BLA (Bipolar Laddering) applied to YouTube. Performing Postmodern Psychology Paradigms in User Experience Field

M. Pifarré, X. Sorribas, E. Villegas, D. Fonseca, and O. García

***Abstract*—**One of the main goals in user research is finding detailed aspects of the user experience There are several techniques to find this type of information but they use to be focused on the usability of the product rather than the experience of the users. The following paper describes and shows a method to find detailed information from a user experience.

BLA (Bipolar Laddering) technique is been conceived departing from a change of paradigm since is not based on a hypothetic-deductive method but on a Socratic paradigm.

Techniques performed on usability and user experience studies are normally based on hypothetic–deductive method, in this article a method based in a Socratic paradigm is going to be suggested. Socratic paradigm entails depart from a non-objective basis perspective, nowadays is often used in some post-modern psychology schools, which use to apply Socratic techniques for psychological exploration and treatment. This model is characterized by gaining information from the user itself, not only from the observation of his behavior.

Starting from Socratic paradigm basis, BLA (Bipolar Laddering) method has been designed. The main goal of this technique is to ascertain which concrete characteristics of the product entails users' frustration, confidence or gratitude (between many others).

To illustrate this technique a study case performed to Youtube website is going to be presented.

Applying BLA method allows discover subtle information of the product that can be difficult to find trough classical usability methods. This methodological proposal not only claims for the participative product design but also promotes the user´s participation in the test product design.

***Keywords*—**Cognitive Psychology, Strategy, Participatory Design, User Experience, User Experience Research, User Studies Application.

Manuscript received April 30, 2008 This work was supported in part by the GTAM- Enginyeria arquitectura La Salle Universitat Ramon Llull

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I. Introduction

THE little details and characteristics of the product use to be the most influent factor in a pleasant or unpleasant user experience definition. Obtaining the relevant details of user experience seems to be the key to get a successful product design guide.

But, how can we obtain the relevant details of a user experience? Normally the topics about user response are predefined by the team who perform the test, but then users only answer about what facilitator ask or what facilitator can observe from the users through the tasks he entrust. Once the test is done, data is treated in an empirical way. But this conception of the test entail the risk of low reliability information in open concepts and a low margin of spontaneous information generation by the users, of course literals are noted, but subjective information is only consider as a support for empirical results.

Classical usability testing methods is inspired in experimental psychology and based in the hypothetic-deductive paradigm, but socratic paradigm coming from postmodern psychology is also applicable in user experience field.

Socratic paradigm allows obtain little details which shape a subjective user experience with high reliability and discover subtle information of the product.

The idea of shifting from the hypothetic-deductive paradigm to a Socratic one is inspired by the paradigm change in clinical psychology done by constructivism and other psychotherapy's post-modern schools. This new psychological model defends a subjective treatment of the user opposed to the objective hypothetic-deductive model.

II. Change of Paradigm in Clinical Psychology

The key for the success of Socratic techniques in clinical psychology is the great capacity for adaptation presented by its users differing from the success of classical psychotherapies, which depends of patients' adaptation to the therapy (the better users adapt the better the results). In the application of the constructivist model the therapy adapts to the user, so the concepts worked on in the therapy have not been previously stipulated and are always adapted, making the psychological exercise Maieutic rather than hypothetic-deductive. In this new model of psychotherapy is the client who generates solutions. The information the psychologist works with to achieve psychological change is completely generated by the

user, and this way, the psychologist can be sure the information is always significant.

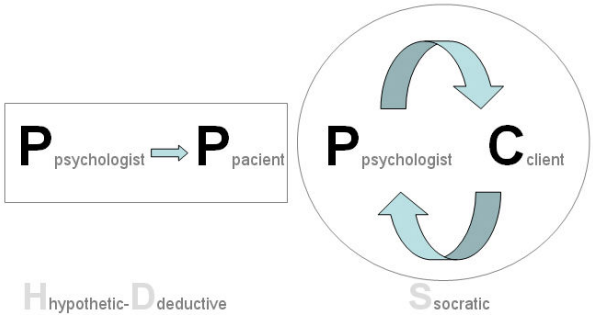

Fig. 1 Socratic psychotherapy means a change in the relationship between psychologist and patient

The change to a constructivist paradigm in therapy means a change in the conception of patients' recovery process. It is not the psychologist changing the patient, but the patient changing oneself with the help of the psychologist. To get this effect, the psychologist does not predetermine or use closed systems, does not resolve, or even give advice. The Socratic psychologist has to adapt the therapy to the client entirely, parting from a blank page. Contrarily, when using standards or rigid content techniques, the information worked with in the therapy will hardly adapt to the patient in all the dimensions.

III. Adaptation of the Socratic paradigm to User Experience (UX)

Socratic systems base the therapeutic process on the clients' significant relations, as the type of relations established with significant people is what determines their disorder. The idea, in the case of UX, consists on focusing our study on the relation between the person and the product, as the way in which users relate to the product is what gives the significant product value.

UX studies must not be centred on opinions or what has been established through conventions, but on the relation between users and our product. The only way of using Socratic techniques is parting from the minimum information possible. The test carried out must be as similar as possible to a bare page. Even though it may be a difficult and not very orthodox task, interviewer must consider the user as a real expert whom they are getting advice from.

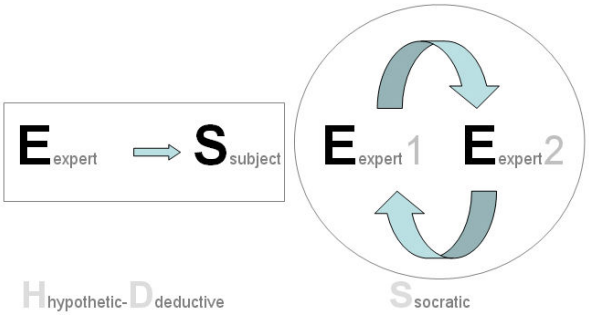

Fig. 2 The main key in a Socratic method application is to establish an expert-to-expert relationship between user and interviewer

This model defends a participative design of the product test where all the elements presented in the interview are going to be obtained from the users. Under no circumstance will interviewers make them assess or reason about predefined elements, as users will only assess or explain elements generated by themeselves.

It is certainly difficult to find more precise and complete observation tools than the users themselves. From their criteria we can discover aspects of the product that would have taken months of observation to detect as significant elements.

IV. BLA: Bipolar Laddering: Applying Socratic Techniques for Information Gathering on User Experience

Starting from socratic paradigm basis, the BLA system (Bipolar Laddering) has been designed.

Bipolar Laddering (BLA) method could be defined as a psychological exploration technique, which points out the key factors of user experience. The main goal of this system is to ascertain which concrete characteristic of the product entails users' frustration, confidence or gratitude (between many others).

BLA method works on positive and negative poles to define the strengths and weaknesses of the product. Once the element is obtained the laddering technique is going to be applied to define the relevant details of the product.

The object of a laddering interview is to uncover how product attributes, usage consequences, and personal values are linked in a person's mind. The characteristics obtained through laddering application will define what specific factors make consider an element as strength or as a weakness.

A. BLA Performing

BLA performing consists in three steps:

1.-**Elicitation of the elements**: The implementation of the test starts from a blank template for the positive elements (strengths) and another exactly the same for the negative elements (weaknesses). The interviewer will ask the users to mention what aspects of the product they like best or which help them in their tasks. The elements mentioned need to be summarized in one word or short sentence

2.-**Marking of elements**: Once the list of positive and negative elements is done, the interviewer will ask the user to mark each one from 0 (lowest possible level of satisfaction) to 10 (maximum level of satisfaction).

3.-**Elements definition** : Once the elements have been assessed, the qualitative phase starts. The interviewer reads out the elements of both lists to the user and asks for a justification of each one of the elements performing laddering technique. Why is it a positive element? Why this mark? The answer must be a specific explanation of the exact characteristics that make the mentioned element a strength or weakness of the product.

Once the element is been defined, the interviewer ask to the user for a solution of the problem he just describe in the case of negative elements or an improvement in the case of positive elements.

B. Results Obtained

Elements regarding poles:

1.-Positive elements are those which the user perceives as strong points of the product, those which help them to work better o which result pleasant of the product, these elements can be functional, esthetic or any other type.

2.-**Negative elements** are those which the user perceives as weak points of the product, those that hinder, slow down their jobs or simply are not pleasant at any level.

Those two are separated between Common and Particular elements.

Elements regarding mention coincidence:

1. - **Common Elements** those are strengths or weaknesses cited by more than one user. Those common elements are build overlapping the element definition of the users matching similar weakness and strengths on one element, so common elements always comes up from a spontaneous element definition coincidence between participants.

Common elements tend to be high perceived elements by the users, being strong or weak points of the product that really affect the user experience.

2.-**Particular elements** are strengths or weaknesses that have been cited only from one user. Those elements are sorted in a table for a quick and easy view.

V. Case Study

As an example of a real BLA application the case of a study performed to YouTube website. The study was held on the University La Salle with a scope of twelve people from ages from 18-35 years, all of them were Youtube users.

YouTube was chosen because is considered one of the best examples of web 2.0.

A. Application

The test was done in the laboratory of user experience UserLab (La Salle, Ramon Llull University), resources for the test were: An interviewer and one computer with internet connection (internet explorer 7 and Firefox 2.0 were available for the user to navigate).

The interviewer entrusted the user to freely navigate by YouTube webpage and to mention what elements of the website were positive ones and what others were negatives ones based on the experience they had.

No specific time was given to the users although the average time of the tests was one hour and a half.

B. Results

Next the obtained results using BLA are exposed, those results are as stated before separated by the users between positive and negative elements and then revised to consider them common or particular elements.

Sixteen positive common elements twenty-three positive particular elements, seven negative common elements and eighteen negative particular elements were obtained.

Those results are exposed on tables for a quick reference.

Common elements are numbered followed by a capital C.

Particular elements are numbered followed by a capital P.

1) Common Elements

The two common tables are exposed with further explanation of the information they gave.

a) Common Positive Elements

TABLE I
POSITIVE COMMON ELEMENTS

Common positive elements			
	Description	Average Score	Mention index
1C	The content is unlimited	8,66667	50,00%
2C	Videos are organized in categories	8	25,00%
3C	It allows you to set playing lists	8,33333	25,00%
4C	It's useful distraction tool	9	16,67%
5C	related videos	8	83,33%
6C	Allows to link videos easily	10	16,67%
7C	IT's easy to upload videos	8	16,67%
8C	Search by keywords	7,75	33,33%
9C	Video information (community)	8	41,67%
10C	Censorship	8,66667	25,00%
11C	Being able to put references on a website	9	33,33%
12C	Being able to see other people favorites	8,5	16,67%
13C	Videos are buffered very fast	9,2	41,67%
14C	There's no publicity	9,5	16,67%
15C	Video diffusion	10	16,67%
16C	Punctuation, ranks	8,5	16,67%

Aside from the Average scores, a mention index is obtained, this indicator shows a percentage about how many users have spontaneously cited that element. A high mention index means that the strength or the weakness is highly perceived by the users.

In this Youtube study case positive element five, “related videos”, has a mention index of 83% this allows us to acknowledge that related videos is an element that users really take into account.

TABLE II
POSITIVE COMMON ELEMENTS INDIVIDUAL USER SCORES

Common positive elements												
Element Code	User 1	User 2	User 3	User 4	User 5	User 6	User 7	User 8	User 9	User 10	User 11	User 12
1C	9		8	8	9			10			8	
2C	7						8		9			
3C	8						9	8				
4C	9					9						
5C	9		7	7	8	8	8	7	8	10		8
6C	10						10					
7C	8										8	
8C		8					8	8				7
9C		7			8		8			10		7
10C		7				10		9				
11C		9			10		8				9	
12C			9							8		
13C				8	9			10			9	10
14C					9	10						
15C						10						10
16C								7				10

In this table we can see how each element is scored by the users who have mentioned it. These particular scores are also very useful when merged with the definition of the element to obtain a better understatement of how the users perceive it.

The same types of results are obtained also for the negative elements.

b) Common Negative Elements

TABLE III
NEGATIVE COMMON ELEMENTS

Common negative elements			
Description		Average Score	Mention index
1C	Bad Video quality	1,75	33,33%
2C	Information is not well related	3,5	16,67%
3C	A user history is missing	4	16,67%
4C	Videos length is limited	3,25	33,33%
5C	It doesn't allow to download videos	2,25	33,33%
6C	Overcrowded interface/ confuse page	3,5	25,00%
7C	Problems with the search engine	3,2	41,67%

As a result of the test seven common negative elements were generated, majority of mention index are found in the bracket of 33% to 50% being elements that are notably perceived by the users. As a relevant element we can see 1C were 33% of the users mentioned the bad quality of the video on YouTube, also when we look at the scores given on that element they are extremely low.

When an element with high index of mention comes along with a low average score (such as 1C) tends to indicate a relevant week point of the product we are testing.

TABLE IV
NEGATIVE COMMON ELEMENTS

Common negative elements												
Element Code	User 1	User 2	User 3	User 4	User 5	User 6	User 7	User 8	User 9	User 10	User 11	User 12
1C	1	2	3	1								
2C	4		3									
3C	5				3							
4C		2		2						6	3	
5C				4	4		0		1			
6C							2,5	3		5		
7C		1	5	4	3			3				

2) Particular Elements

Below the two particular elements tables are exposed.

A total of 41 particular elements were generated those were spilt in 23 positive elements and 18 negative elements.

Positive elements have a high average of 7,9 with 5 perfect scores found.

This represents a high positive perception of the elements mentioned by the users.

Negative elements have an average of 2,9 with two scores with a 0.

Seven elements were middle scored with assessments between 5-4.

a) Particular Positive Elements

TABLE V
POSITIVE PARTICULAR ELEMENTS

Particular positive elements			
Description		Score	User
1P	Organization by countries	7	User 1
2P	You can find a lot of music	8	User 1
3P	You can find series	6	User 1
4P	The user creates the contents	10	User 2
5P	Easy to use (with few clicks)	8	User 3
6P	The user decides when to see the video	9	User 3
7P	Good compression	7	User 3
8P	Anybody can upload a video	10	User 4
9P	Share videos without having to meet	7	User 6
10P	You can personalize your space in YouTube	7	User 6
11P	Start the buffering of the video from the middle	10	User 6
12P	Bubble interface	3	User 7
13P	Uploading and sharing is free	8	User 7
14P	You can make the video screen bigger	6	User 7
15P	No need to register	9	User 8
16P	Preferences of the YouTube links	9	User 9
17P	With the video on pause it keep buffering	10	User 9
18P	The search engine hierarchy	9	User 9
19P	It keep the users history	9	User 10
20P	Easy to edit and erase videos	8	User 10
21P	It shows you the videos that are being watched	9	User 10
22P	The user is the protagonist	10	User 11
23P	Accepts any video quality	4	User 12

b) Particular Negative Elements

TABLE VI
NEGATIVE PARTICULAR ELEMENTS

Particular negative elements			
Description		Score	User
1P	It doesn't have references to common users of the video	5	User 3
3P	It doesn't have tags	3	User 3
4P	There are no movies/series	5	User 5
5P	There's no error corrector on search such as "did you mean..."	2	User 5
6P	An alert system is missing	0	User
7P	There are not enough explanations/information	2	User 7
8P	Changes in typologies	3	User 7
9P	The label doesn't correspond with the video content	2	User 8
10P	Elements that call for the attention of the users	4	User 8
11P	It doesn't allow you to search while watching a video	1	User 8
12P	You can't view the video from the middle	4	User 9
13P	There's no buffer progress bar for the videos	0	User 10
14P	Navigation is confusing	3	User 10
15P	The interface is confusing and outdated	5	User 10
16P	Loss of video quality when you upload a video	3	User 11
17P	Videos have been taken out due copyright issues	4	User 11
18P	No censorship on violent videos	4	User 12

Each element score is expanded with the user definition and the improvement/solution given by the user. This allows the precise understanding of each strength or weakness detected by the users.

C. Score Analysis

When reviewing elements an especial emphasis must be taken on scores as they show a very good perception of how users perceive the element. When the definition attached with the score is analyzed a very precise compression of the element is achieved being able to understand why the user has cited it. On negative elements, solutions give a hint about how the user would like the product working so that the element

wasn't an issue for him. Asking the users for solutions puts the user on the designer point.

(1) Top and bottom scores

On positive elements High scores tend to show key elements of why user perceives the product as a pleasant experience. Those elements shouldn't be modified in a redesign process.

Example 1: Element 17 Particular Positive

Element	Description	User	Score
17P	With the video on pause it keeps buffering	9	10

Justification: Very useful especially for slow connections, you let the video download and then you watch it.

This element gives an especial insight of why he/she uses YouTube as the buffering allows him to see videos with his slow connection.

On negative elements very low scores denote that the elements creates high frustration to the user and really affects the experience they has with the product. Those elements should be taken in to account in a redesign process.

Example 2: Element 11 Particular Negative

Element	Description	User	Score
11P	It doesn't allow me to view more than one video on the same page	8	1

Justification: You can't view the video and search on the same page you have to open another page and the process is slow and tedious.

Solution: Allow me to search while the video window keeps playing. The search could be on the side.

On this example we obtain a precise definition of the user problem with the product, acknowledging what entails to him and also the ideal solution for that specific problem.

(2) Middle scores

On positive elements middle scores tend to represent elements that the user appreciates and is pleased about. Thought you don't find deal breakers here being more a caprice that the user appreciates than anything more.

Example 3: Element 10 Particular Positive

Element	Description	User	Score
10P	You can personalize your space	6	7

Justification: It allows you to get warnings when someone comments a video you have uploaded. It helps to build a community. You can tag videos as favourites and you and other people can see it in your space.

On negative elements middle score are present on elements that annoy the user and create and unpleasant experience without affecting the will of using the product.

Example 4: Element 18 Particular Negative

Element	Description	User	Score
18P	No censoreship on violent videos	12	4

Justification: The fact that they are accessible for everybody can tend to people imitating what they see on the videos.

Solution: Those videos should be erased permanently, it would make YouTube less democratic but there's a minimum control necessary.

(3) Paradoxical scores

Eventually some users define a negative element with a high score or a positive element with a low score, on those cases users must corroborate it to ensure the reliability of the element assessment.

Those elements are defined as paradoxical scores and tend to be very interesting elements to look after.

On positive elements negative scores tend to apply to elements that are perceived as bonus features that don't work. Users perceive it as a good thing but the final experience is not pleasant. The fact that they perceived it as a bonus feature is what provokes that they don't cite them as a negative element.

Example 5: Element 12 Particular Positive

Element	Description	User	Score
12P	Bubble interface	7	3

Justification: It allows to visualize the path that I do on YouTube. It allows locating other videos which are in theory related, but they are not well related.

Improvement suggested: You don't really understand how it works. It doesn't give any explanation. When you exit it doesn't save the relations. It's unintuitive... actually is a piece of shit.

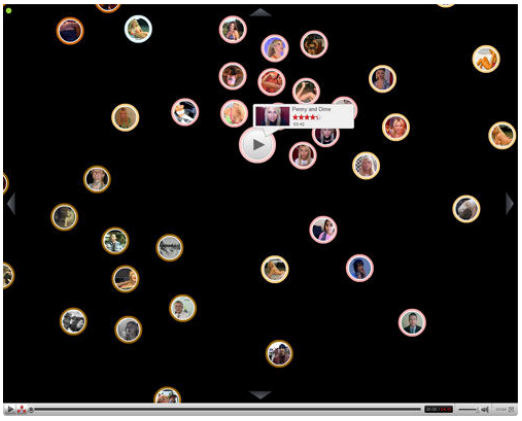

Fig. 3 YouTube bubble interface

(4) Heterogeneous marks

When analyzing common elements sometimes an element appears that has a high difference between the scores users give to the element.

This particular thing happens usually for two reasons. One is that users consider different specific characteristics of the same element. They are really assessing different things. Then it is possible to find out exactly what each user is assessing considering the narrations from the qualitative phase.

The other reason for heterogeneous marks is the different level of affectation of this particular element. Then, the same element can affect users in a very different way. To detect this kind of phenomena in the results analysis would be necessary to separate user narrations for each element.

Example 6: Element 5 Common Negative

Element	Description	Score
5C	It doesn't allow to download videos	2,25

User 4 Score: 4

Justification:. It doesn't allow me to download videos and I have to use other programs.

Solution: Give me the option to download it and that when I upload it I can decide if other users can download or not the video.

User 5 Score: 4

Justification: The video format is particular to YouTube you need an external tool to download the video.

Solution: Just give me the option to download the video.

User 7 Score: 0

Justification: I want to have the videos. I want to be able to archive them, store them and be able to see the video in any situation.

Solution: Allow me to download videos

User 9 Score: 1

Justification: You can never store a video you have to connect to internet always.

Solution: Download button next to the video or that when you have finished the video it gives the option to download it next to the replay options.

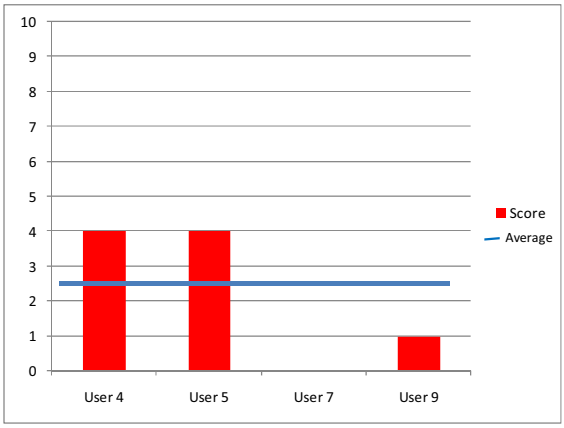

Chart 1: Common Negative element 5 Users score

We encounter four users citing the same element but when we examine the scores we find a big difference between them

With two scores being quite neutral on the subject and two scores being extremely low.

An analysis reveals that the users giving the bottom scores perceive downloading videos as a major necessity in the way they expect to use the product, the users with a middle score have solved the problem trough external sources and don't rely on the product or to solve the problem.

It's also very interesting how the given solutions tend to be alike but also have different particularities on the way they solve the problem. This allows to redesign the product taking into account the real user's needs and desires.

VI. Conclusion

This methodological proposal not only opts for participative product design but also promotes the users participation in the product test. From the basic results diagram, as there are strong and weak points, we can establish a sophisticated system to define a user experience with a product.

To get this kind of results a change of paradigm in classical user experience field is being applied.

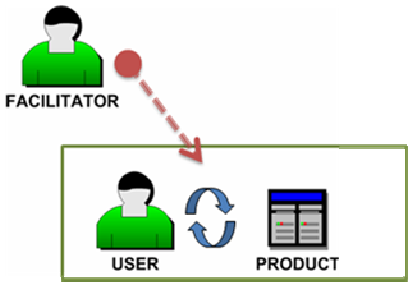

Fig. 4 Classical usability model

We change from observing the interaction between user and product to make the user generate information about the product.

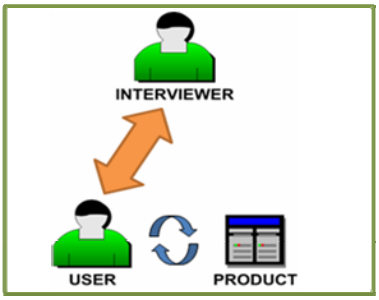

Fig. 5 Socratic Interviewing model

Contrarily to the methodology used in classical usability, the user and the facilitator are working together defining relevant factors of the product and co-creating new concepts. The participants will have an expert role as users of the product as well the interviewer will have an expert role as a test performer.

Resulting data allows discovering a large amount of information about the relevant characteristics of the product and how and why they affect to the users. With the justification of each element and the score given to it we can have a quite accurate idea about how this element is experienced by the user.

Using BLA method we are trying to see the product through the user´s filter, through his perception, emotions, reasoning and value system getting a close approach to user experience.

ACKNOWLEDGMENT

Special thanks to, Oscar Tomico Nuria Torras, Eva Villegas and UserLab team which made possible this paper, also we like to thank the assistants of UEB workshop his help and support.

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