

**THE EFFECTIVENESS OF ELECTRONIC TUTORIAL
IN HELPING LEARNERS IMPROVE
THEIR WRITING SKILLS IN ENGLISH
(An Exploratory Study)**

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Abstract

This article reports on the effectiveness of electronic mail (e-mail) in assisting learners of English to develop their writing abilities. E-mail provides a number of facilities, which can help students of the Indonesia Open University (Universitas Terbuka/UT) improve their abilities as well as raising their confidence in writing English composition. Writing in itself is often considered as a process in a sense that it involves four main stages i.e. pre-writing, drafting, revising and editing. These four main steps seem to be applicable for paper-based writing as well as for e-mail. As far as distance-learning is concerned, these two aspects can be integrated into electronic-based tutorials, as opposed to face-to-face ones. Although there are some constraints, both from UT's and student's points of view, the advantages of electronic tutorial using e-mail still outweigh their disadvantages.

Key Words: *e-mail, Indonesia Open University, distance-learning, writing, electronic tutorial, English composition*

There are many ways that people do in order to improve their English writing skills, either through printed-based-learning materials, or through those learning materials, which make use of the sophisticated technology of electronic mail (e-mail). As a means of computer-based communication, there is no doubt about the capabilities of email facilities, especially in the context of teaching and learning process of a foreign language.

As an electronic medium that is not restricted by the time, space and distance, e-mail proves to be much effective in various respects, especially in individual's written communication or a group of users. Bee-Lay and Yee-Ping (1991) did a research on the advantages of e-mail for two different groups of students in Singapore and Canada. Both groups used e-mail as a means of communication. They discussed the story in two novels, including prose, from the two countries. Below are a few interesting findings of the research:

- The students were able to cross-check their writing;
- They learned how to write clearly, purposely, and effectively;
- They tried to understand their life and culture respectively;
- They have a better understanding about the usage of computer as a tool of communication as well as means for study.

Another relevant research has also conducted by Karla Frizler (1995). He studied the effectiveness of e-mail in teaching English, especially composition, to overseas students in San Francisco. They come from several countries where English is regarded as a foreign language or a second language. The fact was that their writing ability in English and self-confidence via e-mail had improved significantly.

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As far as learning English as a foreign language is concerned, there are four language skills that need to be acquired: listening skills, reading skills, speaking skills, and writing skills. Those skills, particularly writing skills, should continuously be improved so that the degree of proficiency in these skills shall be closer to the native-like performance although it may be rather difficult to achieve. One of the keys to succeed in this respect is to practice a lot. Without having a lot of practice, it is hard to imagine that a learner can improve their writing skills since writing itself is actually a process involving *planning*, *writing first draft*, *reviewing* and *writing final draft* (Byrne, 1995).

E-mail facilities available on UT's local network can be used at maximum to improve the staff's writing ability. This in turn shall upgrade the quality of UT's human resources in general, English proficiency in particular. Hence, a question can be raised as to toward extent e-mail facilities can be used effectively to improve the writing ability of some UT's staff.

Besides, due to the fact that the proportion of writing exercises in the student's book used is relatively low, compared to the other three skills (i.e. Reading, Listening and Speaking), therefore, it is necessary to enrich the learner's writing practice that is given in the form of intensive tutorials. In addition, there is a limited amount of time available to review the writing tasks in the classroom. It is in this respect that e-mail facilities play a great role as the tasks being set, including the feedback, shall be much easier if they are given through the electronic medium with a number of advantages. One of the advantages is that e-mail has those facilities that make it possible to learn independently; such atmosphere is very much demanding in distance learning. Apart from this, the learning materials provided via e-mail are likely to be learner-centred, rather than teacher-centred. Even, e-mail seems to be an ideal solution to those study groups with different age or interest (Scott-Tennant Basallote, 1997).

Based on the above problems, an experiment has been done in order to study the effectiveness of e-mail in the effort to improve the writing skills, including to develop and to raise the subjects' (i.e. both the staff and the student) self-confidence in writing English composition. Through this research, it is possible to study the scores or the participant's writing achievement in doing the Intermediate level of writing tasks that can be monitored or assessed continuously. The monitoring instruments employed were journal of observation and questionnaire in part. The achievement obtained by this experiment group was compared with the achievement gained by another comparative group on the basis of face-to face mode. Both groups were treated equally during the training. And, this article was written on the basis of the research findings.

The population or subjects of this research consisted of 13 participants from the respective group. They are among 1,462 UT's staffs, both junior and senior and also a number of students.

The instrument used in order to elicit the data were the participant's writing tasks at the Intermediate level.

The training lasted for seven weeks starting from 10th of July 2000 until 9th of September 2001. The number of these sessions was, in fact, similar to the number of tasks being set. And, the whole process of sending the tasks, including giving the feedback for the participant's writing, were carried out through e-mail facilities only.

Independent variable being investigated was the participant's writing ability by using e-mail facilities. This variable was then assessed by making a comparison between indicators associated with the types and the number of grammatical mistakes found in each writing tasks given. While the dependent variable being investigated was the improved self-confidence in writing English composition.

The sample data were taken from the participant's writing involving seven writing tasks. Moreover, a journal of observation was also published which contained both the tutor's and the participant's experiences and impressions during the training.

This research findings are expected not only to motivate UT's staff in general which in the end shall enhance the quality of its human resources, particularly in the area of linguistic aspects, but also UT's students themselves. They are then encouraged to constantly use e-mail facilities in their effort to increase their writing skills.

The e-mail software used for this research was Pegasus Mail System. It was David Harris, who made this software in 1990. It used to be one of the communication facilities for the users within UT's local network. It was used on Novell Netware operated under DOS version 3.0 system or above and required 384 KB RAM (Pratmoko, 2000). Unfortunately, this old system has no longer been used at UT since it has been replaced with windows-based e-mail system.

On July 2nd 2000, an English training program using e-mail was offered to a number of UT's staff, including the students. The training aimed to develop the participant's writing skills and also to raise their self-confidence in writing. There were 18 participants enrolled this program.

Prior to the training sessions, they took a placement test in order to recruit those who belonged to the Intermediate level of English. From 18 participants, there were only 13 participants who were entitled to this level. They comprised both the staffs and the students which meant that whatever the outcome of this training was it was primarily dedicated to the students.

During the training, the participants never came across each other in the face-to-face situation. However, in a number of occasions, outside the e-mail-oriented communication, I informally discussed with them about the problems or difficulties they faced, either technically or non-technically.

Mailing List: A Communication Facility for Tutor with the Students

Before having the training, a mailing list, called writing@omega.ut.ac.id, was designed by technicians from the Computer unit at UT. This facility was one of the communication facilities used during the process of training. Besides, I also made use of another facility available in e-mail, that is, *distribution list*. This backup facility was used whenever there was a technical failure on the mail server, or even on the Internet bandwidth which prevents the mailing list from functioning properly. Chart 1 below shows the working procedure of the mailing list.

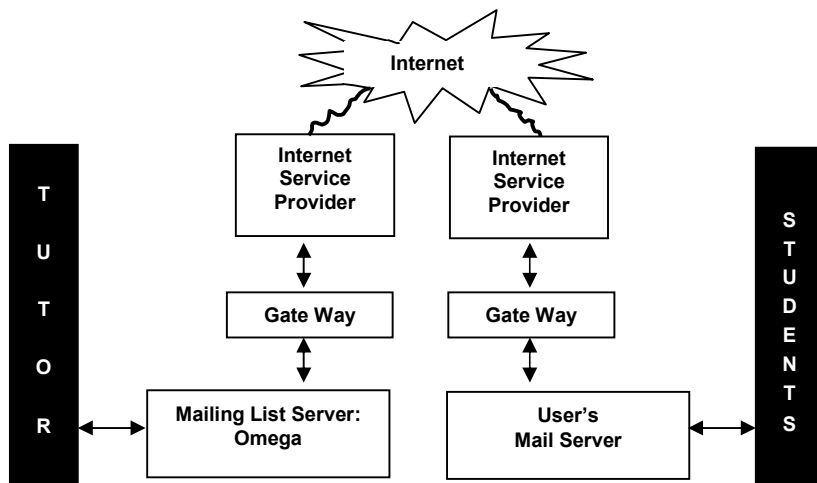


Chart 1: Mailing List – writing@omega.ut.ac.id

Chart 1 represents how the process of training was administered. First of all, I, as a tutor, prepared a set of writing tasks. Afterwards, I sent each of them to all participants, which was in accordance with the training schedule made beforehand, through the mailing list – writing@omega.ut.ac.id. Below is the communication channel between the tutor and the participants:

Tutor ⇄ *Mailing List* ⇄ *GateWay* ⇄ *Internet Service Provider* ⇄ *Internet* ⇄ *Internet Service Provider* ⇄ *GateWay* ⇄ *User's Mail Server* ⇄ **Participants (collectively)**

Distribution List: An Alternative Facility

The mailing list functioned as a facility to send messages or giving the writing tasks to all participants collectively. Yet, the process of training did not terminate at this point. The next process is that the participants sent their writing to the tutor for correction and get feedback on theirs. This took the opposite direction as shown by the arrows. Therefore, another support facility was needed -- *Distribution list* (see Chart 2) which was used to send training materials to the participants if the mailing list writing@omega.ut.ac.id did not work due to technical problems in mail server or even on the Internet bandwidth. At this point, a two-way communication took place -- from the participant to the tutor, and vice versa. Even, the communication was getting intense when the tutor forwarded some of the participant's good writing as model via mailing list or distribution list, so that they could share their work.

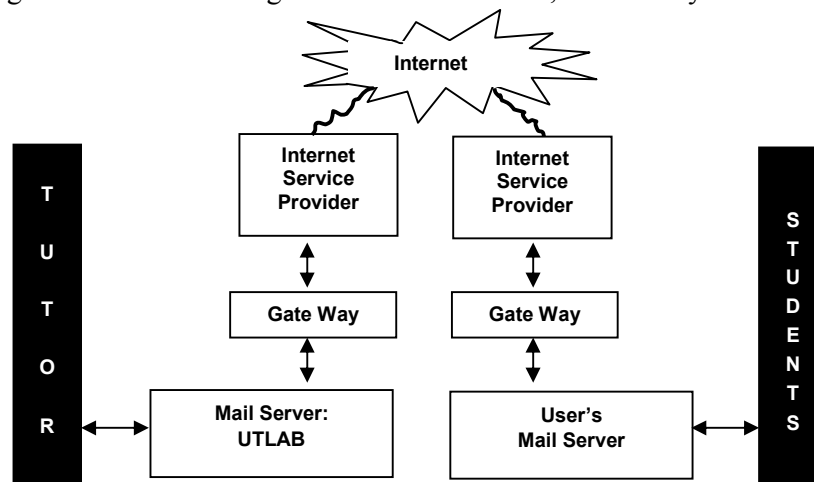


Chart 2: Distribution List

Chart 2 shows individual communication channel between the tutor and each participant during the training. Each writing task and feedback was sent to individual participant through this channel:

Tutor → *Mail Server UTLAB* → *GateWay* → *Internet Service Provider* → *Internet* → *Internet Service Provider* → *GateWay* → **Participants (individually)**

And from the participant when they sent their writing to the tutor using the following channel:

Participants → *User's Mail Server* → *GateWay* → *Internet Service Provider* → *Internet* → *Internet Service Provider* → *GateWay* → *Mail Server UTLAB* → **Tutor**

Distribution list, nevertheless, is slightly different from mailing list in terms of appearance. In the mailing list, there is no a list of participant's addresses on the incoming mail, whereas in the distribution list a participant can see other participants' addresses available on top of the screen before the email messages. The combination of the two facilities has made things much easier during the training.

RESULTS AND ANALYSIS

Software Evaluation: Technical Difficulties

During the training, several technical difficulties occurred on mail server. As a result, this had effect on mailing list. But, the training did not stop here because there was still another e-mail facility -- distribution list.

Another difficulty faced by the researcher was that some participants did not receive the tasks that were sent through mailing list and distribution list. A solution to this problem was by sending the task and feedback again manually via e-mail.

The third difficulty faced by the participants was the way, in which they could extract the attachments which contained placement test, training schedule, and writing tasks typed under MSWord version 6.0 that was no longer up-to-date. Things were getting more complicated when the participants outside UT's local network saved their documents under MSWord with version 6.0 above (Windows operating system), and not under DOS operating system. This caused difficulties for the tutor to open or to extract files. If he managed to do so, then the text in the file was unreadable.

Pedagogic Aspects

Although the participants were not awarded grade for this training, feedback on the participant's writing were given on the basis of three main criteria: average, good, and very good. Below are ways of providing the feedback for the participants:

- 1) Identify errors (abbreviated with I);
- 2) Do the correction and group the errors (abbreviated with C).

The extract below indicates a procedure for the given feedback. First, tutor sent each task to all participants via the mailing list writing@omega.ut.ac.id or via distribution list when there were technical problems with mail server or the Internet bandwidth. A week later, tutor received the participants' writing although not all participants sent their work on time. After printing the e-mail messages, tutor then replied them. Feedback on their work was given within one or two days later. Below is e-mail extracts taken from one participant.

From: Self <UTLAB/KARNEDI>
To: "PP4" <UTLAB/PP4>
Subject: Feedback on Task 4
Date: Wed, 18 Sep 2000 12:50:34

Dear PP4,

Below are some comments on your writing (Task 4).

I = In 2001, Indonesia has the best leader in his history. [TENSES]
C = In 2001, Indonesia will have the best leader in this history.

I = He can build clean government. [ARTICLE]
C = He can build a clean government.

I = We can work nicely everyday, and there are no demos again. [ADVERB]
C = We can work nicely everyday, and there are no demos anymore.

I = Every countries respect to this government, they would like to help our country. [SUBJECT-VERB AGREEMENT]
C = Every country respects this government, they would like to help our country.

VERY GOOD!

Best regards,
Karnedi

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- I** : ... [...] an extract, either in the form of sentence or phrase found in the participant's writing followed by errors identification e.g. [SUBJECT-VERB AGREEMENT/CONCORD]
C : ... correction for the errors.

It was expected that they could get a sort of input from the feedback. If they wanted to study more about the grammatical aspects raised in the feedback, then it was advisable that they would consult their grammar books because learning grammar has no ending in a sense that it is hard to believe that one can master all grammatical rules of a language having completed a period of instruction. They should constantly open their grammar books and learn from them. At least, it is expected that the feedback shall refresh their understanding or knowledge about English grammar, one which they might have learned beforehand. The thing is that we often forget particular grammatical usage as we may rarely use them. Perhaps, this is one of the advantages of this training with regards to their improved language competence and self-confidence in writing.

Below is an analysis of the participant's writing associated with the types and the number of grammatical mistakes did. The kinds of mistakes were then divided into five categories as follow:

- Errors in the use of English, indicated with (1)
- Errors in *subject-verb agreement/concord*, indicated with (2)
- Errors in the use of *pronoun*, indicated with (3)
- Errors in the use of *article*, indicated with (4)
- Errors in the use of *tenses*, indicated with (5)

Task 1 was not analyzed because it was the easiest one in which the participants were not asked to write anything, except rearranged some sentences to make a short personal letter. Therefore, the column for Task 1 above does not contain the figure for mistakes made by the participants. A part from this, it was also intended to make them feel at ease. Still, all of them completed this task.

As can be seen from Appendix, generally speaking, there was a significant improvement of the participants' performance in writing in both groups, particularly in the

use of subject-verb-agreement/concord, article, and tenses, although it cannot be seen from the table that there is a significant increase in those five categories (1,2,3,4,5).

Another fairly interesting aspect that came up in this research is that those writing topics such as *re-telling a story* (Task 3), *describing yourself or someone you know well* (Task 5), and *comparing two people you know well* (Task 6) gave them a strong motivation to write a longer piece of writing, regardless the number of mistakes they made. This can be regarded as a good atmosphere in relation to the psychology of learning a foreign language in which motivation is something highly demanding.

As can be seen from Appendix, the participants' participation was rather low, especially the e-mail group. The evidence for this is that from 13 participants who enrolled the e-mail-based training program, there were only a couple of them who managed to complete all the seven tasks, compared to the classroom-based group. This reflects that the motivation of participants who belonged to e-mail-based group in general is relatively low although the tutor was trying to send them e-mail messages asking for the writing assignments they had to do and send back to him. Due to the fact that they might be pretty busy with their jobs at the office, they did not seem to have enough time to complete their assignments.

Another instrument, apart from the writing tasks, employed in this research was sending questionnaire via e-mail. The feedback from the questionnaire in general informed that the usage of e-mail in the English training program, especially writing, was positive as follows:

From: "pp" <pp@utlab.ut.ac.id> | [Block Address](#) | [Add to Address Book](#)
To: "Karnedi /FISIP" <KARNEDI@utlab.ut.ac.id>
Subject: Re: answer
Date: Sun, 18 Jul 2010 14:44:21 +0700

1. Your writing skills in English BEFORE having the training.
Below average (1)
2. Your writing skills in English AFTER having the training.
Average (2)
3. Is the training helpful? (e.g. your writing ability improved and self-confidence raised) Yes (3)

E-mail, from the student's and tutor's point of view, has two major advantages. First, e-mail enables the students to engage in the process of writing² – *pre-writing* (i.e. step where ideas are formulated), *drafting* (i.e. a step for writing and organize the writing structure), *revising* (i.e. the ideas organization are classified and improved their quality), and *editing* (i.e. the step where expressions are widen and vocabulary are varied) as natural as possible in the sense that they could stop writing using e-mail at certain point of the writing process, whenever they wish, as one can save the draft of the e-mail message, and comes back later to it and then continuous again with the draft for revision and editing although the process is not exactly the same as the one using paper where the use of time can be arranged in such as a way that the writing itself can take longer. However, the communication between the students and the tutor via e-mail is much quicker than normal classroom condition, and even the student's identity can be confidential.

As for the tutor, e-mail is also user friendly where he can forward any good piece of writing written by a student as a model to other students who takes the same subject so that

² (<http://www.tnellen.com/cybereng/>)

the teaching and learning process can be lively and share their experiences which is highly recommended in the context of their writing improvement.

CONCLUSION AND RECOMMENDATION

Based on the research objectives, the researcher has undertaken an experiment in which the effective e-mail facilities used to help the participants improve their writing skills, compared to the improvement gained by another group of participants in the traditional classroom condition.

Both groups were given several writing tasks at the Intermediate level. The experiment revealed that the achievement obtained by the two groups was, to a certain degree, more or less the same where the number of mistakes associated with certain language aspects decreased as they approached the tasks given in the later sessions.

One aspect that makes the two groups different is motivation. The classroom group seemed to have a stronger motivation in learning English, compared with the e-mail group. This can be seen from the number of participants in the former group who managed to complete all the writing tasks; whereas not all participants in the later group did the same.

This, of course, does not mean that the English training program via e-mail is not recommended. The fact might tell something different that if the email-based training program can contribute significantly to the raw scores awarded to the students at the end of the semester like the specially-designed face-to-face tutorials³, then they should be more interested and have a stronger motivation to take part in tutorials of particular subjects through e-mail although one should bear in mind that not all students have easy access to computer facilities since, to some users, this technology is still considered as something rather expensive (Miller and Clouse, 1994). However, this accessibility does not seem to be the main problem anymore because nowadays *warnet* can be found everywhere. The students can make a full use of this public facility for the sake of electronic tutorials.

If the high degree of participation, including self-discipline, in e-mail-assisted tutorials and the idea of tutorial contribution to the final grade can be integrated into one within the context of self-study and distance learning, then UT's students spreading across the country, even those in remote areas, are able to improve their writing skills. Things are even far much easier at this time since there are a lot of *wartel* which provide services for the users who need access to the Internet, including free e-mail subscription on the Internet. The most important thing is that the students' strong will and their seriousness are highly demanding in this respect.

As for the advantages of e-mail facilities in relation to the student's participation rate, it is necessary to conduct a further research involving other subjects within UT by applying the more comprehensive research methodology and by selecting the more representative population, as well by using the current windows-based e-mail. Accordingly, it is expected that these findings shall be more beneficial to UT as a whole, especially in the efforts to increase the quality of academic performance of UT's graduates.

³ This is commonly called *Tutorial Tatap Muka Rancangan Khusus (TTMRK)*

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Appendix: Types and Number of Errors

GROUP OF TRAINING: VIA E-MAIL								GROUP OF TRAINING: FACE-TO-FACE MODE						
	T1	T2	T3	T4	T5	T6	T7	T1	T2	T3	T4	T5	T6	T7
PP1	(1)=	(1)=1	(1)=1	(1)=1	(1)=2	(1)=1	(1)=0	(1)=	(1)=1	(1)=4	(1)=4	(1)=2	(1)=2	(1)=0
	(2)=	(2)=1	(2)=0	(2)=0	(2)=4	(2)=0	(2)=0	(2)=	(2)=0	(2)=0	(2)=4	(2)=2	(2)=0	(2)=1
	(3)=	(3)=0	(3)=0	(3)=1	(3)=0	(3)=0	(3)=1	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=1	(3)=0
	(4)=	(4)=1	(4)=0	(4)=0	(4)=5	(4)=6	(4)=0	(4)=	(4)=0	(4)=1	(4)=4	(4)=0	(4)=0	(4)=0
	(5)=	(5)=1	(5)=3	(5)=1	(5)=8	(5)=0	(5)=0	(5)=	(5)=3	(5)=11	(5)=4	(5)=2	(5)=1	(5)=10
PP2	(1)=	(1)=2	(1)=4	(1)=0	(1)=	(1)=6	(1)=	(1)=	(1)=	(1)=3	(1)=4	(1)=4	(1)=2	(1)=0
	(2)=	(2)=0	(2)=2	(2)=0	(2)=	(2)=1	(2)=	(2)=	(2)=	(2)=1	(2)=2	(2)=1	(2)=9	(2)=0
	(3)=	(3)=0	(3)=0	(3)=0	(3)=	(3)=0	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0
	(4)=	(4)=0	(4)=1	(4)=0	(4)=	(4)=1	(4)=	(4)=	(4)=	(4)=2	(4)=2	(4)=1	(4)=1	(4)=0
	(5)=	(5)=2	(5)=0	(5)=9	(5)=	(5)=5	(5)=	(5)=	(5)=	(5)=4	(5)=2	(5)=2	(5)=2	(5)=3
PP3	(1)=	(1)=0	(1)=4	(1)=6	(1)=9	(1)=4	(1)=5	(1)=	(1)=0	(1)=0	(1)=1	(1)=1	(1)=0	(1)=1
	(2)=	(2)=0	(2)=2	(2)=2	(2)=0	(2)=0	(2)=0	(2)=	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0	(2)=2
	(3)=	(3)=0	(3)=1	(3)=1	(3)=0	(3)=0	(3)=0	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=1	(3)=2
	(4)=	(4)=0	(4)=1	(4)=1	(4)=1	(4)=1	(4)=2	(4)=	(4)=0	(4)=0	(4)=0	(4)=0	(4)=0	(4)=0
	(5)=	(5)=2	(5)=1	(5)=1	(5)=4	(5)=1	(5)=4	(5)=	(5)=0	(5)=2	(5)=2	(5)=5	(5)=1	(5)=0
PP4	(1)=	(1)=4	(1)=1	(1)=3	(1)=1	(1)=5	(1)=2	(1)=	(1)=7	(1)=3	(1)=0	(1)=1	(1)=1	(1)=0
	(2)=	(2)=0	(2)=0	(2)=2	(2)=1	(2)=0	(2)=1	(2)=	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0
	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0
	(4)=	(4)=0	(4)=1	(4)=1	(4)=0	(4)=2	(4)=1	(4)=	(4)=1	(4)=1	(4)=0	(4)=0	(4)=0	(4)=0
	(5)=	(5)=0	(5)=2	(5)=0	(5)=1	(5)=1	(5)=2	(5)=	(5)=2	(5)=9	(5)=0	(5)=0	(5)=0	(5)=0
PP5	(1)=	(1)=0	(1)=5	(1)=6	(1)=3	(1)=3	(1)=4	(1)=	(1)=	(1)=0	(1)=0	(1)=1	(1)=0	(1)=
	(2)=	(2)=0	(2)=0	(2)=0	(2)=6	(2)=2	(2)=1	(2)=	(2)=	(2)=0	(2)=0	(2)=0	(2)=0	(2)=
	(3)=	(3)=1	(3)=0	(3)=1	(3)=0	(3)=0	(3)=0	(3)=	(3)=	(3)=0	(3)=0	(3)=1	(3)=1	(3)=
	(4)=	(4)=0	(4)=1	(4)=2	(4)=0	(4)=0	(4)=0	(4)=	(4)=	(4)=0	(4)=0	(4)=0	(4)=0	(4)=
	(5)=	(5)=2	(5)=1	(5)=3	(5)=0	(5)=2	(5)=1	(5)=	(5)=	(5)=3	(5)=1	(5)=3	(5)=0	(5)=
PP6	(1)=	(1)=0	(1)=	(1)=1	(1)=	(1)=	(1)=	(1)=	(1)=1	(1)=6	(1)=2	(1)=3	(1)=0	(1)=0
	(2)=	(2)=2	(2)=	(2)=0	(2)=	(2)=	(2)=	(2)=	(2)=0	(2)=0	(2)=1	(2)=0	(2)=0	(2)=0
	(3)=	(3)=1	(3)=	(3)=0	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=2	(3)=1	(3)=0	(3)=0
	(4)=	(4)=0	(4)=	(4)=0	(4)=	(4)=	(4)=	(4)=	(4)=0	(4)=3	(4)=1	(4)=1	(4)=1	(4)=0
	(5)=	(5)=2	(5)=	(5)=0	(5)=	(5)=	(5)=	(5)=	(5)=0	(5)=2	(5)=1	(5)=12	(5)=2	(5)=1
PP7	(1)=	(1)=4	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=0	(1)=1	(1)=1	(1)=0	(1)=
	(2)=	(2)=0	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=0	(2)=0	(2)=2	(2)=1	(2)=
	(3)=	(3)=0	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=
	(4)=	(4)=0	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=1	(4)=0	(4)=0	(4)=1	(4)=
	(5)=	(5)=1	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=0	(5)=2	(5)=7	(5)=0	(5)=
PP8	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=0	(1)=1	(1)=0	(1)=0	(1)=0	(1)=0
	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0
	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0
	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=1	(4)=0	(4)=2	(4)=0	(4)=0	(4)=0
	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=2	(5)=0	(5)=1	(5)=1	(5)=0	(5)=2
PP9	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=0	(1)=2	(1)=0	(1)=0	(1)=2	(1)=0
	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0	(2)=0
	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0	(3)=0

	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=0	(4)=0	(4)=0	(4)=0	(4)=0	(4)=0	(4)=1
	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=1	(5)=1	(5)=1	(5)=0	(5)=0	(5)=0	(5)=0
PP10	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=0	(1)=5	(1)=3	(1)=5	(1)=6	(1)=1	(1)=1
	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=0	(2)=1	(2)=0	(2)=0	(2)=1	(2)=0	(2)=0
	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=1	(3)=0	(3)=0	(3)=0	(3)=0
	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=1	(4)=3	(4)=0	(4)=1	(4)=0	(4)=1	(4)=1
	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=0	(5)=7	(5)=4	(5)=10	(5)=7	(5)=2	(5)=2
PP11	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=5	(1)=	(1)=0	(1)=1	(1)=1	(1)=2	(1)=2
	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=1	(2)=	(2)=3	(2)=4	(2)=0	(2)=0	(2)=0
	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=1	(3)=	(3)=1	(3)=0	(3)=0	(3)=0	(3)=0
	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=2	(4)=	(4)=0	(4)=0	(4)=0	(4)=0	(4)=0
	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=5	(5)=	(5)=4	(5)=5	(5)=3	(5)=5	(5)=5
PP12	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=1	(1)=	(1)=0	(1)=1	(1)=4	(1)=2	(1)=2
	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=0	(2)=	(2)=1	(2)=0	(2)=3	(2)=1	(2)=1
	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=	(3)=1	(3)=1	(3)=0	(3)=0	(3)=0
	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=0	(4)=	(4)=1	(4)=6	(4)=0	(4)=1	(4)=1
	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=0	(5)=	(5)=2	(5)=0	(5)=3	(5)=0	(5)=0
PP13	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=	(1)=0	(1)=1	(1)=0	(1)=4	(1)=0	(1)=0	(1)=0
	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=	(2)=2	(2)=1	(2)=0	(2)=0	(2)=0	(2)=1	(2)=1
	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=	(3)=0	(3)=0	(3)=0	(3)=0	(3)=1	(3)=2	(3)=2
	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=	(4)=0	(4)=0	(4)=0	(4)=0	(4)=0	(4)=1	(4)=1
	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=	(5)=2	(5)=11	(5)=5	(5)=1	(5)=2	(5)=0	(5)=0

PP = Participant

T = Task