MOBILE CONNECTIVITY AND REAL-TIME CRITIQUE IN A STUDIO BASED STUDIES

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Abstract

The paper examines the opportunities and impact of using mobile messenger connectivity and real-time critique in project based learning. Studio curriculum dictates a substantial face-to-face engagement as an essential pedagogical format for art and design disciplines. However, the need to guide and reflect critically on student work does not cease with the end of the class time. The proliferation of mobile messengers provides a tool for closing that gap with relative ease and discernible efficacy. This study is based on the experience of using WhatsApp messenger at the American University of Sharjah. Mobile critiques and instruction of students from freshmen to seniors, define both the variety of needed feedback and its timeliness. The demonstrated engagement identifies two areas of critique and discussion – direct feedback on running project development and continuous instruction on design methods, processes and actions. Furthermore, the paper outlines the mechanics of a real-time critique with its advantages and possible challenges as they relate to on-going course discussions. The conclusion identifies the mobile messenger based communications and exchange as effective future critique platform of the extended classroom space.

Keywords: "mobile messenger", "studio critique", real-time, engagement

1.   INTRODUCTION

A traditional approach in atelier model education requires space, master, pupils, tools and objective practice for its effective and productive exercise. In a context of a typical design educational program, all of the indicated elements are clearly expressed and combined within an interactive physical system. The space is the studio classroom for presentation, production and critique. There the master is the assigned instructor/educator and the pupils are the enrolled students. That model has not been impacted significantly with the advent of digital technologies. However, the tools or production and practice have been altered dramatically not only by how artifacts are made but also where are they being made. It is customary to expect laptops, mobile devices, projectors and wireless networks and connectivity to enable contemporary design pedagogy. Those affordances allow for fluid and even none location specific teaching and production. Outside of the instructional environment students have become accustomed to instant interaction and communication. Mobility and mobile interaction has been integrated deeply into their lives. They have grown an expectation of instructor engagement on an ongoing bases rather than simply the allotted meeting times. The need for contextualized feedback/critique to keep a student's project advancement on track has become more evident. Furthermore, significant portion of today's design practice aims to create and deliver digital artifacts and mobility enabled affordances. Converting mobile messengers from objects of distraction and instant gratification into vehicles of instruction and feedback on demand begins to bridge the world of casual life with the world of formal education. A crucial pedagogical component is feedback and critique of student work as it is being developed. Traditionally, students receive input during the course hours or in scheduled meetings outside of the class time. However as students tackle progressively more substantial projects the need for instructor input ranging from a minor technical details to conceptual and aesthetic considerations and reflections, have become imperative. In reality, the activity of physical studio for conception and production of design projects today, encompasses classrooms, cafeterias, home settings and multitude of third spaces coopted by students for the benefit of their course progress. Harnessing the instantaneity of mobile communications can serve as an extender of the physical and virtual course feedback and discourse.

2.   LITERATURE REVIEW

There has already been much scholarship centered on the use of technology in the classroom as well as its impact on studio-based disciplines. Experimentations and focused studies have provided a range of possibilities and models for effective application of technology as an enhancer of learning and class management. Some explorations centered on the effective uses of technology in a context of

online-physical design studio attempted to create collaborative studio culture. The use of online only studio and wiki as a main discussion format, while valid, does not reflect the emergent opportunities afforded by current technological developments. [1] In recognition of the possibilities and potential of digitally enabled advice some studies explored the area of visual advice agent and its impact on students' studies. [2] Others investigated the use of mobile technologies in a classroom and more specifically tablets and built in cameras. [3] Many institutions use dominant platforms for managing most all educational resources and interaction as they relate to individual courses. Moodle is one such platform, which also offers a mobile device enabled communication. However, it must be distinguished between simply accessing the web via a smart phone and using standalone mobile communications applications. [4] Smartphones allow for various methods of communication exchanges. Some researchers looked closely into the parallels and divergences of mobile messengers such as WhatsApp and SMS messaging and identified reliability and privacy concerns. [5] This study looks at the opportunity and challenges for using mobile applications for perpetual contact and critical feedback as it relates to student design project development.

3. METHODOLOGY

The study was conducted at the American University of Sharjah (AUS) in the United Arab Emirates (UAE). All students were enrolled in design related majors at the College of Architecture Art and Design. The study group included foundation, sophomore, junior or senior students enrolled in studio courses. While the courses varied the basic pedagogical approach remained the same. The freshmen enrolled to study in the university collectively come from fifty different secondary educational systems upon their acceptance. More than a third of the students' place of home residence is either in distant cities or outside of the country, to where they return at any possibility. The language of instruction is English, but the proficiency, while adequate varies based on the students upbringing and past educational experience. An overwhelming majority of them are seventeen or eighteen years of age as they begin their college studies. Lastly, the University operates in the context of UAE - a country with the highest penetration of smart phones in the world. [6] Daily, one can observe students having two, sometimes even three smartphones, which are in perpetual use. A key affordance/activity of the all smartphones use is messaging services for constant communication. A practicing educator at AUS has identified that in many instances the allotted course time is not adequate to answer all possible questions, which might arise during the studio work. Thus using mobile messenger provides an open line of communication between student and teacher. Prior to establishing a course communication group a number actions and clarifications must be discussed. Lastly the cited conversations are published as they have unfolded. Student names and phone numbers were withheld to protect their privacy.

3.1. Setup

While students might have smart phones of various brands and capabilities, practically all were already using a messenger to communicate with others. Nevertheless, the first prerequisite is to establish a technological baseline. At the beginning of a semester all participants: instructor and students must confirm that they own or have access to a smart phone with a mobile messenger, in this case WhatsApp messenger. During the course of the study, all students but one have proven to have and already use that specific mobile messenger. For the unusual occasion of a student not being able to use WhatsApp, a logical substitution is to send SMS notifications in combination with email and other electronic communications suitable for both parties. The setup of the chat group was delegated to a student volunteer to create a messenger group with all students and instructor enrolled. This builds a sense of ownership an encouragement to participate. As a control mechanism, all members of the group were required to post a statement confirming their group inclusion. To assure that none is left out in consequential meeting one should reaffirm that all students are receiving the electronic messages delivered to the group.

3.2. Rules of Contact

It is not unreasonable to expect that majority, if not all students have had prior use of a mobile messenger. Most will continue to converse outside of class with multitude of other friends and acquaintances. This presupposes them to be already skilled in the art of mobile messaging. In reality during the study, all identified themselves as avid users. Messenger-based conversations promote high level of casualness and directness. The use of typed language on-the-go, does not always conform to the highest literary standards. So one should expect a level of looseness not customary for a conversation in person. While there could be a specific imposition of a manner of conversational

conduct, it is nearly impossible to enforce different etiquette than the already practiced in that world. The key criteria for conversation should be poignancy and clarity. Another important factor is the time of contact. It is reasonable to expect, confirmed by he practical experience, that the questions and needs for feedback might arise at any time of the day. Such is the nature of mobile communication that does not restrict conversation to specific hours. One could impose a time frame at which conversation is allowed or not but that will be counter to the nature of the medium and more importantly the intent of the engagement. One of the clearly established agreements should be that the instructor would respond as soon as possible, rather than seconds after the inquiry. In reality, based on the day and the instructor responses could be as immediate as in seconds to as long as a hours after inquiry. However in this study the majority of feedback was delivered within naturally expected timeframe.

3.3. Possibilities and Affordances

The nature of the medium allows for flexibility and even depth. The central communication space is the specific course chat group. If a student needs a more private conversation they are able to establish a direct chat with the instructor. In addition to exchanging text messages, the platform allows for pictures, audio clips, videos and links to be sent with ease. This creates a richer design conversation, where comments and feedback could be not only general but refer to specific details and needs for improvements.

4. FINDINGS

The definition of critique for this study includes technical and procedural feedback, specific project critique and contextual resource reference. Many discussions while using a more syncopated language still resemble the structure of a face-to-face conversation. Some group conversations include discourse where multitude of students contributes their thoughts and ideas. In other occasions the need for individualized discussion can be enabled with in messenger based one-on-one dialog. Most exchanges do not exceed a few lines; however do to the nature of the media the presentation of the line-by-line exchanges develops in a running stream. The length of the conversation is dictated by the student perceived need at the moment. At times discussions develop over an hour and emulate an in-depth discourse with on a specific point or a topic.

4.1. Feedback

The simplest form of real-time critique includes basic, timely feedback centered on a problem, issue or a point of confusion. Anyone of these moments has the potential to lead to paralysis and inaction. Having the capabilities of seek advice from the instructor at any moment could help an individual student or even the whole class to keep the momentum of their design efforts. The need for feedback varies based on the student's past experience and already accumulated abilities and understanding. As students transition from freshmen to seniors, there is a noticeable shift of the type of feedback needed - from questions of how to accomplish basic tasks to how to conceive and manage complexity.

The conversations with freshmen about their design projects are in many instances a mater of reassurance rather than specific instruction. Many of the discussions are about clarifications and reaffirmation. While direct critique is important pedagogical ingredient many freshmen for the study, expressed as much need for encouragement and emotional support as for practical suggestions. As they are building up professional vocabulary and mastering foundational concepts, the pedagogical emphasis is as much about procedure and basic sequence of action as on aesthetics and design discourse. The tone of their messenger conversations is clearly casual and direct in keeping with the medium. While the discussions might appear extemporaneous, the impact on their actions is very direct and tangible. The following exchange with a freshmen student demonstrates the need to clarify the parameters of the assigned task.

> 7:03:55 PM: Student: Professor i have this idea but i don't know whether it's legal or not
> 7:04:18 PM: Student: We have to use all of the shapes in the composition, yes?
> 7:05:04 PM: Student: can i cut up the shapes or do i have to use it whole?
> 7:06:56 PM: Instructor: You cannot carve out shapes from the given shapes
> 7:07:43 PM: Instructor: But you could create new shapes by overlapping the ones you have
> 7:08:28 PM: Student: And we can only use the shapes once?
> 7:09:07 PM: Instructor: Yes
> 7:14:28 PM: Student: Wow okay this assignment is tougher than it looks
> 7:29:58 PM: Instructor: That's why I gave it to you

Sophomore students have already been acculturated into the nature and rhythm of design studio practice. However, any sound pedagogy demands a greater degree of autonomy and decision-making. Exploring various conceptual directions, possibilities and leaps of faith can prove challenging and even paralyzing. Being supported by the ability of instant communication with the instructor could prove essential for assuring continuous progress and project development outside of the face-to-face meetings. Design-specific issues in a group chat context could benefit other students with similar questions who do not have the courage to seek help. The net result not only alleviates needless anxiety but also more importantly offers contextually needed support for the resolution of a specific stumbling block. The following example illustrates messenger exchange relevant to group projects where other members were "listening" and added their thoughts, as they felt necessary.

3:29:40 PM: Instructor: I expect to see mock ups of ideas from ALL groups tomorrow.
6:16:11 PM: Student A: Can you elaborate more professor? Like you want the poster layout and the message?
6:18:48 PM: Instructor: A mock up is a basic prototype of what the poster(s) would look like. I expect to have any changes as you progress but you need to have a real object to work with.
6:23:19 PM: Instructor: What I don't want is "we are still deciding on what to work on"
6:24:23 PM: Student B: Oh ok but what if we have a lot of ideas.. and we dont know which approach to choose yet?
6:24:35 PM: Student B: Or do we have to decide before class
6:25:18 PM: Instructor: In that case present a mock up for each idea.
6:26:03 PM: Student B: Okk (L Trenkov, 2013, pers. comm., 18/11)

Some students start a conversation trying to resolve pressing issue. However, the instructor at times does not have an opportunity for instant response. In the meantime the student manages to solve the problem and acknowledges it so. The key aspect of this communication is that demonstrates that pupils have perpetual access to advice and feedback. That simple fact of reassurance encourages them to try on their own to resolve the issue at hand and in the process overcome their identified obstacle.

9:42:26 AM: Student: Hello professor. I was working on my laptop at home with the new indesign and now I'm in Caad trying to move the file to the computer we have in the studio but most of the images aren't appearing. Is there anyway ican make this work?
10:48:57 AM: Student: Nevermind I fixed it
11:31:13 AM: Instructor: Ok (L Trenkov, 2014, pers. comm., 18/05)

Senior studio projects demand at times, complex prototyping process. This complexity requires close interaction and exchange between students and instructor. While the physical prototyping might begin during the scheduled studio time the completion is at times accomplished when the instructor is not present. Upon successful completion of the prototype students created a video record and send it to instructor to assure the desired results are achieved. As the purpose and meaning of the physical prototype is well identified in advance the chat exchange simply serves as reaffirmation of reached milestone. An individual student took the initiative to send a video record of the functioning prototype.

4:17:51 PM: Student: 3eba45ef0fd07f57039b7d62ca9b86af.mp4 <video of working prototype>
4:17:51 PM: Student: 6bd9941fa887c5d0943c1982f60f09e0.mp4 <video of working prototype>
5:07:38 PM: Instructor: Good work guys. Keep improving (L Trenkov, 2014, pers. comm., 13/11)

4.2. Single issue discussion

During this course of the study junior and senior students are confronted with decisions central to the directions of their projects. Doubts and uncertainties at times pose challenges to students wishing to reinvent their project direction. Timely conversation outside a class meeting could determine a change of course during a three to four day gap in meeting time. In a traditional situation students might email or more likely wait of the next meeting to discuss options for more dramatic changes rather than arriving with the already executed developments on the new direction. A mobile messenger chat provides sense of immediacy and sufficient feedback mechanism to both develop suggestion(s) for

central themes and ideas and focus on important details. The following conversation was initiated by an individual junior design student acting as a coordinator and facilitator for a proposal to change an individual project into a group one. One could note that this conversation took place over a weekend day for a span of half an hour.

> 4:28:19 PM: Student: Hello professor, I hope your enjoying your weekend. I wanted to ask you about the studio map project. I'm working on creating an app game based on my location
>
> 4:29:26 PM: Student: I was wondering if it would be possible for me to collaborate with Dina, Abdullah and Khouloud to produce the app or the app prototype
>
> 4:29:39 PM: Student: For example if I were to make my location a level or set of levels in the game, the next levels would be abdullahs, the khoulouda or dinas, etc
>
> 4:30:55 PM: Student: Perhaps we can talk about it more in person during class time? The reason I'm asking is because the four of us plan of creating our own studio, we've worked on personal projects before to add to our studios portfolio
>
> 4:31:11 PM: Student: Together we are called 'Loud Studios'
>
> 4:31:53 PM: Student: I was hoping we could produce the app as a Loud studios production
>
> 4:51:36 PM: Instructor: You are welcome to collaborate anyway you can, however for the purpose of the assignment, four weeks into it, I would prefer you stay with your chosen path.
>
> 4:53:41 PM: Student: Okay well, I've already spoken with the others and they've agreed to do it if we get your blessing
>
> 4:54:34 PM: Student: Are you sure I cant convince you otherwise professor?
>
> 4:54:44 PM: Student: We'd really put in the effort
>
> 4:57:12 PM: Instructor: The short answer is no. You could do it as a side project if you wish.
>
> 4:58:38 PM: Student: Okay I'll inform the group
>
> 4:58:55 PM: Student: Thanks anyway professor
>
> 4:59:19 PM: Instructor: I will be happy to support you if you need me to.
>
> 5:00:00 PM: Student: Okay, I'll keep you posted of any progress (L Trenkov, 2014, pers. comm., 01/03)

As identified, senior students tackle a larger projects and concepts. It is expected of them to act more independently, however they still have doubts and needs for support in their decision-making. It became evident during the course of the study that when a topic/issue of discussion is personal yet key to their design idea development, they prefer a direct discussion outside to the group one. The following topical conversation extended for almost an hour outside the class meeting time and regular office hours. As a result the student used the weekend to develop a better approach for their idea, including supporting their presentation with an on-the-ground research, which they had to conduct. While the tone was fitting of a messenger conversation, the chat helped bring sense of clarity and more importantly established the need for specificity within the idea development.

> 3:23:49 PM: Student: Hey professor
>
> 3:24:28 PM: Instructor: Hello
>
> 3:24:51 PM: Student: How are you today?
>
> 3:25:24 PM: Instructor: We'll. how can I help you
>
> 3:25:55 PM: Student: I'm working on studio
>
> 3:26:20 PM: Student: And I narrowed down my topics to Sharjah tourism
>
> 3:27:19 PM: Student: It's still a broad subject but I thought I'd love to hear your intake about it.
>
> 3:27:28 PM: Instructor: That does not sound very narrow. Can you see ST
>
> 3:27:43 PM: Instructor: ?
>
> 3:27:48 PM: Student: ST ?
>
> 3:28:07 PM: Instructor: Sharjah Tourism
>
> 3:28:58 PM: Student: No I can't. It's an abstract idea
>
> 3:29:33 PM: Student: I passes through some information about Sharjah being names the capital of Islamic culture for the year 2014
>
> 3:29:40 PM: Instructor: That is the Robles
>
> 3:30:26 PM: Student: Robles?
>
> 3:30:34 PM: Instructor: Problem that is
>
> 3:31:06 PM: Instructor: Where. Is Sharjah tourism
>
> 3:31:34 PM: Student: In Sharjah
>
> 3:31:35 PM: Student: Lol

3:32:16 PM: Student: I'm promoting the idea to live like a Muslim for say 7 days. It's an experience.
3:32:19 PM: Instructor: There is a lot of desert in Sharjah
3:33:17 PM: Student: Yes sir. That's true
3:33:35 PM: Student: Promoting safari?
3:34:25 PM: Student: Live like a sharjawi? (Sharjawi means a person from Sharjah)
3:36:07 PM: Instructor: So to be a Muslim you need to go to a safari
3:36:57 PM: Student: HAHAHAHAHHAHAHAHAHAHAHAHHAHA ... Sir no. I didn't mean that. Safari is a developed idea from tourism.
3:38:21 PM: Instructor: Ok work on it more and then ask me. I want you to describe the image of what you are promoting
3:38:28 PM: Student: So I'm saying to be a "sharjawi" experience the desert, the culture, the art, the music
3:39:45 PM: Instructor: What do you see?
3:49:20 PM: Student: I see days of overwhelming experience. I see safari trips, buggies and sand skate boarding, I see Arabic tents and Arabic coffee with Bedouin music playing. I see cultural arts being experienced in an interactive environment. I see calligraphy workshops. I see Islamic history narrated through film. I can keep going on with the visions in my head but I'm not sure if that is what your asking for.
3:51:44 PM: Instructor: That is good. Where is it? Don't say Sharjah
3:52:30 PM: Student: Where is it? You mean where do I see each vision?
3:53:14 PM: Instructor: Yes
3:53:42 PM: Instructor: For your sake give it an address
3:55:45 PM: Student: From the safari trips up to the Bedouin music, it definitely the desert. Cultural arts and calligraphy workshops is in bait al Serkal in the heart of Sharjah. Islamic history in film is narrated in the Sharjah Islamic museum.
3:56:53 PM: Instructor: Ok that was not that hard was it? When is it
3:58:10 PM: Student: Somewhere at the end of December.
4:10:05 PM: Instructor: Ok keep writing (L Trenkov, 2013, pers. comm., 19/09)

4.3. Progress critique

Students were asked to conceive, design and produce a website. The greatest need for ongoing critique manifested itself during their production phase, when they were expected to create working prototype using standard development and prototyping tools. The following example of a private exchange between a student and an instructor, shows not only a direct critique of a specific state of development, but also identified need for communication some of the feedback form the private chat to the class one.

6:10:01 PM: Student: Hey professor , hope you're enjoying your weekend , I was just wondering if my chart seems too complicated because of the arrows , or is that ok ?
6:10:07 PM: Student: f8857841de897dbbb6808ed0540f3fe5.jpg <screen shot of student work>
6:15:02 PM: Instructor: Yes. It is a bit too complicated. Ask yourself if you don't know how your site supposed to flow could you understand it? Summarize like directions and flow with a single line. I showed it to some of you but I have not done so to all. I will send you an example in few moments.
6:17:08 PM: Student: Yes this would be very helpful , thank you so much (:
6:37:55 PM: Instructor: I will send it to the class chat since others could benefit.
6:38:23 PM: Student: Alright no problem (L Trenkov, 2014, pers. comm., 22/02)

In addition to issue discussion and feedback the most direct opportunity for critique raises at the moment of production when a student is attempting to resolve issues relative to form making and aesthetics. They occur at various times of the day depending on students' progress and experienced doubts. Following exchange situation shows a person-to-person critique like exchange where actual plan for a form is being discussed rather than concept development. While the students are not obliged to follow any of the feedback points, they nevertheless welcome any conformation of movement towards effective final outcomes. In this case there was a realization that the discussed nuance could be better addressed in a face-to-face meeting. It must be acknowledged that some obstacles are simply rooted in the students operating in a non-native language.

6:27:15 PM: Student: Prof...this is my stand...I need to start working on my banner and
animation...cant without a stand
6:27:36 PM: Student: 6339ec83f0b8e25db0e9381fdf979375.jpg <image of a sketched
prototype>
6:27:55 PM: Student: da936d71f6b72cc9ba0032928f30436c.jpg <image of a sketched
prototype>
6:28:29 PM: Instructor: It looks intriguing. Go for it.
6:29:34 PM: Instructor: I only wonder if it might be more intriguing if the book part is vaguely
reminiscent of an open book.
6:30:22 PM: Student: Yeah...come again?
6:31:40 PM: Instructor: The top is an open book gesture rather than simply a curve.
6:32:20 PM: Student: Ok..u mean it should be curved more?
6:32:59 PM: Instructor: Can you wait on that part until tomorrow?
6:33:42 PM: Student: I guesa...I wantes to work on the online banner. ..bas its fine...ill finish
the flier design
6:33:44 PM: Student: Thanx
6:33:54 PM: Student: Wanted* (L Trenkov, 2013, pers. comm., 18/11)

4.4. Contextual resource direction

Course lectures and presentation in design education is accompanied by number of existing example and functioning digital products. Mobile messenger discussion circle proves to be a very efficient and expedient method of disseminating recourses and examples as needed. The list of relevant resources could continuously evolve and grow. It is practical and expedient to instantaneously publish links to digital examples as they are identified. Following is a messenger broadcast to junior students course centered on digital content and distribution.

3/2/14, 5:26:06 PM: Student: Sir, do we just continue to "populate" the blog? Or are there
certain deliverables for tomorrow?
3/2/14, 6:40:31 PM: Instructor: Populate
3/3/14, 4:57:22 PM: Instructor: The sites I showed today:
3/3/14, 4:58:23 PM: Instructor: www.upworthy.com
3/3/14, 4:59:08 PM: Instructor: Www.narrative.ly
3/3/14, 4:59:48 PM: Instructor: Www.5secondfilms.com
3/3/14, 5:00:40 PM: Instructor: www.thisismyjam.com
3/3/14, 5:01:19 PM: Instructor: www.curious.com
3/3/14, 5:02:07 PM: Instructor: www.businessoffashion.com
3/3/14, 5:47:05 PM: Instructor: Watch this when you can: www.Internet.org (L Trenkov, 2014,
pers. comm., 03/03)

For all courses included in the study, the instructor aggregates multiple online references in a form of an online magazine using Flipboard.com. This is a very efficient method for distributing digital resources and support materials. Although those aggregated resources are thoroughly advertised, a direct reminder delivered to their mobile devices could offer additional inspiration and reason for consideration.

3:58:10 PM: Instructor: Flipboard magazine for the class: http://flip.it/PxTO3 (L Trenkov, 2013,
pers. comm., 08/10)

5. CONCLUSION

This study identified a vehicle for direct and engaged communication with students outside of the scheduled face-to-face meeting times. While it is not a replacement for class instruction mobile messenger discussion circle could serve as a valuable and productive discourse space. The engagement could range from basic feedback mechanism to a discourse/critique space where students can present ideas and evidence of making and be critiqued in almost real-time as need. Some discussions could be very laconic and lacking specificity, while other exchanges extend for almost an hour with multiple participants adding their voices to the mix. The study was located in a country (UAE) with the world's highest penetration of smart phones, which assured that the technological prerequisites could be easily met. Another aspect to be recognized is the expectation of significant degree of informality in the conversations. One must accept that it will be nearly impossible to enforce absolute precision in punctuation and spelling. The speed of the medium biases immediacy over exactitude. Inferences and abbreviations do not seem to hinder conversation and most

importantly comprehension. Lastly, the mobile discussions are seen as augmentations and timely support rather than replacement of face-to-face meetings. If one believes that the use of technology in the classroom would dramatically alter future pedagogy and student-teacher interaction, mobile-based conversation circles will become more prevalent throughout the educational space. The multitude of tools, platforms, affordances and practices methods will define a highly integrated pedagogical environment where satisfying learning objectives may depend less on specific location than on perpetual connectedness.

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