



“Lamb-Lamp” – An Innovative Measure to Facilitate Family Fun Time and Enhance Family Relationship

「羊燈」- 促進家庭融和與鞏固家庭關係的創新工具

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Wofoo Asian Award for Advancing Family Well-being (Wofoo 3A project) 2018 Hong Kong (SAR)

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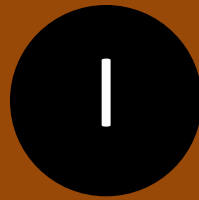
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WHY ?

background & aims

Background

- Rapid growth of mobile and screen-based products use as well as corresponding addictions among adolescents in the past decade continues to cause great concerns amongst different stakeholders. Family as a supportive system for reducing the likelihood of addiction development can be weakened as a result of the deterioration of parent-adolescent relationships associated with excessive mobile use.
- The number of hotline calls and referrals related to internet and internet gaming problems have increased tremendously in the past few years.

A joint pilot project launched in 2016



AIMS

To design and develop a technology-enabled means that can facilitate family fun time and enable rebuilding family relationship that subsequently reduces screen time of individuals.



WHICH ?

theoretical framework

1. Family Functioning

2. Gamification

1. Family Functioning

“the quality of family life at the systemic and dyadic levels.....” and the concerns of “wellness, competence, strengths, and weaknesses of a family”

(Shek, 2002)

1. Family Functioning

“a family *in trouble* disrupts members’ *cohesiveness* and could *jeopardize its function* for *cultivating personal growth.*”

(Smilkstein, 1984)

1. Family Functioning

PROCESS-oriented ← ----- → *RESULT-oriented*

Describe 'FF' from the tasks families need to perform.

McMaster theory:

(6 dimensions)

1. Communication
2. Roles
3. Problem Solving
4. Behaviour Control
5. Affective Involvement
6. Affective Responsiveness

design reference

it places emphasis on the 'interpersonal' level of family functioning.

(as cited in Dai & Wang, 2015)

2. Gamification

“the use of game design elements in non-game contexts.”

(Deterding et al., 2011)

2. Gamification

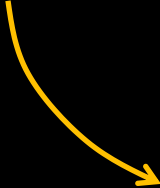
“the use of game design elements in non-game contexts.”



e.g. for training, health, sustainability promotion.

2. Gamification

“the use of game design elements in non-game contexts.”

- 
- (1) interface patterns,*
 - (2) mechanics,*
 - (3) principles & heuristics,*
 - (4) models,*
 - (5) methods*

(Deterding et al., 2011)

competition, chance, simulation, vertigo

(Gaillois, 2001)



HOW ?

designs, data collection & process

[a] Designs

'Interactive PLAY platform'

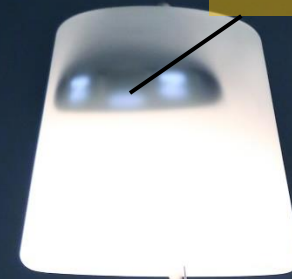
"Lamb-Lamp"



Interactive display

Phone charger

Gamebook



[a] Designs

'Interactive PLAY platform'

Gamebook

Consist of FIVE stacks of game cards

- (i) Intellectual
- (ii) physical
- (iii) bodily-interactive

Adapted from the *game design elements* of Deterding et al. (2011) and Caillois (2002).



[a] Designs

'Interactive PLAY platform'

PURPOSES:

- 1) Allow mental diversion or escape from daily routine.
- 2) Facilitate affective involvement and responses among family members.
- 3) Enable parents and adolescent a moment of pure equality.

(Caillois, 2001; Leung, Shek and Li, 2016)

[b] Data collection

Participant:

Convenient samples of 8 families with children 12-19 years old who sought help from TWGHs ICAPT

Tool/ Approach:

- *Lifestyle probes
- *Semi-structured interview

Basic Profile of the Families								
Case	Family 1	Family 2	Family 3	Family 4	Family 5	Family 6	Family 7	Family 8
Family size	3	4	5	4	4	5	3	4
Family monthly income range (USD)	>\$4000	\$2600 - \$4000	>\$4000	>\$4000	>\$4000	\$2600 - \$4000	\$2600 - \$4000	>\$4000
Parents' age								
Father:	73	47	56	NA	48	53	44	43
Mother:	42	45	52	NA	45	52	43	41
Adolescent with Internet/mobile overuse problem								
Age:	13	12	19	NA	16	17	14	13
Gender:	male	male	male	NA	male	male	male	male

[b] Data collection

'Lifestyle Probes'

a set of selective
self-reporting
assignments.

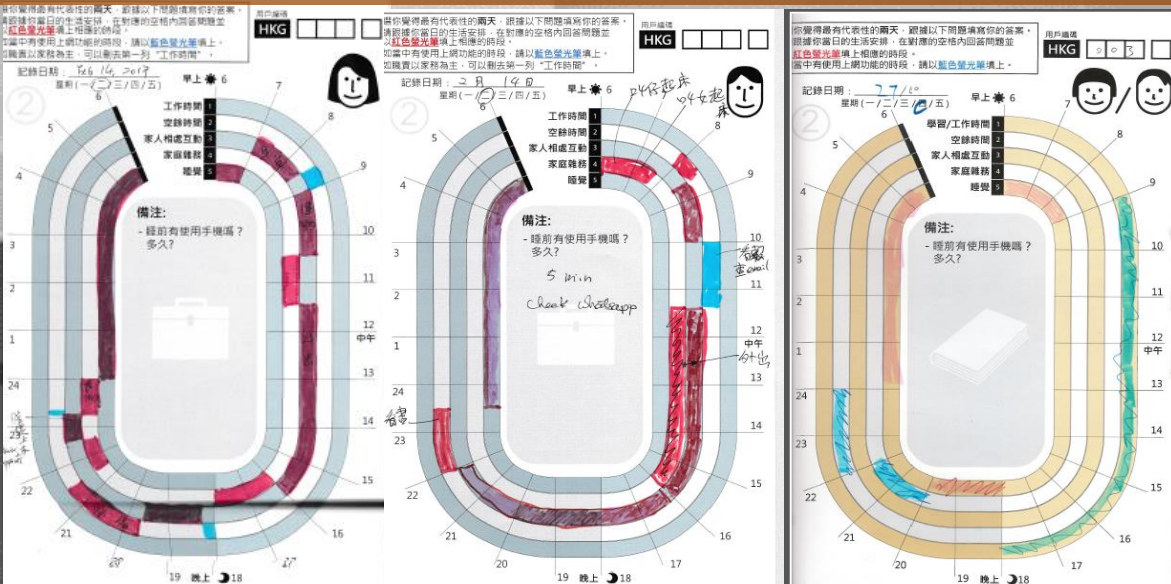


[b] Data collection

'Lifestyle Probes'

- Parents-adolescent's daily communication & interaction patterns.

Life Pattern Diagram



Home Environment Setting map



[b] Data collection

'Lifestyle Probes'

- Parents-adolescent's perception on the relationship and cohesiveness of family.

Family Harmony Diagram

B2c 家庭關係圖表

FAMILY HARMONY DIAGRAM

1. 圖中的灰色圓代表家庭成員，請用圓圈畫出你和你家人互動的常態？

2. 在圖標相交地方填上對應紋理

步驟：

- 畫出中央位置 = 在家中常有話講者
- 圓圈大小 = 對你的重要性
- 圓和圓的距離 = 關係親密度
- 圓圈相交的位置 = 與你經常互動
- 圓圈沒有相交 = 甚少互動
- 圓圈相交紋理 = 與你經常互動情況

人物標示：
F = 父親
M = 母親
S/S = 兄弟/姊妹
P = 自己
G = 祖父
G = 祖母
G₁ = 外祖父
G₂ = 外祖母
O = 其他

紋理標示：
▨ 精神/健康
■ 支持
□ 親密

B1c 家庭關係圖表

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人物標示：
M = 自己
F = 伴侶
P = 子女
G₁ = 父親
G₂ = 母親

紋理標示：
▨ 精神/健康
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■ 支持
□ 親密

'APGAR' Index

B2a 家庭互動情況

FUNCTION FAMILY (APGAR INDEX)

根據你對家庭互動情況的個人評估，請畫出你的答案。

A 協助度 尋求協助困難時，可以從父母得到需要的幫助。

P 合作度 父母對協助孩子責任承擔以及協助孩子解決生活上困難。

G 支持度 當孩子對家庭事務的協助與履行，父母對孩子具鼓勵支持。

A 情感度 父母對孩子表達他們的情感的方式及對他們情感的反應。

R 親密度 孩子與父母相處的情況。

B1a 家庭互動發展

FUNCTION FAMILY (APGAR INDEX)

根據你對家庭互動情況的個人評估，請畫出你的答案。

- 以黑色畫出過往的情況
- 以紅色畫出孩子出現上圖問題後的情況

A 協助度 當子女遇到困難時，我可以從父母得到需要的幫助。

P 合作度 當子女對協助家庭事務以及協助他們解決生活上困難。

G 支持度 當子女對家庭事務的協助與履行，我都會接受且給予支持。

A 情感度 我期望子女對我表達情感的方式及對我情感的反應。

R 親密度 我享受與子女共度的時光。

B1a 家庭互動發展

FUNCTION FAMILY (APGAR INDEX)

根據你對家庭互動情況的個人評估，請畫出你的答案。

- 以黑色畫出過往的情況
- 以紅色畫出孩子出現上圖問題後的情況

A 協助度 當子女遇到困難時，我可以從父母得到需要的幫助。

P 合作度 我期望子女討論各種事情以及讓他們分擔生活上的困難。

G 支持度 當子女希望從事新的活動或發展時，我都會接受且給予支持。

A 情感度 我期望子女對我表達情感的方式及對我情感的反應。

R 親密度 我享受與子女共度的時光。



[b] Data collection

'Semi-structured interview'



the final interview conducted at the TWGHs' ICAPT.

[c] Process

Families referred by TWGHs ICAPT

Intervention & evaluation process: 6-8 weeks

*wk 1: pre-placement briefing
(‘Lifestyle Probes’ dissemination)*

*wk 2: 1st home visit + installation of
‘Lamb-lamp’*

*wk 3-4: ‘Lamb-Lamp’ in use +
2nd home visit to remove the Lamp*

wk 5: collection of Probes + data analysis







wk 6: the final interview

用戶調研任務列表 (供調研小組內部參考)

Prepared by Asian Lifestyle Design Research Lab. SD. HKPolyU 2016


用戶編碼

HKG

階段	任務	工具	調研時間	調研地點	備註
PRE-STAGE	GENERAL CRITERIA (SCREENING)			TW center	- counsellor help to do the screening progress
1	MEET (BRIEFING)	(A) (B) & (C)	1.5 HOURS	TW center	- briefing session (15 mins) - finish (A) + (B) tools (1 hour) - prototype demo. (15 mins) - (C) tools fill in at home
2	PROTOTYPE DELIVERY 	(C) & (D)	3-4 DAYS	home setup 	- prototype setup - home observation (size/ layout/ sensing)  - pre- question (C) tools collect and analysis - distribute (D) tools and fill in at home
3	PROBE & DESIGN INTERVENTION	(D) & (E)	2 WEEKS	intervention 	- fill up the post- question (D) tools at home during the research period - games time 3 days per week (~30mins) - record the game result (E) (further question response through email / phone) 
4	PROBE PACK COLLECTION & ANALYSIS		1 WEEK		- mail the probe pack/ (D) + (E) pass through TW center
5	RETURN INTERVIEW a. participate b. parents	(F)	1.5 HOURS	TW center	- project feedback - finish (F) tools (45 mins per interviewee) 

Duration

Steps

- further question through email / phone 

[c] Process

Among the **8 families** recruited by TWGHs ICAPT.....








**5 completed the trial and data collection,
2 dropped out and
1 at the final phase of study.**

用戶調研任務列表 (供調研小組內部參考)

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5	RETURN INTERVIEW a. participate b. parents	(F)	1.5 HOURS	TW center	- project feedback - finish (F) tools (45 mins per interviewee) 
POST-STAGE	ADDITIONAL QUESTION				- further question through email / phone 

IV

WHAT ?

*findings, case sharing &
future development*

[a] Initial Findings

The 6 dimensions 'McMaster' family functioning model

- Communication
- Roles
- Problem Solving
- Behaviour Control



*'usual mode' –
Pre-placement condition*

- Affective Involvement
- Affective Responsiveness

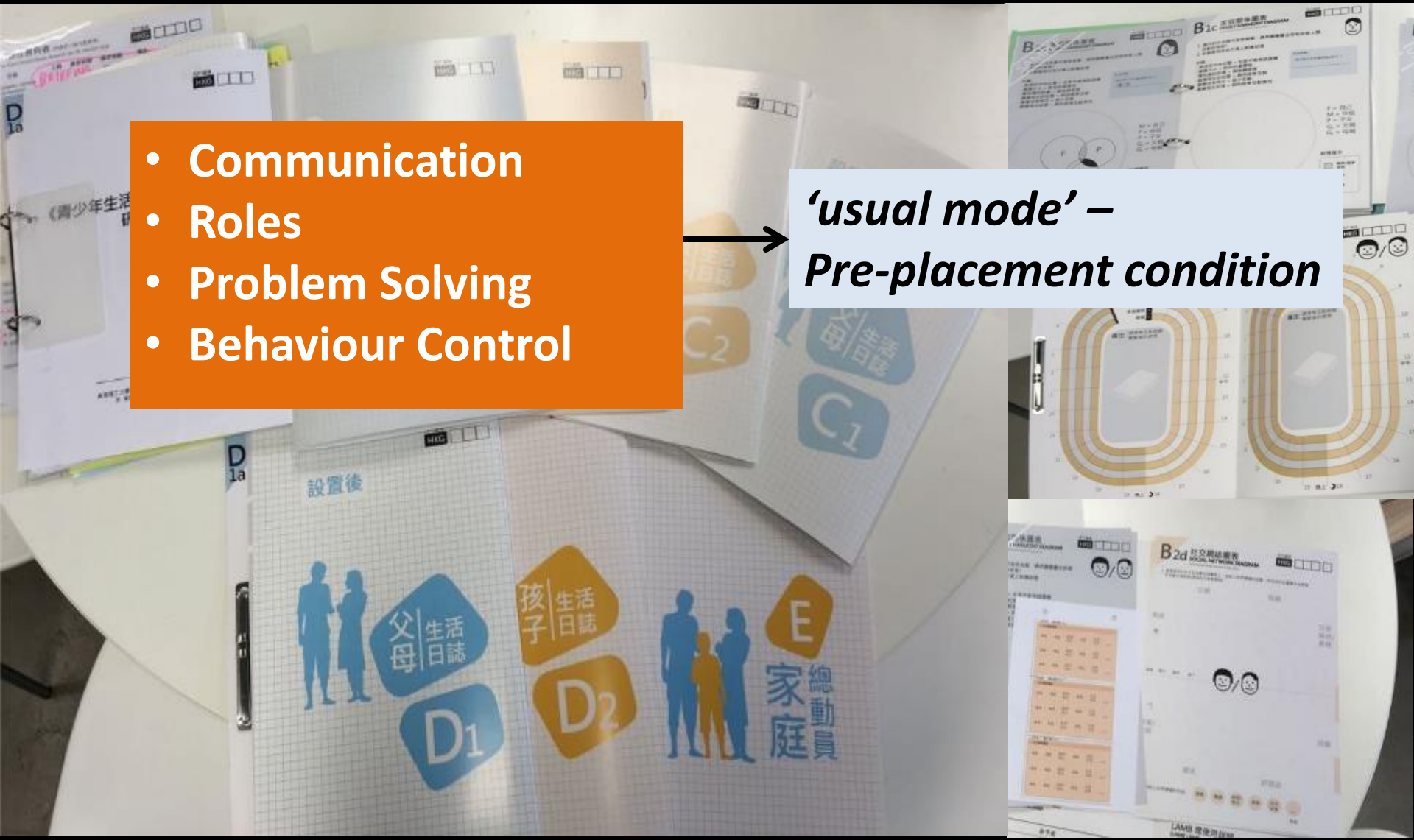


*'occasional mode' –
Collective-play condition*

(1) usual mode ← *self-reporting* (*‘Lifestyle Probes’*)

- Communication
- Roles
- Problem Solving
- Behaviour Control

‘usual mode’ –
Pre-placement condition



[a] Initial Findings

1) *Communication* (parents-adolescent)

- **confined and limited** (*space: dinning/ time: short*)

→ FAIRLY WEAK f2f communication

[a] Initial Findings

1) *Communication* (parents-adolescent)

- **confined and limited** (*space: dinning/ time: short*)

→ FAIRLY WEAK f2f communication

2) *Role* (parents)

- **Supportive and self-initiative** (*as a 'role model'*)

→ WILLING to play appropriate role

[a] Initial Findings

3) *Problem Solving* (parents-adolescent)

- **Rewards/ alternative activities:** *oversea trips/ reading, pet keeping, limiting WiFi access*
- **Unable to mitigate mobile overuse behaviour**

→ DIFFICULTY to resolve the dispute

[a] Initial Findings

3) *Problem Solving* (parents-adolescent)

- **Rewards/ alternative activities:** *oversea trips/ reading, pet keeping, limiting WiFi access*
- **Unable to mitigate mobile overuse behaviour**

→ DIFFICULTY to resolve the dispute

4) *Behavior Control* (adolescent)

- **Internet/mobile use:** *5-12 /9-13 hrs (weekday/weekend)*

→ An indication of WEAK CONTROL

Initial assessment of *Family Functioning*

*'usual mode' –
Pre-placement condition*

- **Problematic functioning**
- **barely-satisfied!** 

NOTE:

The findings were summarized and were verified by parents and the counselors of the families engaged.

(2) occasional mode ← *the final Interview*

- Affective Involvement
- Affective Responsiveness

‘occasional mode’ –
Collective-play condition



[a] Initial Findings

Affective Involvement

Family 6



Family member 1:

Father

Age: 53

Occupation: Self-employed

Education: Master



Family member 2:

Mother

Age: 52

Occupation: Housewife

Education: Associate
Degree

- ***The Lamp helped to stimulate involvement.....***

Family member 3:
daughter
Age: 17 (F)
Occupation: Student
Education: High School

- ***The lamp has enabled us to get together more.***

[a] Initial Findings

Affective Involvement

Family 3



Family member 1:
Father
Age: 56
Occupation: Director of trading
Education: Master or above

Family member 2:
Mother
Age: 52
Occupation: Retired Teacher/ Housewife
Education: Bachelor Degree



Family member 3:
Son
Age: 19 (Male)
Occupation: employee under his father
Education: drop-out from High School



- ***my son enjoyed pretty much the games and playful experiences.***

- ***He enjoyed much to take part.***

[a] Initial Findings

Affective Involvement

Family 5

- *Whenever daddy is at home on the weekends, we'll get together and play!*

Family member 1:

Father

Age: 48

Occupation: IT
Specialist (work at
at weekdays)
Education: Junior
College

Family member 2:

Mother

Age: 45

Occupation: Housewife
Education: High school



Family member 3:

Son

Age: 16

Occupation: F.5 student
Education: High School



Family member 4:

Daughter

Age: 5

Occupation:
Kindergarten student
Education: Kindergarten



[a] Initial Findings

Affective Involvement

Family 6



Family member 1:
Father
Age: 53
Occupation: Self-employed
Education: Master



Family member 2:
Mother
Age: 52
Occupation: Housewife
Education: Associate
Degree

- ***The amount of communication increased, I even shared about personal anxiety.***
- ***I'm now quite used to interacting with my family after dinner.***

Family member 3:
daughter
Age: 17 (Female)
Occupation: Student
Education: High School



[a] Initial Findings

Affective Responses

Family 5

- *It was a special moment, we played and laughed happily. So warm.*

Family member 1:

Father

Age: 48

Occupation: IT

Specialist (work at

at weekdays)

Education: Junior

College

Family member 2:

Mother

Age: 45

Occupation: Housewife

Education: High school

Family member 3:

Son

Age: 16

Occupation: F.5 student

Education: High School

Family member 4:

Daughter

Age: 5

Occupation:

Kindergarten student

Education: Kindergarten

- *While playing, we experienced a really pleasant atmosphere of togetherness!*



[a] Initial Findings

Affective Responsiveness

Family 3



Family member 1:
Father
Age: 56
Occupation: Director of trading
Education: Master or above



Family member 2:
Mother
Age: 52
Occupation: Retired Teacher/ Housewife
Education: Bachelor Degree

- *When my son and I discussed possible play strategies, our status were leveled .*
- *That's an interesting sentiment for me.*

Family m
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- *When my son asked for my help, and said tenderly "thanks mother", I felt such affection!*

[a] Initial Findings

Affective Responsiveness

Family 6



Family member 1:

Father

Age: 53

Occupation: Self-employed

Education: Master



Family member 2:

Mother

Age: 52

Occupation: Housewife

Education: Associate

Deg

- ***Three is an invisible, enormous barrier between us when my daughter is with her mobile.....***
- ***But once we started to play, we enjoyed it a lot, the daughter who I used to know 'reappeared'!***

- ***Enjoyable moment like this was rare before.....***
- ***I felt as if we had returned to the intimate moments we'd enjoyed when she was in kindergarten.***

Initial assessment of *Family Functioning*

*'occasional mode' –
Collective-play condition*

**feeling of togetherness,
connectedness, intimacy, stimulated,
relive joyful memories !**



NOTE:

***These findings were summarized and were verified by
parents of the families engaged.***

[a] Initial Findings

Although feedbacks collected from the families did not indicate obvious reduction in mobile use behaviour, they have confirmed improvement in family relationships and communication through the intervention of 'Lamb Lamp'.

Lamb Lamp

Project presentation for
Wofoo Asian Award
for Advancing Family Well-being
(Wofoo 3A project) 2018



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and Treatment



School of Design,
The Hong Kong
Polytechnic University



[c] future development

‘Phase II’ collaboration

- *community workshops involve 90 households !*
- *will assemble their own ‘Lamb-Lamp’*



thankyou!

Wofoo Asian Award for Advancing Family Well-being (Wofoo 3A project) 2018 Hong Kong (SAR)