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Appendix 1 Yamaha Grade Examination System

13	12	11	10	9	8	7	6	5	4	3
Electone Achievement Test				Electone				Electone		
JMC F.S.S.				Piano				Piano		
								Fundamentals		
				Guitar				Guitar		
								Guitar Fundamentals		

The Yamaha Grade Examination System is set up to evaluate the performing ability and total musical knowledge in each grade level for teachers, students, and interested persons as well as professional musicians. Fundamental Grade is designed for teacher qualification which requires comprehensive musical knowledge and performing skills. The "Yamaha Electone Achievement Test (Level 13-10)" is limited to the students of the "Electone School for Children" to confirm their individual progress and to clarify the goals of their future study. Grade 9-6 are mainly for students and interested persons, and Grade 5-3 are mainly for teachers and those who intend to become teachers.

Yamaha Grade Examination System has been successfully used for over 20 years, with about 3.8 million people having been tested.

Appendix 2 The evaluation criteria of music improvisation performance

There are 4 dimensions in the evaluation of music improvisation performance. They are :

1. Expression and dynamics

<u>Score</u>	<u>Implied relevancy</u>
0	no expression and dynamics playing too loud/too soft
1	having some expression but not suitable roughly playing for mp, mf, f, etc. unable to play the crescendo \llcorner and decrescendo \lrcorner smoothly
2-4	able to play \llcorner , \lrcorner , mp, mf, f, etc. as stated in the score but not playing from the heart
5-7	playing smoothly and playing from the heart
8-10	able to feel the score more deeply

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Appendix 2 (continued)2. Playing techniques

<u>Score</u>	<u>Implied relevancy</u>
0	unable to play the original score not keeping tempo
1	able to play the notes correctly without phrasing, articulation, etc.
2-4	able to keep tempo correctly play but somewhat like a mechanical and no touching
5-7	able to play with touching but some parts are not suitable
8-10	able to play with suitable touching in different sounds of instrument

3. Developing of the piece

<u>Score</u>	<u>Implied relevancy</u>
0	unable to play the original score
1	only playing like the original score
2-4	trying to use some ideas for developing the piece but they are not suitable
5-7	having many ideas for developing the piece but some parts are not suitable
8-10	having good and suitable ideas for developing the piece

Appendix 2 (continued)4. Registration

<u>Score</u>	<u>Implied relevancy</u>
0	funny sound
1	the balance of the sound being used is not good
2-4	the balance of the sound being used is excepted but having no ideas for the registration the registration is not suitable to the score
5-7	having some ideas for the registration there are some changings of the registration in different parts of the piece but some parts are not suitable
8-10	having good and suitable ideas for setting the registration in each part of the piece

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Appendix 3 Music improvisation performance marking sheet

Name of examiner _____

Test number _____

Date of evaluation _____

Date of-test _____

No.	Subject number	Expression and dynamics			Playing techniques			Developing of the piece			Registration			Total score
		Remarks :												
		Remarks :												
		Remarks :												
		Remarks :												
		Remarks :												

Appendix 4 Self-regulating form

Period number _____

Date _____

Name _____

Target score _____

Achieved score _____

Evaluation

above/on target

(Name) _____

(Give appraisal of yourself)

Next trial I will try to perform for a better score.

below target

(Name) _____

Next trial I will try to perform for a better score.

Appendix 5 Feedback information form

Name _____

40								
30								
20								
10								
	1	2	3	4	5	6	7	8

Period

Appendix 6 Example of the modelling procedures applied to the experimental group

The example below uses the first improvisation exercise in period 1. (The score is shown in Appendix 7).

Researcher :

"Before we decide how to make an effective improvisation performance from the score given, we must find the mood of the piece first.

(sing the melody with good phrasing)

Melodious piece. It is a very nice, sweet and lovely melody. I think it would be nice to play with moderate tempo, using 8 beat feeling.

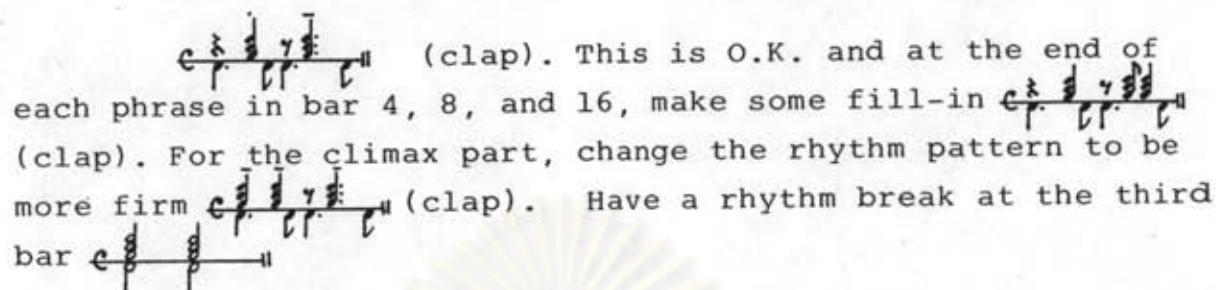
Now, let's analyse this piece more deeply.

What about the structure of this piece ? Where is the climax ?

For the melody part, the first line and the second line are similar (sing). The movement of the melody line is quite simple but in the third line, it changes into a wider range of sound (sing). We can feel the more powerfulness of the sound, long breath feeling than the first 2 lines. Therefore, this part should be played with crescendo (sing). Then, it becomes more and more powerful feeling (sing sol-la-ti sol-la-ti). That is the climax of the piece. After that decrease the sound (sing la-ti-re do-ti-la-sol) and that's it.

Appendix 6 (continued)

What about the rhythm pattern to be used ?

 (clap). This is O.K. and at the end of each phrase in bar 4, 8, and 16, make some fill-in (clap). For the climax part, change the rhythm pattern to be more firm (clap). Have a rhythm break at the third bar

Oh! What else could we do ?

Alternating bass or bass line ? No, not good. In the first line and the second line, there are 2 chords in one bar and this chord progression cannot do any bass line or alternating bass. Therefore, simple playing use only root position would be better. The third and the fourth ones, eventhough there is only one chord in one bar but root position would sound better.

Look at the chord progression in the third line
 $G_7 - C_m$ and $A_7 - D$ ($V_7 - I$). Hm ! The counter melody can be done here (sing ti-do-do[#]-re).

All right.

Now summarize

Sweet song, 8 beat, moderate tempo, play more crescendo on the third line with long breath and counter melody. The climax is on the fourth line.

How to develop the piece ?

This piece has only 16 bars. We better do it with 3 choruses.

Appendix 6 (continued)

1st chorus : play the notes correctly with good expression, use strings sound. The rhythm patterns and counter melody could be played as I told you.

2nd chorus : make the variation or fake of the melody, sing some part (see A below), use piano sound.

3rd chorus : play the double notes with the long tone (see B below), and make a contrast by playing single note variation (see C below). For the third line, use sustained double notes on right hand, and play block chords on the fourth line. Strings sound is chosen for this chorus.

introduction and ending : use the same progression (Cm F₇ | B^b E^b | Cm C[#]dim | D₇ | Gm | Gm |) Create the melody from the motif at the beginning of the piece and also use strings sound for introduction and ending."

Perform the improvisation and evaluate the outcome.



Appendix 7

Improvisation exercises



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Period 1
Exercise 1

8 Beat

Cm7 F7 B \flat E \flat Am7 (\flat 5) D7 Gm7 G7

Cm7 F7 B \flat E \flat Am7 (\flat 5) D7 Gm6

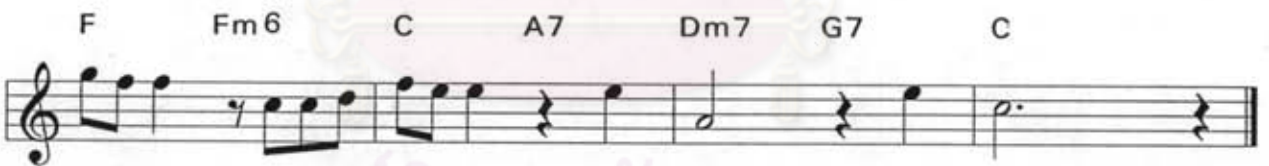
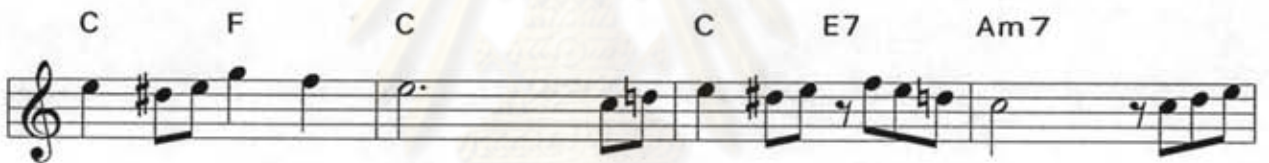
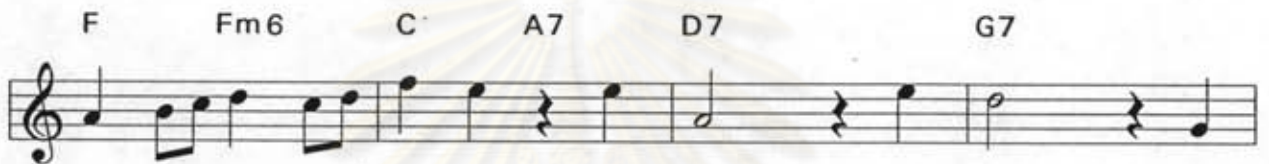
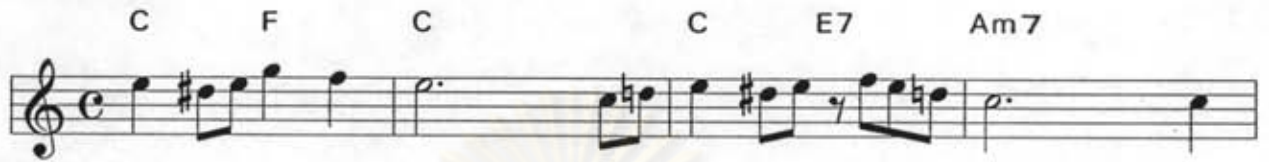
G7 Cm6 A7 D7

Gm6 E \flat Am7 (\flat 5) D7 Gm6

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จุฬาลงกรณ์มหาวิทยาลัย

Period 1
Exercise 2

8 Beat



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จุฬาลงกรณ์มหาวิทยาลัย

Period 2
Exercise 1

8 Beat

Chords: G, Bm7, C, D7, G, Bm7, C, D7, G, C, G, D7, G, C, Bm7, E7, Am7, D7, G

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จุฬาลงกรณ์มหาวิทยาลัย

Period 2
Exercise 2

8 Beat

Am6 E7 Am6

Dm6 G7 C E7

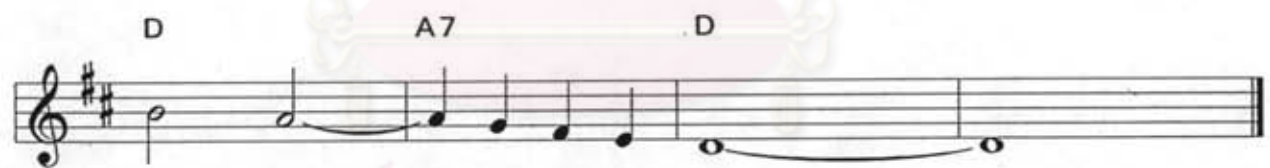
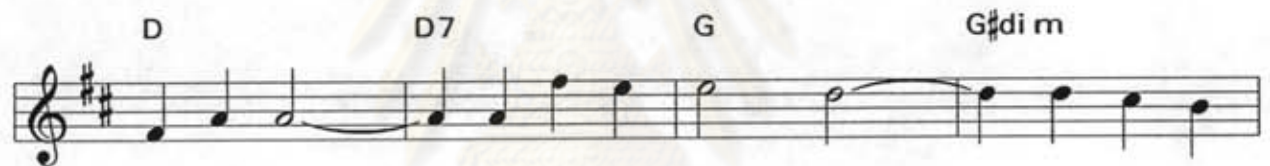
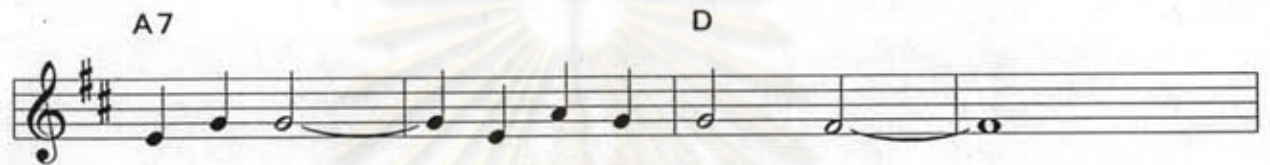
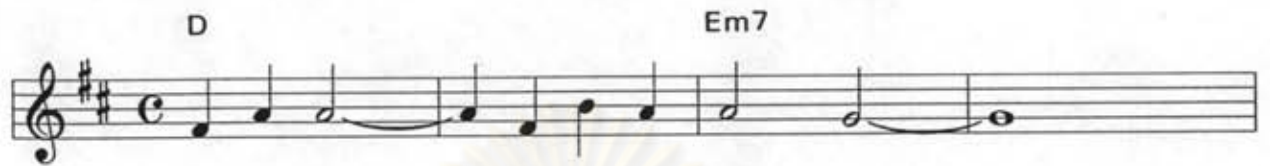
A7 Dm7 G7 C

F Bm7 (b5) E7 Am6

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Period 3
Exercise 1

2 Beat



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Period 3
Exercise 2

2 Beat

G D7 G

G D7 G G7

1
C D7 Bm7 E7

Am7 A7 D7

2
C D7 Bm7 Em7

Am7 D7 G

Period 4
Exercise 1

Latin

Gm6 D7

D7 Gm6

G7 Cm6

Gm6 D7 Gm6

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จุฬาลงกรณ์มหาวิทยาลัย

Period 4
Exercise 2

Latin

Gm6 D7

D7 Gm6

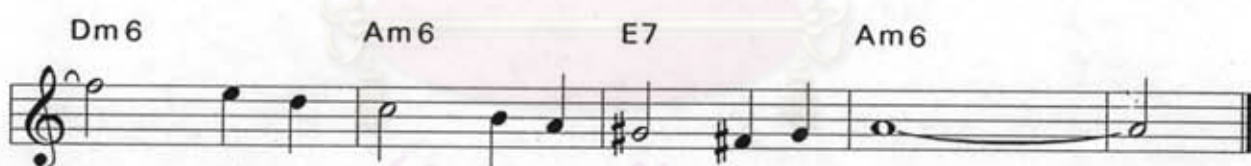
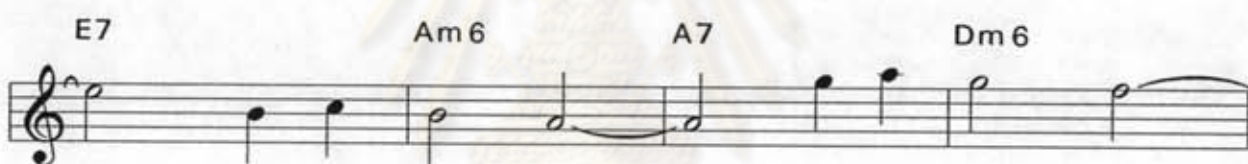
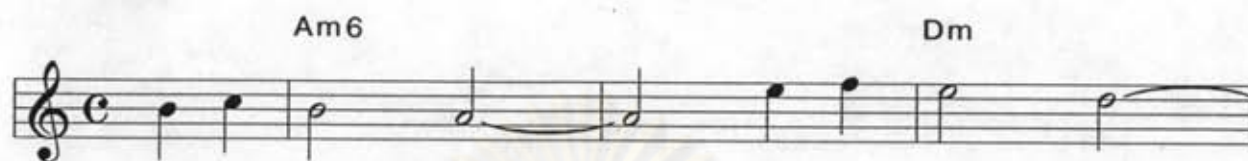
Gm6 G7 Cm6

Cm6 Gm6 D7 Gm6

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จุฬาลงกรณ์มหาวิทยาลัย

Period 5
Exercise 1

2 Beat



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จุฬาลงกรณ์มหาวิทยาลัย

Period 5
Exercise 2

2 Beat

Am 6 E7 Am 6

A7 Dm 6 F7 E7

Am 6 E7 Am 6

F Dm 6 Am 6 E7 Am 6

G7 C G7 C

E7 Am 6 B7 E7

Fine

D.S.

Period 6
Exercise 1

Latin

C Bm7 (b5) E7

Am7 Gm7 C7

1 F G7 Em7 Am

D7 G7

2 F G7 E7 Am7

F D7 G7 C

Period 6
Exercise 2

Latin

Chords and notes for each staff:

- Staff 1: Dm6, Gm6
- Staff 2: C7, F, A7
- Staff 3: Dm6, D7, Gm6
- Staff 4: Dm6, A7, Dm6, D7
- Staff 5: Gm7, C7, F, Bb
- Staff 6: Em7 (b5), A7, Dm6, D7
- Staff 7: Gm7, C7, F, Bb
- Staff 8: Em7 (b5), A7, Dm6

Period 7
Exercise 1

2 Beat

C G7

G7 C

C A7(b13) Dm7

Dm7 G7 Em7 Am7 Dm7 G7 C

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Period 7
Exercise 2

2 Beat
C Dm7

G7 C

Em7^(b5) A7 Dm7 Fm6

C G7 C

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จุฬาลงกรณ์มหาวิทยาลัย

Period 8
Exercise 1

Latin

D7 Gm6 D7 Gm6

D7 Gm6 Cm6 D7 Gm6

F7 Bb D7 Gm6

F7 Bb A7 D7

Fine

D.C.

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จุฬาลงกรณ์มหาวิทยาลัย

Period 8
Exercise 2

Latin

D7 G

D7 G

C Cm6 G

D7 G

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จุฬาลงกรณ์มหาวิทยาลัย



Appendix 8

Testing materials

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จุฬาลงกรณ์มหาวิทยาลัย

Test 1

8 Beat

F Gm7

C7 F

F Gm7

F C7 F

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Test 2

2 Beat

G D7

D7 G

G G7 C Cm6

G D7 G C G

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Test 3

Latin

The musical score is written in F major (one flat) and 4/4 time. It consists of six staves of music. The chords indicated above the notes are: F, C7, F, F, Bb, F, C7, F, Bb, F, C7, F, Bb, F, G7, C7, F, C7, F, F, Bb, F, C7, F.

Watermark text: ศูนย์วิทยทรัพยากร
วิทยาลัยราชภัฏบึงกาฬ

Appendix 9 Research statistics

1. Mean

$$\bar{X} = \frac{\sum x}{N}$$

\bar{X} = mean

$\sum x$ = sum of scores

N = number of scores

2. Standard deviation

$$SD = \sqrt{\frac{\sum x^2 - (\sum x)^2 / N}{N - 1}}$$

SD = standard deviation

$\sum x^2$ = sum of squared scores

$\sum x$ = sum of scores

N = number of scores

3. t-independent test

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{\sum x^2 + \sum y^2}{(n_x - 1) + (n_y - 1)} \left[\frac{1}{n_x} + \frac{1}{n_y} \right]}}$$

df = $n_x + n_y - 2$

\bar{X} = mean of scores of the control group

\bar{Y} = mean of scores of the experimental group

$\sum x^2$ = sum of squared scores of the control group

$\sum y^2$ = sum of squared scores of the experimental group

n_x = number of subjects in the control group

n_y = number of subjects in the experimental group

Appendix 9 (continued)

4. Pearson product-moment correlation coefficient

$$r_{xy} = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}}$$

r_{xy} = correlation coefficient

x = scores evaluated by tester 1

y = scores evaluated by tester 2

N = total number of subjects

5. One-way analysis of variance with repeated measure
(Winer, 1971)

$$(i) \quad (1) = G^2/kn \quad (2) = \sum x_{ij}^2 \quad (3) = (\sum T_j^2)/n \quad (4) = (\sum P_i^2)/k$$

	SS	df	MS	F
Source of variation				
Between people	(4)-(1)	n-1		
Within people	(2)-(4)	n(k-1)		
(ii) Treatments	(3)-(1)	k-1	$\frac{SS_{treat}}{k-1}$	$\frac{MS_{treat}}{MS_{res}}$
Residual	(2)-(3)-(4)+(1)	(n-1)(k-1)	$\frac{SS_{res}}{(n-1)(k-1)}$	
Total	(2)-(1)	kn-1		

X_{ij} = the measurement of person i under treatment j

P_i = the sum of the k observations on person i

T_j = the sum of the n observations under treatment j

G = the sum of the kn observations in the experiment

k = number of treatments

n = number of persons

Appendix 9 (continued)

6. Tests on differences between pairs of means : application of Newman-Keuls method (Winer, 1971)

The followings are the simplified explanation test (using 4 treatments as example)

Treatments		A	B	C	D
Totals		a	b	c	d
(i)	A	-	(b-a)	(c-a)	(d-a)
	B		-	(c-b)	(d-b)
	C			-	(d-c)
	D				-
Truncated range r			2	3	4
(ii)	$q_{1-\alpha}(r, kn-k)$				
(iii)	$\sqrt{nMS_{res}} q_{1-\alpha}(r, kn-k)$		x	y	z
		A	B	C	D
(iv)	A	-	(b-a) vs x	(c-a) vs y	(d-a) vs z
	B		-	(c-b) vs x	(d-b) vs y
	C			-	(d-c) vs x
	D				-

(i) The totals are arranged in increasing order of magnitude.

(ii) The critical values for the q_r statistic.

(iii) The critical values used for the test.

(iv) Comparing the observed difference from (i) with the critical value in (iii). When (i) exceeds (iii), there is difference between that pair of treatment.



BIOGRAPHY

Miss Thanaphorn Tanchareon holds a degree of Bachelor of Science in Biochemistry, Faculty of Science, Chulalongkorn University in 1982, and a Master of Science in Biochemistry, at the Graduate School of Chulalongkorn University in 1986. She has enrolled as a candidate pursuing a higher degree in educational psychology at the Department of Psychology, the Chulalongkorn University Graduate School from 1987.

For her musical education background, she received various certificates of advancements from Yamaha Music Foundation of Japan in electone performance Grade 4, fundamentals (theory) Grade 4, electone teaching Grade 4, piano performance Grade 5; and Pianoforte Grade 8 from Trinity College of Music, London, England. She is also honorably recognized as a qualified Yamaha Grade examiner for Grade 9, 8, 7, and 6. She is a part time music teacher at Siam Kolkarn Music School and as an independent music teacher for over 12 years.



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