Montreal, two from Regina and two from Vancouver. For inside settings, Montreal produced five segments and Regina produced three segments.

These segments appear to reflect Canada's population quite accurately since more than 65% of Canadians live in urban settings. The problem might be that all urban settings appear very similar, unless clear cues are used.

Visible or Identified Groups

Seventeen segments showed and/or identified a member of a cultural group. The number of seconds devoted to each person(s) was noted. The segment was coded as positive whether the member of a different cultural group was with other people or not. The four visible groups coded were Oriental, East Indian, Black and Native. Thirty-one percent (1340 seconds) of time in all segments was devoted to a visible or identified cultural group (See table 4). Vancouver segments presented a visible minority 74.3% of the time. Toronto segments contained 68.6% visible minorities. Halifax and Montreal used minorities just over 20% of the time. Regina segments devoted 4% of total time to minorities.

Table 4
Visible Minority Ttime (in seconds) by Production Location

	Halifax	Montreal	Regina	Toronto	Vancouver	All	Percent
Oriental		223	28	62	334	647	15.3
East Indian		125				125	3.0
Black	24	148		78	205	455	10.8
Native					99	99	2.3
Spanish		4				4	0.1
Italian		6				6	0.1
French		4				4	0.1
Total Vis. Min Exposure	24	506	28	140	638	1340	31.7
Total non-Vis. Min. Exposure	84	1849	677	54	221	2891	69.3
Segment length	108	2355	705	204	859	4231	100.0
Percent of V.M. Exp. to Total	22.2	21.5	4.0	68.6	74.3	31.5	

Segments were also analyzed to determine the time devoted to each cultural group. Oriental people were shown for the greatest amount of time (15.3%). Blacks appeared for 10.8% of the time, East Indians 3.0% and native people 2.3%.

One segment produced in Montreal identified one French, one Spanish and one Italian child by stereotypical names (Sylvie, Carlos & Tony) as being a member of their cultural group linked with food (souffle, Spanish omelette and futada respectively).

In Canada, with its many cultures and heritages, television must show minorities on television because as Barcus (1983) suggests, exposure on television says that a minority has arrived. The above data suggest that although some visible minorities and cultures are presented, their exposure could be increased to reflect Canada's multicultural mosaic.

Language(s) and Style of Presentation

One of the objectives of CBC Sesame Street is to present and teach French. The seven ways in which language could be presented were described above. Fifty-six percent of the segments presented French in some way (See table 5). One segment had no language, 41.5% of segments had only English. Five

Table 5
Number of Segments by Language Presentation Mode by Production Location

	Halifax	Montreal	Regina	Toronto	Vancouver	All	Percent
No language		1				1	2.4
English		2	4	2	9	17	41.5
French			3			4	9.8
Bilingual		3	1			4	9.8
Translated		5				5	12.2
Point out French		4				4	9.8
English Rng.French	1	4				5	12.2
Q English A French		1				1	2.4
All Formats							100.0

segments (12.2%) had an English narrative with French in the background. Five segments presented the same words in both English and French. Four segments (9.8%) presented only French; four segments (9.8%) presented a bilingual message in which the same content but not necessarily the same words were presented in both English and French. One segment used a technique in which the question was posed in English and the answer given in French.

Seventeen of Montreal's 20 segments presented French though interestingly, no Montreal segment presented only French. Montreal used the most innovative formats of English narration and running French in the background and a question posed in English and the answer given in French. Most of the other production centres used very little French. Only 5 segments (12%) produced outside Montreal presented French. Of segments produced in other regions, one of the Halifax segments presented a child attending a French immersion program for the first time. Since many Canadian children watching the program may attend French immersion programs such a segment provides some direct experience of what to expect.

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER STUDY

The regions do not produce an equal number of segments. If all 173 segments produced in 1985 are considered, Toronto produced 72, Montreal produced 48, Winnipeg produced 29, Vancouver produced 13, Regina produced eight and Halifax produced three segments. The outlying regions had fewer opportunities to produce material than the central section of the country. The information on formal features such as number of shots per minute, type of shots, and age of speaker all point out regional differences in the techniques used. The use of sophisticated techniques requires more resources. Therefore, regions with available resources could afford to produce more sophisticated segments than those with fewer resources.

The researcher was interested in how the segments reflected Canada and the regions in which they were produced. It appears that much could be done to exploit the potential of segments to reflect the regions in which they are produced. Identifiable features of the regions and cities could be introduced as background elements to the segments. Since production from regions outside central Canada is limited, the regions have to strive to increase their visibility by using identifiable features and backgrounds wherever possible.

Visible minorities and cultural customs must continue to be shown especially in the context of the regions. The Halifax segments could focus on the Celtic, MicMac and Acadian cultures along with the other features of the region. The Winnipeg and Regina segments could present Ukrainian, Native Western cultures and features of the geography of the West.

This study focused on the 1985 production year. Future work must increase the database by examining other years to determine trends and to describe means of presenting cultural and regional information in engaging and effective formats. Further studies need only concentrate on the portrayal of the regions, culture and language. Canadian segments do not appear to make frequent use the wide range of special effects available to producers.

Another series ofstudies could select segments which expertsagreeovertly portray a region and determine whether members of the target audience and

school agechildren can identify the region in which the material was produced. In segments presenting culture, retention of material presented could be tested.

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Exploring Alternative Categories of Users of Computer Communication Systems

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Abstract: The purpose of this study was first to describe patterns of computer-mediated communication (CMC) usage by graduate students at the Ontario Institute for Studies in Education (OISE), and second to explore alternative ways of describing users of communication systems. A qualitative approach was thought adequate to the aim of describing patterns of CMC usage from the actors' perspective. Data were collected through a semistructured interview and processed according to the method of constant comparison. The main findings in this study are: 1) the coexistence of patterns of usage; the students interviewed used CMC for instrumental purposes and to make or keep social contact: and 2) these students' thwarted expectations regarding online conferencing. Similar findings for EIES, Minitel and ALEX are discussed. Dynamics of online communication are brought into explaining frustrated participation in online conferencing.

Resume: Les buts principaux de cette Etude sont: 1) la description de modeles de communication informatique médiatisée utilises par les etudiants diplomes à l'Ontario Institute for Studies in Education (OISE): et 2) l'exploration des moyens alternatifs pour decrire les utilisateurs de ces systemes de communication. Une façon qualitative fut, au debut, suffisante pour decrire les modeles d'utilisation des communications informatiques mediatisee suite aux perspectives des acteurs. Une entrevue semi-structure fut utilisee pour la ceuillette et le traitement de donnees selon la methode de comparaison constante. Les principaux resultats de cette etude sont: 1) la co-existence des modeles de manipulation: les etudiants impliques dans une entrevue ont utilise la communication Informatique mediatisee pour atteindre les buts, et pour creer et retenir une relation sociales: et, 2) ces etudiants contrec arrerent les attentes en ce qui concerne une conference en ligne. On discute les resultats sembiables suite aux programmes EIES, Minitel et ALEX. Les dynamiques d'une communicatlon en ligne sont utilisees pour expliquer la participation insatisfaisante d'une conference en ligne.

Dervin (1989) argues that traditional user categories employed by communication media researchers fail to provide a basis for innovative system design, and help to perpetuate current patterns of use and exposure. Traditional user categories are based on population segmentation; users are described demographically, psychologically and geographically, according to marketing principles . They are described in terms of "what they own, what they have access to, what they control, how they live, and what are they able to do, use, think' (Dervin, 1989, p.216). Developments then are targeted to people who are already able to access and use the current systems.

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Some researchers have developed new ways of describing users that change the premises of communication system design. These approaches emphasize the actor's perspective rather than the observer's perspective, as is traditional. The change is from categories derived from transmission and objectivity-oriented models of communication to categories derived of situational-bound models of communication, focussing on the ways in which users construct information and perception of situations (Dervin, 1980).

The alternative categories proposed by Dervin (1989) are based on the assumption that the uses a person makes of an information or communication system arise from the intention to make meaning, to bridge gaps. These categories are grouped as follows: a) ***the actor's situation*** - categories designed to understand what in a given situation induces a person to use a communication system; b) ***gaps in sense making*** - categories designed to uncover gaps which the communicator is attempting to bridge; c) ***actor-defined purpose*** - categories that deal with the actor's purposes for using a communication system; d) ***information-using strategy*** - categories of strategies for seeking and using information; e) ***information values*** - categories designed to describe the users' criteria for evaluating information; f) ***information traits*** - the information characteristics which would match the users' needs.

Another useful approach to understanding users' needs is to study ***lead users.*** Von Hippel (1988) argues that for very novel and highly changing processes, products or services it is desirable to get input from those users

> whose present needs will become general in a marketplace months or years in the future. Since lead users are familiar with conditions which lie in the future for most others, they can serve as a need-forecasting laboratory for marketing research. Moreover, since lead users often attempt to fill the need they experience, they can provide new product concept and design data as well (p. 387).

In North America, computer-mediated communication (CMC) has proliferated mainly in university and business environments. Thus, graduate student users in a graduate School of Education may be considered CMC lead users.

At the Ontario Institute for Studies in Education (OISE), electronic mail has been available since the beginning of the 1980's. The Participate (Parti) computer conferencing system -a VAX-based system – was acquired in 1985 and has been used mainly for delivery of courses. In fact, OISE was the first public educational institution in Canada to offer credit and non-credit courses entirely online, using Parti. Over two years ago, the system was opened so that any OISE user could initiate and moderate a conference. Although online communication is becoming increasingly integrated into OISE activities participation on CMC is still not massive. Presently*, one in four students

*Fall 1989.

from 2367 students) have VAX accounts. The number of registered names in Parti is approximately 776, including faculty, staff and students.

The purpose of this study is first to describe patterns of CMC usage by graduate students at the Ontario Institute for Studies in Education (OISE), and second, to explore alternative ways of describing users of communication systems.

METHODOLOGY

A qualitative approach was thought more appropriate to the aim of describing patterns of CMC usage from the actors' perspective. Data were collected through a semistructured interview and processed according to the method of constant comparison (Lincoln and Guba, 1985).

Subjects

The original plan was to examine graduate students using Parti for a specific course, but only one student in the course agreed to participate in the study. The recruitment was then changed to include students using Parti at will, as opposed to a mandatory basis, in an online course. Therefore a note was sent to the "El cafe" conference (a chat conference in OISE Parti). Nine students answered, agreeing to participate in the study One male student, however, was eliminated because he could not be interviewed face-to-face, as he lived in Western Canada. Therefore, in total, nine students (five males and four females) were interviewed for 30-45 minutes.

The students' ages ranged between 27 to 40 (seven were in their mid thirties). All were single except one female student. They belonged to five different Departments at OISE. Three students were in the M.A. program; three in the M.Ed. program; two in the Ph.D. program and one in the Ed.D. program. They were in the last stages of their programs.

Measures

The interviews were based on this schedule:

- When was the first time you heard about Parti?
- How did you decide to start using Parti?
- Did you have any preconceptions or imagery about Parti prior to using it?
- What were your first impressions of Parti?
- Have these impressions changed after using Parti for a while?
- What was your experience with computers prior to using Parti?
- Do you use E-mail?
- Have you developed any routine to use Parti?
- Do you compose on line or do you use a word processor and then upload?
- What features of Parti do you use?

- What do you use Parti, E-mail for?
- What conferences have you joined?
- What is your role in these conferences?
- Have you thought of initiating a conference yourself?

Data Processing

The taped interviews were processed as follows:

The first three interview were transcribed and coded according to broad categories which were employed later to code the rest of the interviews. These categories were

- Awareness of Parti
- Learning to use Parti
  Parti activities
- Routines for CMC
- Roles in conferences
- CMC as a pleasurable activity
- Negative experiences with CMC
- Comparison Parti - E-mail
  People's behavior

An examination of the units included in each category led to elaboration of new, finer categories.

- Keep in touch with people
- Make contact with people
- Feel connected
- Discuss an issue
- Send personal messages
- Send messages or files to professors
- Send messages outside OISE
- Ask for technical help
- Print
- Download/upload
- Open a conference
- Read conferences
- Demonstrate a skill or knowledge
- Keep track of what's happening
- Use as a toy, entertainment
- Network
- Special uses

Four dimensions emerged from the examination of these categories, mainly associated with Dervin's category of actor-defined purpose. They fit well with the above categorization and with the author's intuitive impressions while conducting the interviews:

- Intrumental use
- Being socially immersed
- Exploratory use
- Demonstrating skills or knowledge

RESULTS

Levels of Adoption of CMC

All students used E-mail and Parti except one of them who used only Parti as part of a mandatory course activity and who lived in the U.S. Four students had previous intensive experience with computers while the others had experience mainly with word processors. Students learned about Parti one or two years ago. Four students learned Parti by themselves "playing around" "figuring out" "experimenting" using the online Help; one learned in a CSG[1] workshop and the four remaining were introduced by an OISE professor as part of course activities. All claimed not to have used the manual, stating that the Help feature was enough: "Parti is a user-friendly program" 'you don't need a manual for everything." Three have asked for help a few times from the 'Parti Assist" conference.

In terms of levels of adoption[2] this group seemed to have reached a plateau and developed certain routines at an elementary level . Only one student had tried to implement some procedures to make his use of CMC more efficient. Seven students check their mail (E-mail and Parti) every day The other two, living out of Toronto, check it only a few times a week, because of the line charges. Usually they check E-mail first and then if they have time they read Parti messages. Personal messages are usually answered at once. All of the students log on regularly at least once a day; two of them log on 4-10 times a day All students compose online, i.e., type directly the text of the message to be sent. They do not use Parti features that help text editing (e.g.,the edit command) or the uploading files capability which allows text created in a word processor to be brought into the Parti environment. They state that: a) they do not need to make use of these features so they have not taken the time to learn; orb) they have learned these features but do not use them because they find them cumbersome.

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[1]Computing Services Group, OISE.

model of adoption of innovations is from G. E. Hall, cited by Naidu, 1988.

Four students had tried the PHONE facility (a synchronous chat facility). A few students occasionally do print dumping from the screen or from files tranferred through E-mail. Only one student has made an online bibliographical search in FELIX, the online catalogue of the University of Toronto Library.

All are aware of the small number of students involved in CMC at OISE and see this as a disadvantage. They attribute this to the following reasons: people do not like computers, people have not had access to computers before, people are afraid to learn about computers or lack the time to learn, people do not have computers at home.

Patterns of CMC Usage

Two main patterns of CMC usage emerged. First, these students use CMC as a message device for instrumental purposes and second, these students use CMC as a contact device- to keep socially immersed. Two minor patterns also emerged: CMC as entertainment or exploratory activity and as a forum for demonstrating skills or knowledge.

CMC as a **Message** *Device: Exchanging Information and Reaching Out*

Students use Parti and E-mail to exchange information, arrangemeetings, ask for technical help. Some prefer E-mail for this (because of easy access to past messages) some prefer Parti (because of the capability to check if the person has read the message). Students use E-mail to correspond with their supervisors and thesis committee members. Most of them have sent messages out of OISE, but only one does it on a regular basis. Some of them have ocassionally sent files through E-mail. One of the interviewees organizing a conference made a call for papers through Parti.

These students have joined at least 4-6 public conferences in the system. Public conferences at OISE are mainly technical conferences, exchange of technical information about different programs, except the "El cafe" conference (a chat conference) and an issue-oriented conference. Some have had experiences with private conferences. Most students are only "observers" of conferences; they content themselves with browsing through messages. Some students occasionally respond to questions and few students have actively expressed viewpoints.

CMC as a Contact Device: Being Socially Immersed

Students state that they use Parti and E-mail as a way of making contact with people or keeping in touch. There is an emphasis on casual, informal communication. Six of them used Parti preferentially for this purpose. and three of them use E-mail for it. It is possible to distinguish various ways in which people get socially immersed:

- ***feeling connected:*** Some students in the last stages of their programs and without any concrete tie to OISE stated that using E-mail or Parti was a way of still feeling part of OISE: "it was exactly the time I stopped

working in an office, I stopped meeting people or talking to people and here there was a group of people conversing.. .I never wrote a message" "It's a feeling of still being connected to OISE now that I'm choosing to stay away as much as I can." Students that are living in special, isolated life situations feel comforted by their on-line contact: "If you are lonely sometimes it's kind of neat to have a message" "When I started I thought this is wonderful because being a foreign student.. .I still think that has a lot of possibilities" "It's nice when you feel kind of lonely," "If I have lots of time and I feel that I really need to make contact with somebody then I'll spend up to one hour, even if there are not meesages on. I will read back messages and all kinds of things."

- ***networking:*** Students stated that CMC makes it possible to establish contact with people or keep in touch: "I like the fact that I can 'hit' people across the country or around the world," "I keep in touch with my friends," "I send notes just to say ***hi*** to colleagues I've met in that course." They also stated that CMC could allow them to establish a relation with people who have common interests, however, they also expressed some awareness of possible difficulties in achieving this purpose: "I have thought of opening a conference to play squash,""One thing I've been really tempted to do but I don't know how many people would be interested is to look at issues of parenting." One student had thought of starting an antiracist conference but stated ". . .it's difficult to get key people involved."
- ***exchanging viewpoints:*** Some of them see Parti as a forum where it would be possible to discuss issues ***(see the section Expectations and Reality in Parti).***
- ***knowing what it is going on:*** A few express a vague need to know what is going on at OISE: "to keep track of what's happening" "to keep abreast of what's happening."
- ***meeting people:*** One student used Parti to meat people "In these days the singles situation is difficult" "you are certain that people have similar level (sic) and interests." Another one referred to the same issue in a humorous way "Not everybody is interested in having conversations with strangers, this is not a dating service."

Two students speak of a kind of ***compulsive*** log on behavior "Mostly I'm addicted to VAX mail. I tend to log on quite often, sometimes ten times a day "I keep in constant contact with over ten people that way, on a daily basis, I probably spend an hour and a half on the mail a day" "It doesn't bother me like going two or three times a day, nobody in the Department is complaining that I'm spending too much of the Department money on that so I don't hesitate to use it."

Two Minor patterns of CMC Usage

There were two other kinds of CMC usage: a) as entertainment or exploratory activity – "It's a distraction from working on my thesis" "Just to take a break" "It's personal entertainment" "I use it for curiosity...it's a kind of curiosity for what is going on" "As for example CoSy* every student has an account and you would always have somebody to talk to, to have some fun, here I don't know many people that are on so I'm sort of limited with the audience I can play with" and b) as a forum to demonstrate skills or knowledge: "I can demonstrate my expertise in a particular word processor" "I take it as a kind of public service."

EXPECTATIONS AND REALITY IN PARTI

Dialogue in Parti

Students expected a lot from Parti: "I liked the idea of a conference – the idea that you could discuss an issue through a computer." However they expressed disappointment in this respect; they complained about uninteresting content and the exchange of trivial banter: "I didn't find that the discussion, the idea of a conference, the material in there was all that interesting. It seemed to be a lot of communication in terms of what's the meeting about, what are you doing tomorrow as opposed to discussion of topics" "I found that really boring, I never found anything of interest there" "I use it now more for announcements, sometimes I expose my views." They were also unhappy with the lack of involvement and low participation of others: 'There are lots of people who just sit and watch and you just can't force them to participate." "A lot of people are up to date according to the system, but have never written something, that's too bad. It would be harder to be that quiet in a real conference." 'Nobody responds to anything." "If we were around the table it would be very hard for them to be that quiet."

A few users of Parti refered to the problem of feedback delay: "One of the issues I've tried to get used to is even the length of the messages because you don't know if you will get immediate feedback, you are not sure if you overloaded (sic) or it's too situation-specific...that kind of thing." Others mentioned the lack of feedback: "When I write something I may never receive any response, there is a sense of needing response." "I think it's one of the limitations of computer conferencing that some people are going to get responded to and simply others are not going to get responded to." It seemed easier to express a viewpoint than to respond to another person: "I usually throw in a thought of my own, rather than responding to what is already going on." Some students mentioned time as a factor in the decision to respond to others' messages: "I sent a message about that and people responded to that.. .

*Conference System developed by University of Guelph.

but I didn't have time to continue the dialog." "When something is crystallized in text it means you have more time to reflect upon on it and decide whether or not you are going to respond."

One of the interviewees opened a conference and described it in this way: "It's basically three or four of us who do most of the communication and every once in a a while somebody else says something or somebody gets frustrated and complains ***nothing*** useful is going on here, there's no philosophical discussion going on here, why don't you start something...and they don't start anything." He has being playing his role of moderator very much as a social ***host*** (Feenberg, 1987), greeting and receiving new members, but he showed uneasiness about his ***meeting chairperson*** role: "I feel if I dominate the conference too much, it discourages other people from participating, so that's been a problem for me"You don't know how much to have input" "I hoped that people who join would participate and initiate ideas, raise issues and prompt the rest of us to discuss them" "I hope other people than me would respond to these kinds of things."

Searching for a Pliable Social Reality?

There was some expectation of magical ease in making social contacts "Initially I felt a lot freer to contact people" "I thought it was more like a community, friendly people and everybody would feel comfortable like one big party." Only one student referred to the need for creating a common space for discussion and to the difficulty posed by the different "languages" of participants. A few students expressed a kind of expectant attitude, waiting for something to happen: "If I don't log on I can miss something important." "Next day something interesting will happen." However, some of the issues commonly conditioning inhibitions in face-to-face encounters are also playing a role in Parti encounters:

- ***private us public*** – 'The conference is supposed to be a forum for sharing ideas.. .I don't exchange ideas in a group situation even in a class situation."'"I'm a very private person and I don't like to talkabout issues like that publicly, I'm not willing to take that step." "There are some people that are always on and they are the best of friends and it's like you are interrupting a private conversation and I feel funny about that."
- ***risk*** – 'You can put yourself into trouble if you say the wrong thing you look like a racist or you look like you are stupid." "On one ocassion someone was asking information that I knew...I felt tempted to respond...but I thought it could sound presumptuous"
- ***permanence of utterances*** – "It's not only just fleeting but also something that really comes up as permanent record...I think that changes one's relationship to other people." "Maybe I should voice my opinion but then you don't want to feel like a jerk because it becomes public and remains."

DISCUSSION

The discussion will refer to findings and arguments of other researchers regarding the two main issues emerging from the present data: a) the coexistence of a sociability-oriented pattern of CMC usage with a rational-instrumental CMC usage and; b) users' thwarted expectations respect of online conferencing.

The Rational User and the Convivial User

On one hand, the students interviewed use CMC in an instrumental way: to correspond with their supervisors and thesis committee members, to exchange information, to arrange meetings and to ask ask for technical help. On the other hand, they use CMC also to get socially immersed — to feel connected, to network, to exchange viewpoints, to know what it is going on, to meet people, to entertain themselves. Similar coexistence of patterns of usage has been found in other online experiences. Hiltz (1984) describes groups of scientists using EIES* engaged in task-oriented activities as well as on a variety of social activities. This trend has also been described for the u tilization of Minitel and ALEX. Minitel is an interactive videotext service initiated in France in 1978. ALEX is also an interactive videotext service that was first launched in Montreal in 1980 and in 1990 in Toronto.

In her study of online scientific communities, Hiltz (1986) found users involved in a) task-oriented activities such as communicating about theoretical and methodological controversies in their fields, and b) social activities: people "exchange gossip and pleasantries, support and comfort one another at times of personal crises, look for interesting activities online, flirt, and invent new forms and applications. Births, deaths, and marriages have been announced, and friendships formed" (p. 106).

Charon (1987) describes two patterns of user behavior for Minitel: the first one can be categorized as ***utilitarian*** and corresponds to a user who resorts to specific on-line services in an episodic, punctual, rational way: database consultations, bank transaction, train ticket reservations, information searches and so on. The second pattern corresponds to a user who searches mainly for ***conviviality,*** entertainment and who makes permanent, regular use of the network with astrongemotional and social investment. Initially, Minitel was aimed to increase access to information because the designers a priori conceived a model of user resembling French computer scientists in likes and attitudes. However, later, unexpectedly, the general public transformed the way in which the medium was utilized, emphasizing the communication amongpersons, amonggroups, among institutions. Already, in 1986, theonline messaging and entertainment/leisure services had become the most prominent. The Montreal experience with ALEX seems to have followed a similar

*Electronic Information Exchange System, conferencing system based at the New Jersey Institute of Technology and designed by Murray Turoff.

pattern to the Minitel experience. The higher number of billable calls are by far Communications (chat and contact services) 19,012 and Entertainment/Leisure 4,046; then Finance 3,861, Consumer (includes Home Shopping and Public Utilities) 1,773; Current Events, 1,403 and then Government/Politics, 651; Food, 462; Tourism, 344 etc. (Bell Canada, 1989).

DYNAMICS OF ONLINE COMMUNICATION

The Passive Participation Problem

Despite their initial interest and hopes with respect to participating in online conferencing, most of these students have taken the role of passive observers. They seem to have expected an easy social contact in online interaction, Instead, they found, in others, a lack of involvement and participation and, in themselves, unwillingness to take the perceived risks and commit the time involved in making public written statements. Although the passive participation phenomenon in online interaction has been observed for several researchers there is no elaborations on its dynamics. Feenberg (1987) and Mason (1989) associate the passive participation phenomenon to the special characteristics of online communication process. Grint (1989) and Davie (1988) bring into focus the issue of the permanence of records.

In an evaluation of the use of CoSy in an Open University course, Mason (1989) found that in the main conference only 26% of all students were contributors. Mason hypothesizes that the lack of a clear model of how to participate deterred these students from participating actively. Feenberg (1987) asserts that the absence of tacit feedback in online interaction results in communication anxiety and reduces some participants to silence. Grint (1989), assessing participation and non-participation in CoSy in the same Open University course mentioned above makes the hypothesis that the indelibility of the written message (in contrast to the fleeting nature of oral contributions) leads to perception of a demand for a correct message. Davie (1988) comments on the issue of passive participation

> the problem seems to lie in the perception that leaving a note in the conference is an act of publishing, rather than an act of speech. As a student confronts the issue for the first time (or maybe at any time) life scripts relating to significant other's reactions to one's written work are activated. We become overly concerned about how others will view our writting (p. 8).

The present author suggests that an added factor regulating online participation could be the familiarity of the user with a) CMC systems and the particular online experience. For a novice user of CMC systems or a participant involved in the first stages of an online conference, the lack of a model of how to participate and the communication anxiety derived from the absence of tacit feedback can be more prominent factors in inhibiting their

participation than the perceived demand for a ***correct*** message and the time involved in producing it. Instead for more experienced users the latter can be more important deterrents.

The Intermediary Role in Communication Systems

The students in this study expressed frustration over the lack of substance of the online dialogue in Parti. Students' complaints of ***trivia*** have been also reported for an Open University course using CoSy (Grint, 1989; Mason, 1989). Mason states that message exchanges were mostly geared to information giving or receiving rather than to more articulated forms of dialogue such as discussion, opinions, critiques. The need for a moderator, an intermediary in online communication, has been discussed by Feenberg (1987), Ancelin (1987) and Charon (1987).

Feenberg has described online communication as lacking on the tacit dimension, i.e., the tacit cues in our face-to-face encounters that give us information on the approppriate and relevant kind of communications for a certain context. He postulates that the contextualizing and monitoring functions in online communication can be fulfilled by the actions of a moderator. A moderator should provide context for online interactions and should monitor how the participants of this interaction are interpreting this context. Feenberg (1987) states, "In large part, this role will consist in reassuring participants that their contributions to the discussion really fit the model" (p, 179). Feenberg (1989) also considers it important for the moderator to perform meta-communication functions: communicating about the communication, The moderator should be able to help participants confronting communication problems openly, by requesting clarification, changing rules in the conference, and so on. It is also important that the moderator makes comments about the content of the conference – i.e., weaving comments. He or she should help to identify issues, make connections, point out the areas of disagreement, and synthesize. Ancelin (1987) predicts that the next generation of Minitel services will be ***contextualized*** services, that is to say, services with the intervention of intermediaries and ***animateurs*** (facilitators), organized around the participation of the users. Charon (1987) proposes that thematic and functional exchanges should be developed side by side with spontaneous dialogues and forums; he emphasizes the importance of ***telematique*** editor and moderator roles. Dervin (1989) in discussing the problem of improving access to communication systems, foresees intermediaries fulfilling the role of making the systems appealing and useful for different kinds of people. However, these approaches to the problem of trivial online dialogue, pose some implementation difficulties. It is the impression of the present author that performing online facilitation functions require enormous amounts of time from the moderator(s).

CONCLUSIONS

Limitations of the Study

First, although the experiences of the graduate students in this sample are illuminating, a small sample of self-selected graduate students cannot be claimed to be representative of graduate students at OISE. Second, the results raise a question "Can the students in this sample be considered ***lead*** users?"

The word ***lead user*** conjures an image of a highly sophisticated user taking maximum advantage of CMC systems capabilities. Some OISE graduate students do, for example, make online bibliographical searches, consult databases, reach peers in other universities through BITNET[1] and are registered in LISTSERV.[2] The graduate students in this sample mainly exchange messages. However, they have been online for more than one year and have incorporated the use of e-mail and Parti into their daily routines. Further, they do have ready access to CMC resources, technical help and online peers using the systems; according to the usage of the concept in this study, lead users are users that "are familiar with conditions which lie in the future for most others" (Van Hippel, 1989; p. 387).

Suggestions for Further Research

In this study the author worked out the emergent issues related mainly to Dervin's "the actors' defined purposes" category. However, a next promising step would be to address "the actors' situation" and "gaps in sense making' categories (with in-depth interviews and focus groups). In this manner, it would be possible to reach a better understanding of electronic sociability in a graduate school. It would be also interesting to study the process by which a graduate student integrates in an online experience as a passive observer. Finally, it seems important to study definitions, implementations and impact of moderating functions in different online communication experiences,

Final Conclusions

The main findings in this study are as follows: a) the phenomenon of electronic sociability coexisting with a rational-instrumental usage; and b) these students's thwarted expectations regarding of online conferencing. A promising research avenue for designers wishing to respond to users' needs for nontrivial, substantial on-line dialogue is to explore intermediary roles (e.g., moderators, electronic editors, access intermediaries) that make a system appealing and useful for a variety of people and purposes. The intermediary role in communication systems seems to be an important design issue when the goal is to change the patterns of use and exposure.

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[1] A computerized network linking universities and research centres worldwide.

mailing-list server designed to make group communication easier. People with a common interest are grouped in a list which is stored on LISTSERV, then they can communicate with each other by sending mail to a special network address.

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High Definition Television: New Perceptual, Cognitive and Aesthetic Challenges

Nikos Metallinos

Abstract: The perceptual, cognitive and aesthetic principles governing the medium of television are decisively challenged by the advent of high definition television (HDTV) or improved definition television (IDTV). Established rules of visual perception, cognitive processes, and aesthetic appreciation of television images of the past must now change to compensate for the high quality, film-like picture produced by HDTV.

This article focuses on the major adjustments that need to be made in perceiving, comprehending, and appreciating the newly emerging technology of HDTV.

Résumé: Les principes perceptuels, cognitifs et esthétiques régissant le médium de la télévision sont désormais mis au défi par l'avènement de la télévision à haute définition (HDTV) et par celui de la télévision à définition améliorée (IDTV). Les règles et principes de perception visuelle, de processus cognitif et d'apréciation esthétique de l'image télévisuelle, établis par le passé, doivent maintenant etre revisés, s'ajustant ainsi à la haute qualité, à la ressembiance cinématoraphique, des images produites par la télévision à haute définition (HDTV).

Cet article concentre son propos sur les adjustments majeurs et nécessaires a apporter à la perception, à la compréhension et à l'appréciation de cette nouvelle technologie émergeante qu'est la télévision à haute définition (HDTV).

The advent of electronic cinematography, defined by Mathias and Patterson (1985, p. XII) as ". . .a new form of production, born of the marriage of video hardware and film techniques," was an inevitable development of communication media technology. So confident were these authors in the development of the field of electronic cinematography, that they predicted that:

> The future of electronic cinematography lies in high definition television. When video images achieve a resolving power comparable to images recorded on 35mm film, electronic cinematography will begin to realize its full potential. (p. 220)

For the most part, the predictions of these authors proved to be right, and, according to Carbonara (1990), HDTV technology consists of:

> ...five times the visual information detail {1.125 scanning lines} of pure NTSC {National Television Systems Committee, 525 scanning lines}, about ten times the color information, more than two times the horizontal and vertical resolution, great improvement in picture brightness, a wider aspect ratio {5:3} and sound quality that is equal to compact disc. (p. 1)

Technical, political, and economic problems have delayed the mass application of HDTV technology everywhere but in Japan where it has been in use for more than a decade. This could be a welcome sign considering the preparation and the consumer adjustment needed to meet the challenges of HDTV technology. The "technical" problems imposed by HDTV touch on the ***production*** of HDTV, the projection of images and the means of ***distribution*** of HDTV programs. The "political" problems center on the issue of arranging a world-wide accepted standard for the transmission of HDTV programs. The economic problems have to do with the enormous amount of money required for the development of electronic cinematography, the production, and the distribution of HDTV programs as opposed to the limited funds required to produce regular 35 mm films (the estimated ratio is 5:1). The bulk of the literature on HDTV technology centers on various technical, political, and economic issues. Excellent seminars on these issues are found in the proceedings of several recent world conferences, most notably, 1) ***High-Definition Technology: The Critical Choices*** (Checco, Russell, & Behrens, 1988); 2) ***Technology Update: High Definition Television Production of Electronic Films, Strategies and Experiences*** (Zwaneveld, 1987, June 4); and ***3) Proceedings From the 2nd Annual Conferenceand Exhibition on High Definition Television and the Only one Devoted Exclusively*** to ***HDTV*** (Meckler, 1990). However, very little has been done on the artistic, cognitive and perceptual issues related to HDTV technology.

In the view of some scholars and researchers, so much emphasis has been placed on these technical, political, and economic issues that the technology is already ten years behind in its proper development. Researchers at M.I.T.'s Media Laboratory have worked out an alternative solution to HDTV technology and claim that they ". . . can deliver those gorgeous HDTV-quality images within existing TV bandwidths by clever data compression and image improvement" (Brand, 1987, p. 75). In fact, the founder and director of M.I.T.'s Media Lab, Nicholas Negroponte, prophesizes that the future of HDTV technology will be even greater if we redirect efforts towards computer generated HDTV pictures which can go beyond 1.125 scanning lines (Rice, 1988, pp. 62-71). Negroponte's associate, Andrew Lippman (1990), suggests open architecture and computational video as the most likely high definition system for the 1990's and states that:

> A change in television has already begun with so-called "intermediate digital" TVs (IDTV). digitally translate an image onto a higher definition scanning system. So, it will not be long before the computer

> ***qua*** TV will be the receiver, whether the broadcaster is delivering NTSC, 1125, 1250, 1375, or any other type of signal. (p. 3)

Regardless of the means of transmission (regular broadcast or computer image compression), when the outstanding technical, political, and economic problems are resolved, the new technology imposes some challenges for today's producers and researchers.

Existing perceptual, cognitive, and aesthetic principles governing the medium of television are fundamentally challenged by the advent of cinematographically produced high quality, film-like images which are transmitted by television. Some well established rules and principles of visual perception (stemming from related studies in the fields of perceptual psychology and neurophysiology), certain bases which are needed in order for the viewer to easily decode and recognize television images (stemming from related studies in the field of cognitive psychology and semiotics), and some guidelines for composing television pictures which can be more readily appreciated (stemming from the related fields of the arts, communication and media aesthetics) need to be altered due to new electronic cinematography technology, This article is an overview outlining these changes and pointing out the adjustments that must be made in order to meet the challenges presented by future mass application of HDTV,

Changes in the Perception of HDTV Pictures

Such perceptual variables as 1) life-like pictures; 2) aspect ratio; 3) screen size; and 4) frame rate, are among the most significant factors found in numerous empirical research studies coming from Japan where the technology has been in full swing for more than a decade (Takahashi, 1982), from Canada (Conway, 1988; Cook, 1990; Hearty & Phillips, 1988). and from the United States (Mathias & Patterson, 1985; Meckler, 1990; and Zwaneveld, 1987, June 4).

Unquestionably, HDTV or IDTV pictures are superior to those of the NTSC (National Television System Committee), PAL (Phase Alternation Line) or SECAM (Sequential Couleur à Memoire) systems. Such picture clarity, however, has caused concern to some researchers. They contend that in HDTV pictures, detailed and unnecessary visual elements -third level visual information – can assume a prominent role – first level visual information – disturbingrather than enhancing thevisual communication process (Behrens, 1986; Metallinos, 1990; Winner, 1989) if the priorities of thevisual information are not predetermined and the figure/ground hierarchical order is misrepresented. Empirical studies on figure/ground anomalies in commercial television have shown that picture perception of certain television commercials was decisively diminished when the background (third level visual information) took precedence over visual elements in the foreground (first level visual information) (Metallinos, 1988). Film and television directors have used the technique known ***as depth axis, vertical axis,*** or ***Z-axis*** staging to increase the

perception of depth of field in film and television pictures. It should be noted, however, that film and television cameras produce high or low resolution pictures indiscriminately. They cannot replace the human eye which perceives images in accordance with their position in the visual world. Consequently, placement of visual elements in the vertical axis alone does not guarantee normal figure/ground relationships.

Empirical studies conducted in Japan by NHK (Nippon Hoso Kyokai), the Educational Television Network, have determined that HDTV pictures are better perceived by a wider screen aspect ratio (preferably 5:3) than the conventional 4:3. This is confirmed by Mathias and Patterson (1985) who state that:

> Studies indicate that the impact of wide-screen images results from the fact that the wide format doesn't allow the viewers to take in the whole image in one glance. It requires them to scan the image with their eyes and edit it into a visual experience. The fact that the viewers must participate in their visual experience tends to involve them more fully. (p. 224)

Experimental studies on the I-IDTV screen size confirm that the larger the screen, the more comfortably the picture is perceived. As stated by Zwaneveld (1987):

> The advantages of HD'I'V cannot really be appreciated unless the display is much larger than at present. For an optimal "presence", at a ratio of 5:3 and an image diagonal size of 2 meters, observed at a distance of 2 x image height, and a 45" viewing angle, the monitor or video projected display should measure 1 meter x 1.8 meter for an 1100 line TV system. (p. 2)

Apparently this has been the experience over the years with the motion picture industry- the larger the film screen, the better the visual impact on the spectators (Mathias & Patterson, 1985, p. 224).

Another perceptual factor which challenges HDTV viewers is the rate at which the frames or pictures change to create the illusion of motion. In general, the higher and the more frequent the ratio at which frames change, the better the resolution of the picture. The adoption of HDTV requires a higher frame rate in order to avoid flickering and "promote better rendition of movement" (Mathias, 1985, p. 225), and to reduce the possibility of noise. Ordinary NTSC (a 525 line, 30 frame per second system) and PAL or SECAM (both 625 line, 25 frame per second systems) television viewers are not accustomed to this higher frame rate. The proponents of IDTV use the "frame rate" limitations of HDTV to promote the notion that the digitally created High Resolution TV picture system is completely free from flickering, reproduction of motion, noise and bandwidth requirements (Lippman, 1990).

Changes in the Cognitive Process (Comprehension) of HDTV Pictures

Recognition is another prerequisite for the study and understanding of the workings of the visual communication media, in general, and HDTV pictures in particular, Cognition here is synonymous with comprehension, recognition, interpretation, and understanding of the high quality of the pictures and sounds of HDTV technology Scientific research on the cognitive effects of HDTV in North America and Europe are very limited-almost non existent. From general research on technology imported from Japan, the emphasis is placed on such factors as 1) the overwhelming picture resolution; 2) the increased size of the TV screen; and 3) the entertainment value of the new technology.

In commenting on the cognitive impact of the picture resolution, Behrens (1986, p. 42) explains that minute details like, for example, the list of ingredients printed on a can of soup, overwhelm the viewer whose eyes capture things never before seen on television or details which were never intended to be of any visual importance. To avoid visual confusion and misunderstandings, the HDTV producer/director must pay special attention to this factor. Placement of the visual elements within the depth or vertical axes of the visual field becomes an even more necessary practice in HDTV productions.

Mark Fleischmann (1990) commenting on the issues raised by HDTV and IDTV regarding their use of bigger screens, suggests that the issue of acceptable size is related to the issue of viewer acceptance and understanding of the visual image projected by such TV set technology It will take some time before NTSC, SECAM, or PAL TV viewers readily adjust themselves to watching larger TV screens. An image presented on a small screen does not offer the same level of comprehension or degree of understanding and is not appreciated the same as on a large screen. Epoch films intended for projection on large film screens are viewed differently when presented on the small TV screen. Size is a determining factor in comprehending the semantic dimension of televised images.

Several observers of the cognitive effects of HDTV have speculated that television programming which is not made solely to enhance the technology, will invariably not be recognized and appreciated by its viewers. Winner (1989) suggests that "If our society absolutely must spend billions on television during the next several decades, improving the quality of programming would seem a better place to start" (p. 276). In discussing the differences between film and HDTV or IDTV as far as future programming is concerned, Moore (1990) predicts that:

> Sitcoms, talking heads shows, most news programs and the typical intimate drama will benefit little from improved picture quality. The most significant benefit8 will be for sporting events, epic pictures, operas and ballets, and shows with exotic locales as backdrops. These type shows make up only a fraction of programs currently being broadcast, which again limits the attractiveness of HDTV. (p. 3)

Levy (1989) goes even a step further. He believes that HDTV will not only develop its own programming to feed the viewer's hunger for better home entertainment, but that technology will have a profound effect on the movie industry as well. He predicts that 'We'll see an incredible increase in special effects, and films will more easily be able to portray fantasy" (p. 100). Improvement in the programming of the movie industry and creation of special programming for HDTV are both cognitive factors which will challenge the future viewer of electronic media.

Changes in the Aesthetics of HDTV Pictures

The greatest challenges faced by the new technology will be in such widely practiced aesthetic principles (theories, concepts, rules, and constructs) as hot (film)vs. cold (TV) media; horizontal (film) vs. vertical (TV) stagingtechniques; small (TV) vs. large (film) visual fields, to mention only a few.

Prior to the development of HDTV, students of television production, television criticism and television aesthetics full-heartedly embraced McLuhan's hypothesis of hot and cold media (1964, p. 37):

> **There is a basic principle that distinguishes a hot medium like radio from a cool one like the telephone, or a hot medium like the movie from a cool one like TV. A hot medium is one that extends one single sense in "high definition." High definition is the state of being well filled with data. A photograph is, visual, "high definition." A cartoon is 'low definition," simply because very little visual information is provided. (p. 37)**

Partly due to the low quality (low definition) of TV pictures and partly due to the small size of its visual field (the TV screen), television adopted the practice of using extreme closeups in dramatic television to more intensely involve theviewer. With the advent of massively applied HDTV, McLuhan's TV aesthetic hypothesis becomes outdated. As mentioned earlier, HDTV programming requires a larger TV screen, A larger TV screen with a high resolution picture requires less viewer effort for psychological closure, In short, HDTV is no longer a "cool" medium-it is a "hot" one. This implies that the aesthetic theory of "hot and cold" media in film and HDTV is inappropriate. It also implies that the production techniques for TV programs intended for HDTV presentation must follow, to a large extent, those techniques established by the film industry.

Research works stemming from various studies on film and TV production techniques have formed two distinct bodies of literature in film grammar in which Eisenstein (1942, 1949), Lindgren (1970), Bobker (1969), Mast and Cohen (1974) and Kauffmann (1979) are the most representative; and in television grammar which was created by Armer (1990), Davis (1974), Lewis (1969), Millerson (1972), Wurtzel (1983), and Zettl (l990) amongothers. These grammars formed the various compositional principles and production techniques in lighting, staging, editing, and audio which were unique to each of

these media. The emerging electronic cinematographer and HDTV producer/director must be knowledgeable and confident with both grammars in order to meet the challenges posed by the new techniques.

Until now, it was theorized that in order to enhance the illusion of depth of the small visual field of the low definition television picture, visual elements should be composed within the Z-axis, moving inwards or outwards, either towards or away from the center of the screen (Zettl, 1990, p. 193). It was further theorized that the small opening of the regular TV screen does not allow the composition of crowded scenes and shots of landscapes. Such scenes were deemed more appropriate for the larger high definition film screen. These theories are now fundamentally challenged and must be adjusted with new aesthetic rules applicable to HDTV programming.

Aesthetically speaking, the composition of visual elements within the small view offered by the ordinary home television set is much different than the composition of visual elements within a larger screen area. In addition to changes in framing and shot selection, there will be environmental changes of scenery, sets, props and the like. According to some speculators, not only will the new HDTV set be larger, but the entertainment center in the home will have to change. According to Levy (1989):

> Unlike regular television, a tiny box in a room, HDTV cannot be ignored. Who can read a magazine in a movie theatre? Ultimately.. . the whole experience of watching television is going to be different. It will be a cinema experience. (p. 100)

SUMMARY AND CONCLUSIONS

This article focuses on the major adjustments that need to be made in perceiving, comprehending, and appreciating the emerging technology of HDTV Producers and consumers alike must be sensitive to and aware of this electronic cinematography technology, As television home viewing differs from attending a theatre or film presentation, so do the developers and producers of these two media differ in their expertise and attitudes. In this common practice, these two media are fundamentally different perceptually, cognitively, and aesthetically The merging of film with HDTV is like asking artiste to become scientists. It is possible, theoretically, but it is difficult in practice. As Blandford (1987) suggests:

> Films were born from imaging and photography, It's easy to use, that is paramount. It's right side of the brain oriented. Video is a "left side of the brain" medium, its practitioners are electronics engineers and technicians. (p. 36)

Although this is an extremely provocative statement, it focuses on the

changes that need to be made and directs our attention to the challenges presented by the forthcoming massive application of HDTV technology,

It is, therefore, important that ***we keep informed,*** through systematic study and vigorous experimentation, on all aspects of this new technology, not only technically or scientifically, but practically and artistically as well. In developing and marketing HDTV technology, its artistic, cognitive and perceptual dimensions (aesthetic factors) should not be overlooked.

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Marketing Educational Products

Clayton R. Wright

Abstract: Educational institutions are frequently seeking new ways of increasing revenues or reducing expenses. For many post-secondary institutions, strategies such as marketing, brokering, or sharing educational products are becoming viable alternatives to the expense of producing instructional materials in-house. The success of such endeavours often depends on how an institution elects to establish, manage, and monitor these activitles. Before embarking on a marketing, brokering, or sharing agreement, the institution's administrators must be aware of the benefits and limitations of each. In some cases, a special office may be established to coordinate and oversee the marketing, brokering. or sharing of an institution's educational products.

Résumé: Les établissements d'enseignement cherchent constamment de nouvelles façons d'augmenter leurs revenus ou de réduire leurs dépenses. Pour de nombreux établissements postsecondaires, des stratégies comme le marketing, le courtage ou le partage de produits éducatifs s'affirment comme des solutions de rechange vaiables permettant de compenser le coût de la production interne de matériel didactique. Le succès de ces activités dépend souvent de la façon dont l'établissement choisit de les créer, de les géter et d'en assurer le déroulement. Aussi, avant de décider de se lancer dans ces activités, l'administration doit-elle être consciente des avantages et des limites de chacune des formules. Dans certalns cas, il peut être nécessaire de mettre sur pied un secrétariat spécial chargé de coordonner et de surveiller le marketing, le courtage ou le partage des produits éducatifs.

INTRODUCTION

Increasingly, post-secondary institutions are marketing their educational products. The primary motivation is to generate funds, which can be used to develop more educational products and to support or expand existing programs. However, in times of budget restraint, it may be advantageous for institutions to examine how the external distribution of their educational products may be incorporated into the institution's overall marketing scheme.

Although marketing educational products can generate funds for an institution, the process of marketing may affect the manner in which the institute conducts its business. High-profile marketing may offend the insti-

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tution's faculty and members of the community Faculty may feel that they will achieve recognition only for profitable activities. Some faculty may be excited about the possibility of making a profit on their educational activities. Others, particularly the general public, may perceive that the educational philosophy is moving toward an emphasis on competition and commercialization.

If an institution elects to market its educational products, it must ensure that it can distribute a high-quality product, which will not negatively affect the institution's image, at a minimum cost. Care must also be taken to ensure that the institution's favourable tax advantages are not adversely affected by a marketing policy For example, educational institutions receive federal sales tax exemption on hardware and software products that are used in an instructional setting. If these items are then used to develop marketable products, the federal government's taxation department may take a dim view of this commercial activity In addition, local media producers may cry foul because they cannot effectively compete; their hardwareand software costs are much greater than the institutions'.

BENEFITS OF MARKETING

Currently, educational products such as print-based courses and instructional videotapes are shared among various institutions. However, as budget restraints become a "fact of life," many institutions are looking for alternative sources of revenue. One of these sources is the sale of educational products,

An institution should consider marketing their educational products if the institution wants to:

- recover the cost of developing course materials including computer-managed and computer-assisted instructional materials;
- support independent study and increase the accessibility of its programs by providing services such as extended learning resources centre hours and correspondent student services;
- continue to support existing activities under current budgetary restraints;
- reduce its dependency on government funding;
- provide an alternative means of encouraging its employees' creative endeavours and developing new instructional materials;
- recognize changes in the educational environment wherein more institutions are marketing their products;
- avoid a negative public image that may result from sharing and selling instructional items of varying quality;
- achieve renown as an institution that produces quality educational products.

CONCERNS WITH MARKETING

Before contemplating the benefits of marketing, an educational institution must consider how marketing may affect it. Some of these concerns, as well as a few potential solutions, are outlined below. These issues will have varying affects on each institution; some concerns will be more prominent than others, some will be easily addressed, and some will present unavoidable problems. Occasionally the "worst case scenario" is presented in order to emphasize a particular concern.

A Change in Philosophy

The implementation of a prominent marketing program may change the perception of an institution's educational philosophy Some people may see the institution emphasizing competitiveness rather than cooperation. Others may believe that the institution is exchanging its community leadership and long-term societal goals for short-term monetary gains. The fear is that the public education system will become commercialized. Whether or not these shifts will actually occur is debatable; however, it is the public's perception of the institution that counts.

A high profile marketing stance may be an affront to the institution's supporters. Although they may appreciate thenewentrepreneurialspirit, they could easily be offended by the institution's potential "hard-sell" approach, or they could object to an educational organization entering the commercial marketplace. Small businesses or consulting firms, who feel that the institution would be operating from an unfair advantage, may also raise objections. The institution would be seen using public resources and facilities to produce goods and services that compete directly with private industry, As well, an institution that has a large resource base could absorb the financial risks of an entrepreneurial venture better than a small business. Therefore, the institution must be willing to handle concerns from businesses who feel that their commercial positions would be jeopardized by the marketing stance of the institution.

The Human Factor in Academic Marketing

When an institution initiates a serious marketing campaign, evidence indicates that a human cost is involved. In the effort to break-even or earn a profit, the institution's faculty may find that their academic roles have changed. Faculty might find it uncomfortable to have their work examined for evidence of profitability or external marketing potential. They could become concerned that they will gain recognition only if their activities generate income. Other staff, such as continuing education personnel, may feel that if their work generates marketable products, perhaps they should establish their own businesses and reap these benefits directly

Perhaps a parallel situation would help illustrate these role changes. Consider how some institutions emphasize the importance of scholarly re-

search and publication. Their faculty members, who prefer classroom teaching to researching and writing, may find this emphasis on research and publication unsettling. Similarly, instructors who work in academic institutions where marketing is emphasized may also feel uncomfortable.

A Change in Activities

If staff perceive that only fund-generating projects receive recognition, then nonrevenue-producing activities may not be implemented. For example, the individualization of a specific program may not occur because there may only be a few, if any, external clients who wish to purchase that program. The institution must ensure that its needs are placed before the need to market educational products. The products marketed by an institution should be the direct result of projects undertaken to meet the needs of the institution's students, faculty, or staff.

Internal Versus External Product Design

Educational materials, designed primarily for institutional use, may not be appropriate for an external market. For example, some courses may contain numerous references to local place names, contact persons, and so forth. These references might be inappropriate in course materials intended for a national or international market. Should such design criteria be considered ***before*** an instructional package is produced or ***after*** the project is completed and the course implemented at the institution?

Product Focus

Because an institution cannot design educational products for every segment of the population, what markets should the institution focus on? Should they concentrate on materials for areas such as business, health sciences, or international education? Should materials be designed for a specific external market? Currently, many developing countries in Africa, Asia, and South America are seeking suitable course materials. In order to fully develop its potential for marketing, the institution must select a product or market focus.

What Materials are Suitable for Marketing?

If educational products are to be distributed to external clients, then the materials must be of superior design. These materials will reflect the educational quality of the institution that produced them. Who should decide which materials are suitable for external distribution? Who will establish the quality standards? Who will ensure that these standards are consistently met? The institution may have to establish a marketing office to perform these activities.

of Control

Frequently, when educational products are sold, the institution no longer controls how the materials will be used or how long they will be used. Perhaps

these materials will be modified in ways that are unacceptable to the institution that produced them. Usually, sharing agreements can minimize these risks. These agreements state the conditions under which the materials may be used, altered, upgraded, and distributed.

Affect on Tax Rating

As a nonprofit entity, an educational institution receives several tax benefits. Will the marketing of instructional products affect the institution's current favourable tax rating? In order to avoid a change in its tax rating, it may be beneficial for the institution to establish an educational marketing agency that remains at "arm's length. The effects of Canada's new goods and services tax (GST) on academic marketing must also be considered.

Resources for Marketing

To successfully market educational products, certain resources are required. The costs incurred through marketing should be offset by the funds generated from product sales. Initially, more funds wouldbespent establishing the marketing system than generated through sales. If the appropriate incentives are put in place, if reasonable prices are set, and if the potential market is large, the revenue from product sales should exceed the marketing costs.

Pricing

If it is determined that the marketing of educational products will be beneficial, pricing must be considered. Establishing the price of an educational product is a fine art, and it depends on the goals of the marketing plan. The price for an instructional item should reflect a consideration of the following:

- the need to recover part or all of the development costs;
- the need to maximize profits;
- the quality of the product;
- the potential buyer's perception of the product's quality;
- the demand for the product;
- the price of similar products.

Price guidelines must be established for different types of course materials. For example, prices for print-based materials will vary according to the number of pages and the inclusion of visual or graphic material. Prices for computer-assisted instructional material will vary depending on the amount of animation and/or videodisc material included in the package.

ORGANIZING FOR MARKETING

Sharing, Brokering, and Marketing

Before an institution begins marketing its educational products, it should consider the merits of sharing instructional materials with other institutions. A sharing arrangement is a mechanism whereby each institution receives some benefit from the exchange of materials. For example, one institution may exchange an accounting course for the other institution's materials on human resource management. This type of arrangement benefits both institutions and promotes feelings of cooperation. In addition, when institutions share educational products, they are more likely to exchange ideas on how to implement or improve the materials. Faculty may also appreciate the opportunity to develop contacts with instructors at other institutions who use specific educational products.

If a mutually beneficial sharing agreement cannot be arranged, the institution may elect to pursue brokering arrangements with other institutions. In a brokering situation, an institution can control the quality of its courses, which are being offered through other institutions. The originating institution benefits by collecting revenues and by having its materials tested with a large group of students. The institution that brokers the materials benefits by being able to offer a program or course, which it would have been unable to produce without the assistance of another agency.

If sharing or brokering arrangements are not possible, then an institution should consider selling its educational products, providing that such sales are in the best interests of the institution, Although product sales generate income, the institution would not be able to control the manner in which its materials would be used. For example, once the product is sold, the institution can not prevent the materials frombeingused after the content becomes outdated. The concerns mentioned earlier would then have to be addressed.

Marketing Office

In order to effect a coordinated sharing, brokering, and marketing effort, an office could be established to oversee all such activities. The function of this office would be to:

- actively participate in any sharing, brokering, or marketing arrangements;
- set marketing guidelines;
- review all products to be shared, brokered, or marketed;
- set an appropriate unit price for marketed items;
- promote the institution's instructional materials;
- determine how to market educational products successfully, especially in the relatively small Canadian market.

The marketing office would act as a clearinghouse for all sharing or marketing arrangements completed by the institution. This procedure ensures

that a coordinated effort is mounted and that pertinent guidelines are followed. The marketing offices could also handle all copyright clearances.

The marketing office should set the sharing and marketing guidelines. These guidelines would take into account:

- the mission, goals, and objectives of the institution;
- the marketing plan, as reviewed by the institution's Board of Governors;
- an assessment of the institution's resources, strengths, and weaknesses;
- the markets already covered by other departments within the institution such as the extension or continuing education department, the community relations department, the alumni office, and the registrar's office; and
- the decision to market the materials locally, nationally, and/or internationally

All of the educational products, which are to be marketed, should be reviewed to ensure that they are of a suitable quality and that they reflect the high standards of the institution. In addition, these materials should:

- specify an intended audience;
- be applicable to clients beyond the institution;
- contain instructional objectives;
- contain appropriate learning activities, which are congruent with the learning objectives, the evaluation instruments, and the targeted audience;
- contain a summary of the formative and summative evaluation reports;
- have all required copyright clearances;
- be copyright protected by the institution, and where warranted, by the author;
- be clearly identified as material produced by the institution with the institution's name or logo prominently displayed on all items;
- be attractively packaged;
- feature precise titles that are easily understood by the potential audience; and
- specify the follow-up services that the institution provides.

If the educational products do not meet these standards, the marketing office should provide, where warranted, the funds required to upgrade the materials.

The marketing office would also establish the appropriate prices for all educational products. Unit prices should reflect the factors previously

tioned as well as the development and duplicating costs, the need for cost recovery, and comparable market prices. In most cases, the unit price will include a portion of the development cost and 100 percent of the duplicating cost. An administrative overhead charge of 15 percent and a 10 to 15 percent handling charge will also be reflected in the unit price. These percentages are similar to those used by national book publishers.

The question of how to disperse the funds generated from the sale of educational products must also be considered. For example, although funds generated from the sale of educational products may go into the institution's general revenues, some monies should be returned to the authors or the originating departments in the form of one-time payments. Would people continue to produce and develop marketable products if only the institutions profited from their endeavours? Such remunerations may encourage additional innovative work. Attention must also be given to the possibility that some faculty will perceive the marketing of educational products as an opportunity to increase their income. Faculty may ask for: royalties for each student who uses the materials; a percentage of the profits; a one-time payment; or non-monetary payments such as an instructional assistant or release time from teaching duties.

The marketing office must also determine the potential risks involved in mounting marketing campaigns. It must ascertain whether or not the educational products are worth the efforts required to prepare them for distribution, Such preparations could involve producing brochures to promote the materials, developing mailing lists, duplicating the materials, establishing a potential client preview system, and mailing or delivering the materials to the buyers. All of these activities require "up-front" money – funds that must be spent before an educational product is sold. In each case, the marketing office must estimate how much money should be assigned to these activities, and thereby determine the potential financial risks. This assessment is particularly critical if the product is to be sold in the small Canadian market.

Authorship and Copyright

If faculty and staff are not aware of the authoring rights or the copyright laws and procedures, the marketing of educational products will be unsuccessful. Before an institution's staff members begin a project, they should be informed of their moral, legal, and economic rights regarding all published materials including print, videotape, computer software, and works of art. These rights and obligations should be included in, and form part of, an authoring contract. Such a contract should contain details with respect to the following:

- the parties involved in the agreement;
- the competency of the writers or producers;
- the services to be rendered;
- copyright, patents, and trademarks;

- indemnities;
- acknowledgements;
- revisions and adaptations;
- fee payments including licensing and royalty payments,
- part performance;
- rights as independent contractor;
- writers' access to the materials; and
- conditions for terminating the contract.

If course materials are to be marketed, there may be instances where an author, who is also an employee of the institution, completes all or part of the work on his or her own time. In such cases, in addition to the above, a contract should contain:

- the percentage of the work to be completed on the individual's own time and the percentage to be completed as part of the individual's regular duties;
- the facilities and resources that the institution will provide and the means by which the individual will compensate the institution for the use of these resources;
- the right of the individual or the institution to market and/or distribute the materials locally, nationally, or internationally and, where applicable, the method of allocating the funds generated by the sale of these materials, particularly in partnership situations. In the case of partnerships, it will be necessary to agree on whether the author receives a one-time payment or royalty fees;
- the right of the individual to use or perform works, such as dramatic scripts, in public;
- the right of the institution to modify the materials for its own use; and
- the method of revising or updating the materials. If the materials are developed exclusively by the author on his or her own time, the author should have the right to refuse to revise or update the material. However, if the materials are developed on institutional time using institutional resources, it is assumed that the institution can alter, amend, delete, or edit the material at its discretion and without the consent of the author. Ideally, the institution should inform the author of its intent to make revisions to the work and provide the author with a copy of the revised material. If the material is produced as a result of a partnership arrangement, the institution should negotiate the right to revise or update the material without the author's consent. The author, however, would reserve the right to have his or her name removed from the revised editions.

In order to avoid misunderstandings between the institution and its employee-authors, it is imperative that all agreements be negotiated before

the commencement of any developmental work. Negotiation sessions should involve the author, his or her dean, and the manager of the marketing office. Employee-authors must also be made aware of materials such as course outlines, course syllabuses, lesson plans, class assignments, examinations, and media or computer materials that are the exclusive property of the institution.

Materials such as policy manuals, computer programs, photographs, works of art, and so forth, which are produced by an individual as part of his or her job responsibilities and during the course of his or her employment with the institution, are usually the property of the institution, unless it decides to waive this right in writing. However, it is recommended that the employee be given the option of having his or her name attached to these materials, but not the right to gain financially from the sale of the materials or the right to prevent the institution from revising or updating the materials. Consideration should be given to providing the institution with the national rights and giving the author the international rights. The institution must clearly delineate the rights of the institution as well as the rights of its faculty and staff.

If an authorship agreement is not signed prior to the commencement of a development project, the marketing office may, at its discretion, create an authoring agreement that recognizes the rights of the individual as well as the rights of the institution.

CONCLUSION

Due to budgetary constraints, many institutions are considering marketing their educational products. Although this revenue-generating strategy has its benefits, an institution should carefully consider the following recommendations before it embarks on a marketing program:

- The institution must ensure, wherever possible, that its sharing and marketing arrangements are congruent with the institution's mission, goals, and objectives and that the needs of the institution's students, faculty, and staff are placed before the need to market educational products.
- The institution must consider the liabilities as well as the benefits of sharing, brokering, and marketing activities.
- The institution must ensure that the marketing of educational products will not adversely affect its current tax status or the operation of its alumni and foundation departments, or place the institution in a position whereby private enterprise believes that th institution is competing unfairly
- The institution must continue to abide by its existing sharing/brokering agreements and comply with federal copyright laws,
- The institution should sell its products to other institutions only when

such a sale is in the best interest of the vendor.

- The institution should sell only those products that are complete and that meet appropriate quality standards. If the product is incomplete, the institution may elect to enter into an arrangement whereby both parties agree to complete the materials jointly
- If materials are sold, the market price should reflect the developmental, administrative, andduplicating costs, the need to recover costs, and the current market prices of comparable products.
- A marketing office should be established to:
  - oversee the sharing or marketing of materials;
  - set marketing guidelines;
  - evaluate all products to be shared or marketed;
  - set fair and appropriate unit prices for marketed items;
  - promote the institution's instructional products.
- The institution's faculty and staff members must be fully apprised of the existence of the marketing plan as well as its associated copyright/ authoring policies and procedures.

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Microware Review

Scary Poems for Rotten Kids

L. F. (Len) Proctor

Reviews in this column have typically focused on productivity tools for the computer user-software which enhances instructor skills or efficiency. This review does not. Instead, we segue to a product which may be used to enhance student achievement. Frequent calls have been made in the current literature for the development of educational software products that exploit the capabilities of CD-ROM technology The Discis talking book is one example of a new type of publishing format that does take advantage of more than the mass storage capabilities of CD-ROM disks. ***Scary Poems for Rotten Kids,*** written by sean o'huigin, and illustrated by John Fraser & Scott Hughes, has captured much of the look and feel of the printed page. Voice, music, sound effects, and color have been added to the electronic page and exploited in such a manner as to attract and hold the attention of almost any youngster.

The talking book is not intended to replace its paper-based counterpart, Instead, it is a high-tech, tutorial approach intended to be used to enhance learner interest and proficiency in reading. For elementary students who are just beginning to learn how to read or who are reading but experiencing difficulty with their reading, having all or part of a book read to them will be a pleasant, alternative way to learn. While English is the current language of this book, some Discs books are available in Spanish, French and Cantonese. The ability to alternate between English and another language would make this learning resource especially useful for ESL students.

A modest amount of hardware is required to run this software. Any Macintosh from the Mac Classic to the IIfx and a CD-ROM drive will do, but to take full advantage of the book, Discus recommends the use of a color machine with an 8 bit color board. A hard disc drive is not required because the Discis book is a self contained product. The only computer operation skill required of the user is the ability to point, click, hold and drag the mouse. Currently, there are ten books in the series and several more are in various stages of publication. Each title costs in the range of $70.00 to $100.00. Discis

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books are published by Discis Knowledge Research Inc., 45 Sheppard Avenue East, Suite 802, Toronto, Ont. M2N 5W9.

In ***Scary Poems for Rotten Kids,*** there are 34 pages of poetry. The titles of the poems range from 'The Day the Mosquitoes Ate Angela Jane" to 'The Fog." A ***speaker*** icon has been placed at appropriate intervals in the text and when combined with options available from the ***customize*** menu, several presentation modes may be invoked. For example, when the user clicks on the speaker icon, the passage is read. Clicking twice on the speaker invokes a phrased reading of the passage. In both options, each portion of the text is highlighted as it is being read in order to keep the user's eye synchronized with the voice of the reader, If users are reading a passage silently, and encounter a word that they do not recognize, clicking on the word once will cause the word to be pronounced for them. Double clicking on the word will cause it to be pronounced syllable by syllable along with an in-context definition or explanation. Similarly, by clicking on objects in an ascompanying illustration, the user can find out the pronunciation and spelling of the names of many objects associated with a particular poem.

The sound of the digitized voices and the effects used in the talking book is as natural and clear as one would expect from a CD-ROM product. The obvious zest exhibited by the reader(s) of the text serves to immediately focus and hold the attention of the user. The pace of the presentation voice can also be controlled by the user. Selecting a slower pace however removes the special effects which serve to enhance the ambiance of the presentation. In addition to being able to adjust the pace of the presentation, users can also adjust the presentation of the text. Pull down menus may be used to change font, style, and size of the text, and the spacing of the lines of the text. Provision has also been made to store user preferences for each to these options and to keep track of words that the learner may have had difficulty pronouncing or understanding.

The printed documentation accompanying this disc is minimal. It is only 8 pages long and fits within the disc case. The introductory paragraph suggests that this amount of documentation will probably be sufficient for most users but in the event that more than a 'bare bones" amount of information is required, a more detailed manual is available from the publisher for the cost of postage and handling ($2.00). For many users, the short form or the documentation will probably be adequate because of the excellent on-line help file resident on the disc. When the help feature is activated, the cursor turns into a question mark. Placing the question mark on any feature of the book brings forth a spoken explanation of the nature or function of that feature. For many users, this level of explanation will be sufficient.

In conclusion, this disc represents a valuable addition to the tools we currently have available for teaching reading to beginning learners. It could be argued that the price of the disc when it is compared to the price to the book is too high and that the cost of the presentation equipment is too expensive for many elementary schools to afford. Perhaps this is true, but not very long ago,

motion picture and video media were in the same financial league and the same issues were hotly debated. Today, while the cost of motion picture and video learning resources has come down substantially, motion pictures and videotapes remain primarily linear presentation tools. They have no options built into them to enable the tracking of student error patterns, and they require no overt interaction with the media.

Discis books, like their paper-based counterparts, can be randomly accessed. Student error patterns can be collected and learner interaction has been made mandatory. Granted, such interactivity is currently costly. However, if traditional cost patterns are repeated as this format matures, it is reasonable to expect that both the equipment and software will become much leas expensive in the foreseeable future. Traditional methods of helping every student, and especially the low-ability student, to learn to read more effectively are also expensive. However, it could be argued that helping all students to become better readers early in their educational careers is likely to be much leas expensive than the cost of developing and delivering remedial programs later on. The Discis talking book represents a valuable addition to the tools teachers have available to help students become more interested in reading, and consequently better readers.

COLUMN EDITOR

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Book Reviews

Mary Kennedy, Editor

Computer-Based Instruction: Methods and Development (2nd Edition) by Stephen M. Alessi and Stanley R. Trollip, Englewood Cliffs, NJ: Prentice Hall, 1991. ISBN O-13-168592-9 (CDN $52.67)

Reviewed by Diane P. Janes

Since the first edition of this book was introduced to the community of computer-based instructional (CBI) designers in 1985, we have as a profession, witnessed a revolution in the computer field. In the early 1980s computers were still out of the reach both financially and emotionally of most of the educational population. If we did use a computer, a 5 MB hard drive was a sight to behold, and the learners our early CBI was designed for were not computer literate.

In six short years, the revolution has taken place, and it is still ongoing. 'Ibday, many of the students CBI is aimed at -both secondary, post-secondary, and adults involved in industrial training and/or personal growth – have home computers or use them daily at work. Today's interactive, instructional computers are available at the local video store, the supermarket or library, ready for the novice or expert to use.

These facts are acknowledged by Stephen Alessi and Stanley Trollip in their 1991 update. Gone are the chapters on the history of computers, hardware and software. This has become one introductory chapter. New chapters, under the section Advanced Topics in Computer-Based Instruction, have been added to investigate the advances in computer-managed instruction, interactive video and artificial intelligence.

This text is divided into three parts. Part One, entitled ***Computer-Based Instruction Methodologies,*** is an introduction to the types of methods most commonly used by computer-based instructional designers, namely tutorials,

drills, simulations, instructional games and tests. Each section is measured against the "expository model of instruction"put forward by the authors. They maintain that in order for the instruction to be effective it must include the following four phases: presenting information, guiding the student, practice by the student and assessment of student learning.

Part Two is entitled ***Development of Computer-Based Instruction.*** Its chapters describe preparation, design, flowcharting, storyboarding, programming and support materials, and evaluation. These chapters provide a model for novice designers which will take them through, as the authors note, many of the procedures similar to the Instructional Systems Design (ISD) approach. The procedures are simplified for the beginning designer, and are specifically intended to assist in thecomputer aspect of thedesign process. The model they promote has ten steps: determine needs and goals, collect resources, learn the content, generate ideas, design instruction, flowchart the lesson, storyboard displays on paper, program the lesson, produce supporting materials, evaluate and revise.

Finally Part Three, ***Advanced Topics in Computer-Based Instruction*** discusses in great depth the past, present and future of computer-managed instruction, interactive video, and artificial intelligence and instruction. Each of the three chapters in this section describes the history and the theory of the specific topics, and serve as good introductions to these relatively new areas of potential exploration.

Overall the text is well organized and easy to read. It takes the novice through the methodologies and design process in a through manner. Practised CBI designers will find this book a handy reference and refresher. One of the best aspects of the book is the end section of each chapter, Each chapter finishes with a complete bibliography on the topic of the chapter, and with what the authors call ***Summary.*** This is a block at the end where, step by step, the chapter topic is reviewed in point form, as a handy mnemonic device.

Another excellent feature of the book is the appendices. Appendix A provides a summary of the instructional factors for each of the methodologies presented in Part One. It is a handy reference tool. Appendix B is a quality review checklist. Laid out in a practical format, this checklist covers language and grammar, surface features, questions and menus, other issues of pedagogy, invisible functions, subject matter, and off-line materials. Appendix C covers the old standby of storyboard forms, available for the designer to photocopy for use. The advantage to these forms are their layout, specific to the type of hardware one may be using, such as a Macintosh, Apple or the IBM system as well as the screen size or programming language one may be working with.

This book is a valued addition to the literature and would not gather dust on any bookshelf belonging to an beginning or presently active designer of computer-based instruction.

REVIEWER

Diane P. Janes is a M. Ed candidate in Educational Communications and Technology at Memorial University of Newfoundland, St. John's, Newfoundland.

Instructional Design: Implications from Cognitive Science by Charles K. West, James A. Farmer and Phillip M. Wolff, Englewood Cliffs, NJ: Prentice-Hall 1991. ISBN O-13-488578-3 (CDN $33.67)

Reviewed by Beverley Park

This book is based on the authors' contention that cognitive strategies are the primary contributors of cognitive science to the field of instructional design. The book therefore attempts to instruct the designer in these cognitive strategies so that they can be effectively incorporated into the instructional design model.

The book is organized into twelve chapters. The introductory chapter discusses the theoretical background of the cognitive revolution, or evolution as these authors prefer to name it, and provides an overview of schema theory which is essential to the understanding of the instructional design process. In the first chapter, West, Farmer and Wolff identify a series of cognitive strategies and present them as a repertoire of ways to learn. Each of the nine strategies: chunking, frames-type one, frames-type two, concept mapping, advance organizers, metaphor-analogy-simile, rehearsal, imagery and mnemonics become the subject of the nine subsequent chapters (2 to 10). In each of these chapters the research on that particular cognitive strategy is summarized, and the authors present several ideas about how teachers and designers can activate these strategies to assist learning.

The final two chapters of the book are devoted to what the authors refer to as 'The Instructional Design Template" (IDT), which is a procedural explanation of an instructional design model. The book presents six phases in the IDT: the situational audit, the statement of aims and objectives, the identification of content and uses, the selection of appropriate cognitive strategies, the analysis of the means of instruction, and finally the process of evaluation, This rather complex procedure is presented in a very uncomplicated manner, which even the relative newcomer to the field of instructional design should be able to grasp. Indeed the entire book is an excellent example of the basic design principles it attempts to teach. It effectively incorporates many of the cognitive design strategies throughout and, in the end, challenges the reader to consciously identify them.

Following the discussion of the research each chapter has, a) a designer's guide which specifically directs the instructional designer in incorporating the

ideas presented into the eventual instructional design; b) a set of exercises which allows the reader to evaluate his or her understanding of the information presented; and c) a detailed bibliography. With the exception of chapter one, the text is very readable. While the first chapter provides important background, it is a somewhat difficult introduction to a text which is otherwise very comprehensible.

The book is well organized and, whereas it is best viewed as a coherent whole, it could be studied in segments if one wished to explore any one of the cognitive strategies in chapters 2 to 10. The final two chapters could also be studied independently as a description of the instructional design process. This is perhaps more advisable for those more experienced in the field. Those for whom the instructional design process is new would be best advised to consider the text in its entirety.

The book could be valuable to a very broad spectrum of users. For those uninitiated in instructional design there is a wealth of practical information, soundly backed by theory, which is presented in a non-intimidating manner. For theexperienced instructional designer this book permits afresh look at the advances in instructional design resulting from the cognitive evolution. There is truly something for everyone. The authors, despite their emphasis on cognitive theory, advocate an instructional design approach which is eclectic. It has been said that there is nothing more practical than a good theory; this book proves it.

REVIEWER

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Information for Authors

CJEC welcomes papers on all aspects of educational communication and technology. Topics include, but are not limited to: media and computer applications in education, learning resource centers, communication and instructional theory, instructional design, simulation, gaming and other aspects of the use of technology in the learning process. These may take the form of reviews of literature, descriptions of approachesor procedures, descriptions of new applications, theoretical discussions and reports of research.

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