

The Use of an E-Group as a Support Tool among Student Teachers

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Abstract

An e-group was created for in-service student teachers involved in the *Special Degree Programme for Non-graduate Teachers (PKPG)* majoring in Interactive Multimedia during their practicum. The main reason for the setting-up of the e-group was to give affective and learning support to the teachers while they were away from their course mates during the practicum. Based on Fahy's Transcript Analysis Tool (TAT), this paper will analyse and discuss the types of affective support for learning that may be provided online during the duration of the practicum.

INTRODUCTION

Information and communication technology (ICT) has become part of the educational landscape in Malaysia. Since 1996 when the Malaysian Super Corridor (MSC) was first launched, accessibility to ICT tools is no longer an issue in Malaysia. According to the Minister of Education, all 10,000 schools in Malaysia will be "smart schools" in the next five years as another 4,500 computer laboratories will be built under the Ninth Malaysia Plan to ensure that the schools have adequate ICT facilities (Zubaidah Abu Bakar, 2005). A study by Nor Azilah Ngah & Mona Masood (2004), which is part of a longitudinal study on the use of computers amongst in-service primary school teachers, has shown that computers are mainly being used as a glorified typewriter to help the teachers with administrative work at schools. As schools are being equipped with the latest technology, are the teachers ready for the invasion?

The Ministry of Education has started the Special Degree Programme for Non-graduate Teachers (PKPG), a three-year programme for non-graduate education officers serving in primary schools, secondary schools, polytechnics, community colleges, teachers training colleges or district education offices, state education departments and divisions in the Ministry itself. The first year is spent at a teachers' training college while the second and third years are at an institution of higher learning, in this case Universiti Sains Malaysia (USM). In this study, thirty-nine of these in-service teachers, or participants, comprising the first batch of the PKPG teachers majoring in Interactive Multimedia, underwent a six-week practicum at the end of their three-year programme. The Centre for Instructional Technology and Multimedia (CITM), as the centre that provides courses for Interactive Multimedia majors, created a practicum in line with the participants' knowledge and skills gained over the three-year period. Since the participants were in-service teachers who had teaching experience prior to the degree programme, it was decided that a practical experience in doing formative evaluation, one of the most important but rarely executed steps in instructional design, would be a better alternative for them. The final grade for the practicum was based on the report of the formative evaluation (60%), on-site teaching observation (10%), creation of a user manual (10%), services provided to the schools, for example, for creating multimedia brochures or pamphlets (10%), and participation in an e-group created during their practicum (10%).

One of the objectives for creating the e-group is to provide an effective learning support system for the participants while they were away from their peers during the six-week practicum. Another objective was for them to familiarise themselves with a viable communication tool in the current educational setting. The practicum was an opportunity for the participants to apply their Interactive Multimedia knowledge and skills acquired during their three-year course into the “real” school environments. The locations for the practicum included primary schools, secondary schools and community colleges in northern Malaysia.

There is extensive literature regarding online interactions as numerous studies have been conducted in this area in the last ten to fifteen years. According to Harasim (1990), computer-mediated conferences can not only greatly amplify human intellect online but also enhance collaboration and facilitate active knowledge construction. A study by Nor Azilah Ngah (1994) on online interactions amongst graduate students showed that for the students, such interactions forced them to be reflective in their thoughts and writings. In this study, the participants spent three years as course mates and were familiar with each other’s quirks and idiosyncrasies. The e-group was created as a means of providing affective and learning support to these students during their time away for the practicum.

According to Mason (1991), the role of an online tutor is two-fold. At a technical level, the moderator has the power to delete or alter any message in the conference and is responsible for removing irrelevant or offensive materials; at an educational level, the moderator has the responsibility to guide discussions, stimulate participation and often, to offer intellectual leadership. Accordingly, a moderator for an e-group needs to have a combination of skills such as those of a teacher, a chairman, a host, a facilitator, and last but not least, a community organiser. Salmon (2003) talked about the different activities or “e-activities”, as she calls them, that have to be performed by online moderators to allow for greater participation and interactions in an online learning environment.

The interpretations of the “unit of analysis” for online interactions are many and varied. The choice depends on the type of information the researcher would like to extract from the interactions. Researchers have often considered each individual sentence as a single unit of analysis (Fahy, 2001) or identified a consistent “theme” or “idea” (unit of meaning) in a message (Henri, 1992). Others have used as complete message as the unit of analysis (Gunawardena, et al., 1997; Rourke et al., 2001).

The aim of this study is identify the presence of support behaviours as indicated by Fahy’s (2003) Transcript Analysis Tool (TAT) during the six-week online interaction. According to Anderson & Simpson (2004), communication for online communities can be looked as the provision of scaffolding or support to students to enable them to attain goals in their studies and as an emotive support for each other. The emotive support is connected to social online interactions while the learning support for this study focuses on the activities or interactions to achieve the goal of the course.

METHODOLOGY

The participants for the study were 39 in-service teachers enrolled in a three-year programme for the Bachelor of Education (Interactive Multimedia) degree; the practicum was the last leg of their programme where they were required to spend six weeks in a school setting. The in-service teachers were required to conduct a formative evaluation of a multimedia instructional material created for a course through a portfolio design undertaken during the last semester of their programme. This material would be the accumulation of knowledge and skills they had acquired during the three-year programme, including instructional multimedia, visual literacy, digital audio and video systems multimedia authoring, Web design and development, 2D & 3D graphics and animation and project

management. These are knowledge and skills required of an instructional technologist according to the domains of theory and practice in instruction technology as prescribed by Seels & Richey (1994). In addition to these courses, the teachers would have taken other pedagogical courses in a minor area such as geography or science; these courses are being offered by the School of Educational Foundation, USM. The online interaction outcome was given 10% of the total practicum points where the teachers were required to contribute twice weekly to the online discussion over the six-week practicum period.

The online or e-group was created by using Yahoo groups, moderated by the authors, with the first author and her colleagues (lecturers from the Centre for Instructional Technology and Multimedia (CITM), USM), as “practicum supervisors” for the course. The teachers were required to sign onto the e-group one week before the practicum commenced and were required to send in at least two messages per week during the six-week period; no restriction was given on the type of messages sent. The first author, as the course supervisor for the online component of the practicum, posed weekly questions on matters pertaining to the week assignment. The participants were free to either answer these questions or send in other types of messages to the e-group. In addition to the online meetings, two site (physical) meetings were held with the teachers by their respective practicum supervisors, i.e., the lecturers from CITM.

In this study, Fahy’s (2003) Transcript Analysis Tool (TAT), a tool for the classification of online interaction (see Table 1), was used to analyse online support. The categorisations for TAT are shown in Table 1 below.

Table 1: The Transcript Analysis Tool (Fahy, 2003)

Category		Definition
1A	Vertical questions	Assume a correct answer exists and can be found
1B	Horizontal questions	Invite negotiations on plausible answers
2A	Non-referential statements	Make no reference to others’ comments or views
2B	Referential statements	Make direct or indirect reference to others’ statements
3	Reflections	Usually guarded personal thoughts, judgments, opinions or experiences
4	Scaffolding and engaging	Intended to initiate, continue, encourage or acknowledge interaction, and to “warm” or personalise the interaction environment
5A	Quotations and paraphrases	From sources within or outside a conference
5B	Citations	Attributions of quoted or paraphrased materials

Based on the TAT, Fahy (2003) identified 13 sentences that represent “supportive” behaviour including TAT Type 1B – horizontal questions, Type 2B – referential statements and Type 4 – scaffolding and engaging comments as shown in Appendix A of Table 2.

The qualitative and quantitative coding and analysis of the e-group transcript contents were done manually by the second author and rechecked by the first author. Coding was done at the sentence level with multiple codes being used for sentences that contained more than one category. Where coding disagreements or questions arose for any reason, a third person – a lecturer at CITM – served as the arbiter.

RESULTS AND DISCUSSION

Demographics

The participants' teaching experience ranged from two to sixteen years with their age varying from 30 to 44 years. They taught subjects such as the Malay, English and Chinese and Tamil languages, science, mathematics, art and health education. All of the participants own computers. In terms of computer and Internet usage, 38% (14) of them had been using the computer for three to five years, 35% (13) of them for six to nine years, 24% (9) of them for 10 to 15 years and one for 18 years. These teachers were able to use application software for word processing, electronic spreadsheets, presentations and databases. They also had access to Internet through their own computer at home, in cyber cafés or in the computer laboratory. The frequency of access to Internet among the teachers varied from twice a day to once a month. They were familiar with e-mail, search engines, Web surfing and chatting online, but most of them had never used the Internet discussion group.

Weekly Supportive Activities

Table 5 (Appendix B) shows the weekly percentages and frequencies of statements made by the group members based on the 13 support behaviours. During the six-week practicum period, the support behaviour statements participants used the most frequently were *signature* (33.9%), followed by *salutation* (25.7%), *closing* (10.8%), *referential statements* (9.1%) and *thanks* (7.3%). The notes of thanks were most expressed during the sixth week, the last week of the practicum. During the six-week period, discussion questions were posted to the e-group by the lecturer on the second, third, fourth and sixth week. The frequencies of interactions increased during these four weeks compared to the other two weeks. Support behaviours such as acknowledgement, agreement and rhetorical questions were seldom used in this e-group with the percentages being less than 1%.

Affective Support

Affective support was defined earlier as social interactions. For this paper, TAT Type 4 statements, representing the "scaffolding and engaging comments", were used as indicators of the affective support that occurred for this e-group. Table 5 shows that 88.8% of 960 support statements made during the six-week period were of this nature. Some examples of the interactions are shown in Appendix B of Table 5.

Support for Learning

Support for learning, defined earlier as activities or interactions to achieve the goal of a course, can be seen from TAT Type 1B statements (horizontal), Type 2B statements (referential) and from the content of the discussion. Type 1B and Type 2B statements represented the other 11.2% of the 960 support statements identified. Figure 1 and Figure 2 are two examples of the threaded messages sent to the e-group concerning the content of the practicum.

The two figures show not only the presence of student-instructor interactions but also peer-peer interactions. In Figure 1, student A posted a horizontal question on the management of data gathered during formative evaluation. Other members of the e-group members gave their support by giving explanations and suggestions within two days. During the discussion, other related questions were added on by peers and answers were given by a lecturer. Figure 2 shows the reaction to a statement by a student regarding the amount of time she had to spend on relief classes for other teachers in her school.

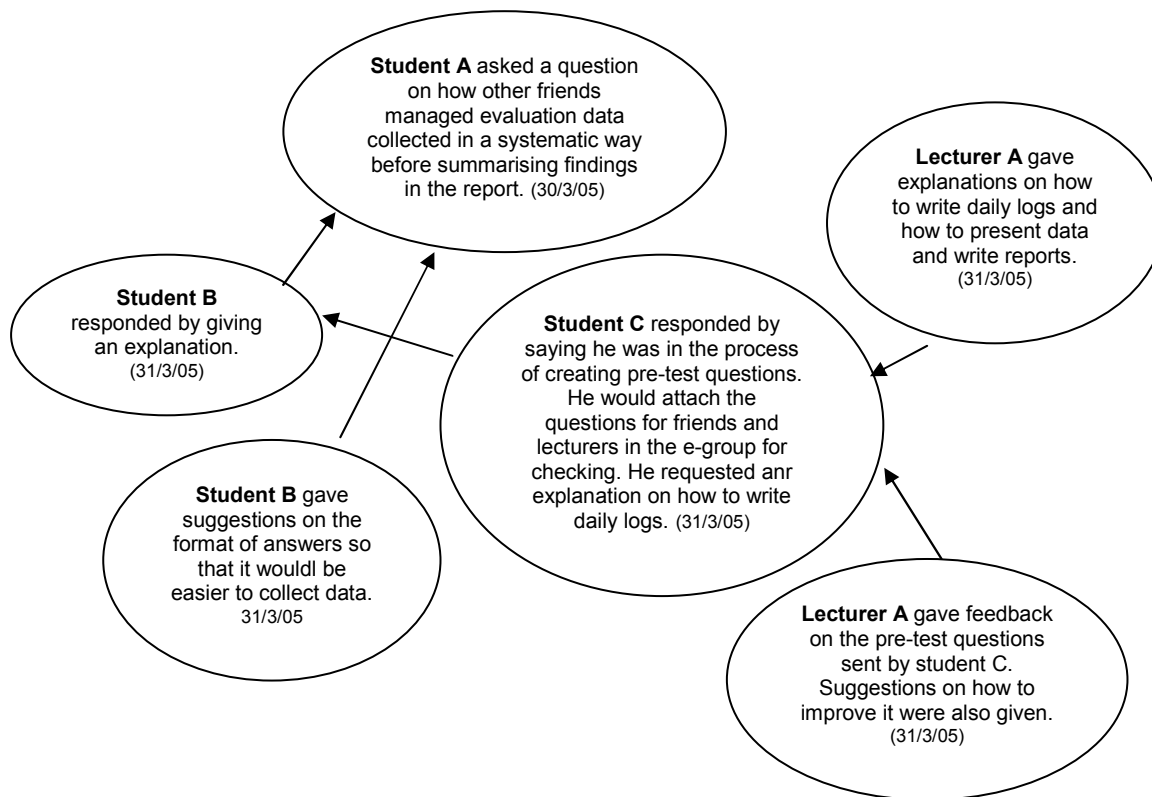


Figure 1: An Example of an Interaction Pattern of Support Given by Peers and Lecturers in an e-Group on Matters Pertaining to the Content of the Practicum

Positive and Negative Attributes of the e-group as a Support Tool

At the end of the practicum, the participants were asked to give their opinion on the positive and negative attributes of their online interactions during their practicum; Table 3 shows the three main positive attributes identified by the participants. Out of the 54 statements given concerning the positive attributes of the e-group, 21 statements (42%) were related to the assistance given to members to discuss current issues, giving opinions and suggestions, exchange of information, experiences and guidance when facing problems during the practicum. About 15 statements (30%) were related to how the e-group made them feel connected even though they were separated by distance from their peers. The e-group members posted 14 statements (28%) requesting for the e-group to continue after the practicum ended.

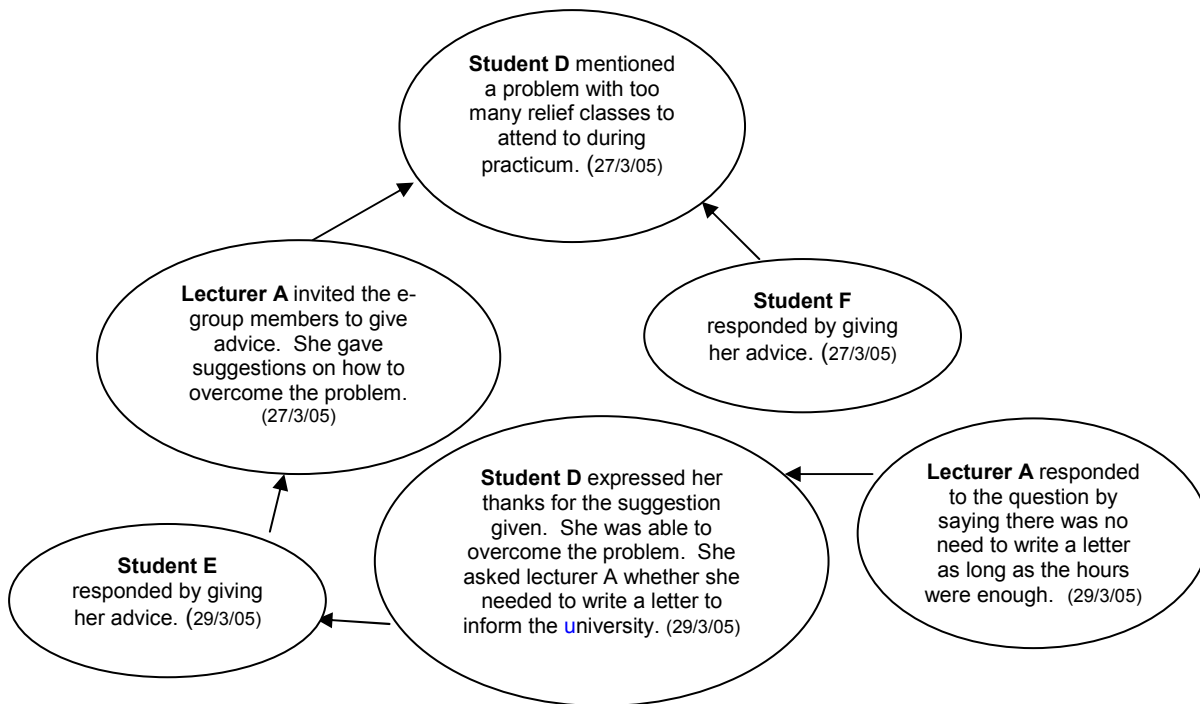


Figure 2: Another Example of an Interaction Pattern of Support Given by Peers and Lecturers

Table 3: Percentage (%) and Frequency (F) of Statements of Positive Attributes of the E-Group (N =33)

Positive Attributes	% (f)
Discussed current issues, enabled exchange of information and experiences	42 (21)
Felt connected regardless of distance and time	30 (15)
E-group should continue after the practicum for continuous discussions	28 (14)
Total	100 (50)

Although there were many positive statements about the e-group, there were some negative elements mentioned as shown in Table 4. Out of 24 statements posted regarding the negative attributes of the online group, seven messages (29.2%) were about problems with Internet connection which hindered discussions and interactions in the e-group. Some of the members were unhappy with the slow response from the peers and lecturers regarding questions they posted on the Internet (20.8%). Some contended that there were members who were posting too many irrelevant statements (20.8%) while others felt that serious discussions bored them (12.5%). Some of the members observed redundancy in the discussions posted in the e-group (12.5%). One member felt that messages sent through the e-group should be addressed to the whole group and not to one specific person.

Table 4: Percentage (%) and Frequency (F) of Statements of Negative Attributes of the E-Group (N=33)

Negative Attributes	% (f)
Trouble connecting to Internet	29.2 (7)
Slow response from the members of the e-group towards questions or problems posted	20.8 (5)
Members posted irrelevant information	20.8 (5)
Serious discussion without jokes was boring	12.5 (3)
Too many similar discussions posted	12.5 (3)
Information posted addressed to specific persons	4.2 (1)
Total	100 (24)

CONCLUSION

The main aim of this paper is to identify the presence of affective and learning support as identified by Fahy (2003)'s support indicators based on his TAT model. The findings from data have shown that both affective and learning support were present during the e-group discussion. The participants felt that the e-group allowed them to feel connected and they were able to discuss ideas and problem faced in achieving the goals of the practicum.

One interesting finding from this study is that of the importance of the presence of a moderator online; the absence of any questions from the instructor and moderator during the first and fifth weeks caused a drop in the interactions. During face-to-face interviews with some of the participants, they mentioned that they preferred more lecturers to be involved in the discussion. The participants also mentioned the delay in responses from instructors and peers as a negative attribute of the online interactions. The silence in a virtual environment can be deafening. Prior experience has shown the authors that successful communities must be led and facilitated. All these need considerable time and resources on the part of the facilitator. Further research should be done on the role of moderators in successful online interactions especially where longer (for example, a semester) online interactions are possible.

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Appendix A

Table 2: Definitions and Examples from the Transcript (Adapted from Fahy, 2003)

1. Horizontal questions	Questions which do not have a "correct" answer, but for which discussion might produce consensus or deeper understanding of the problem. - <i>"Bagaimana hendak membuat manual pengguna"</i> - <i>"Anda sepatutnya telah menjalankan ujian pakar minggu lepas dan ujian satu-ke-satu pada minggu ini. Boleh cerita pengalaman anda"</i>
2. Referential statement	Statement which makes specific reference to the content of a comment posted by another participant. - <i>"You only need to conduct the pretest for small group and field test"</i> - <i>"Contact your penyelia [name] and explain your situation"</i>
3. Acknowledgement	Recognising or acknowledging the helpfulness, ideas, comments, capabilities and experiences of other. - <i>"Good question"</i> - <i>"Bagus cadangan [name]"</i>
4. Agreement	Expressing agreement; connecting sympathetically with the views of another participant. - <i>"Betullah apa yang kata oleh [name]"</i> - <i>"Penilai saya juga komen tentang arahan yang saya bagi terlalu panjang"</i>
5 Apology, self-criticism	Any form of apology. - <i>"Sorry terlambat reply"</i> - <i>"Mohon maaf atas salah dan silap sepanjang menjadi penuntut"</i>
6. Closing	Ending the post with some closing summary or leave-taking convention. - <i>"Sekian, terima kasih"</i> - <i>"Bye.. c u all"</i>
7. Emoticon	Using an emoticon in a post to provide tone. - <i>"☺"</i>
8. Humour	Some effort at humour (may be self-deprecating or ironic). - <i>"5000 years ago, their ancestors were already using wireless technology"</i> - <i>"Rindu sangat pada semua rakan-rakan, kalau ada sayapkan.. dah lama terbang kat [name] dan kawan-kawan"</i>
9. Inviting	Inviting agreement, sympathy or comment from others. - <i>"Harap dapat respon dari semua"</i> - <i>"Siapa ada advice untuk [name]"</i>
10. Rhetorical question	Posing a rhetorical question. - <i>"Apa tujuan buat ujian pra dan ujian pos?"</i> - <i>"Habis semua tak boleh makan, nak makan apa?"</i>
11. Salutation	An expression of greeting, usually at the opening of the posting. - <i>"[name]"</i> - <i>"Hi all"</i>
12. Signature	Ending a post with the writer's signature or a nickname. - <i>"[name]"</i>
13. Thanks	Expressing thanks to another participant, or thankfulness for another's behaviour or views. - <i>"Terima kasih di atas nasihat dan pandangan"</i> - <i>"Terima kasih buat semua pensyarah yang telah memberi ilmu"</i>

Appendix B

Table 5: Weekly Presence of Support Indicators by Percentage (%) and Frequency (F)

Category		Week 1 (N=39) % (f)	Week 2 (N=36) % (f)	Week 3 (N=26) % (f)	Week 4 (N=30) % (f)	Week 5 (N=26) % (f)	Week 6 (N=36) % (f)	Total % (f)
1B	Horizontal questions	2.3 (5)	3.0 (5)	2.8 (4)	2.2 (3)	1.0 (1)	1.0 (2)	2.1 (20)
2B	Referential statement	1.8 (4)	10.2 (17)	9.8 (14)	17.2 (23)	1.9 (2)	13.9 (27)	9.1 (87)
4	Scaffolding and Engaging Comments							
	- Acknowledgement	0 (0)	2.4 (4)	0 (0)	1.5 (2)	0 (0)	0 (0)	0.6 (6)
	- Agreement	0 (0)	0.6 (1)	0.7 (1)	0 (0)	3.9 (4)	0.5 (1)	0.7 (7)
	- Apology, self criticism	1.4 (3)	0.6 (1)	0 (0)	0.7 (1)	1.9 (2)	4.1 (8)	1.6 (15)
	- Closing	9.6 (21)	12.6 (21)	9.1 (13)	8.2 (11)	12.6 (13)	12.8 (25)	10.8 (104)
	- Emoticon	8.3 (18)	8.4 (14)	4.2 (6)	1.5 (2)	1.9 (2)	3.6 (7)	5.1 (49)
	- Humour	0 (0)	0.6 (1)	4.9 (7)	1.5 (2)	3.9 (4)	1.0 (2)	1.7 (16)
	- Inviting	2.3 (5)	0.6 (1)	0.7 (1)	0.7 (1)	1.0 (1)	1.0 (2)	1.1 (11)
	- Rhetorical questions	0 (0)	0.6 (1)	0 (0)	0.7 (1)	1.0 (1)	0 (0)	0.3 (3)
	- Salutation	28.9 (63)	23.3 (39)	25.2 (36)	27.7 (37)	28.2 (29)	21.5 (42)	25.7 (246)
	- Signature	40.4 (88)	33.5 (56)	40.5 (58)	32.9 (44)	29.1 (30)	25.7 (50)	33.9 (326)
	- Thanks	5.0 (11)	3.6 (6)	2.1 (3)	5.2 (7)	13.6 (14)	14.9 (29)	7.3 (70)
	Total	100(218)	100 (167)	100 (143)	100 (134)	100 (103)	100 (195)	100 (960)