

Cryptolysis

Cryptolysis is a community-based website/app, that helps users learn about crypto and manage their FoMO.

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May 2022 | New York University



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The last couple of years me and many people in my close social circle are involved with cryptocurrencies, most of them are usually trading every day. Especially for the past few month's cryptocurrencies are our number one topic of our online or in-person conversations. With some of them we even created an i-message group only to share information about various crypto - currencies. The purpose was to inform each other almost daily about any news that we read and found on the internet. Even though we were selecting information and being updated through that process easily and fast, I still had some doubts regarding which coin's chart was good for buying or selling. This lack of knowledge though was something that I had to deal with by myself, by watching thousands of videos all around YouTube and by spending hours in front of my computer reading. It was a very time-consuming procedure and I still need improvement.

Info about Cryptocurrencies

Crypto-currencies or crypto are not physical but digital coins issued by digital platforms. The term digital coin is to express the use of advanced technology as a tool for financial transactions and obligations among individuals or parties. They can be considered as advanced innovative mediums of exchange, used for financial transaction without the interference of banks, governments, or any other financial institution. Based on cryptographic computer programming and Blockchain technology, they provide to their users the ability to make decentralized exchanges but at the same time they are verified and recorded.

All cryptocurrencies consist of some common and unique features. They can provide anonymity, independence from central authorities, like banks and governments and double spending attack protection. This exchanging system can contribute among individuals without any third party involved. For those transactions to be generated, cryptocurrencies are based on the advanced technology of Blockchains. Cryptocurrencies are not issued from the banks and official parties and there is no law that mandates their acceptance as a currency, thus they cannot be compared with real money (Alhihi, 2019). Another basic feature that they have is

the volatility, sudden ups and downs of the coins' prices, something that does not affect long-term but short-term investors.

Even though cryptocurrencies consist of some common features, their usage and utility are different for each coin. Each of the cryptos has its own purpose of creation and to assist different things. The first crypto created in 2008 was Bitcoin from somebody with the pseudonym Satoshi Nakamoto and it was released January 12th, 2009. So far is the most powerful digital coin, with second in the list the Ethereum. The main reason Bitcoin was created was to ensure transactions over the internet with low transaction fees, even for the low financial value transactions (Halaburda & Sarvary, 2016).

After a few years, specifically in 2015 another cryptocurrency was released under the name Ethereum. Ethereum is not considered a digital coin, but as a decentralized open source blockchain with smart contract functionality. Ethereum enables to send money among users but only under a certain set of conditions. With Ethereum transactions do not need any third party to execute it in order to take place, but only through a piece of code as mentioned in the Coinbase Blog in an article named "A beginner's guide to Ethereum".

Other two coins created from the same developer but for different purpose are the Stellar (XLM) and Ripple (XRP). XLM focus more on unbanked individuals, provide

them the ability to make transactions cheaply and internationally. On the other side, the functionality of XRP is also to enable cheaply and international transactions focusing though more on the banks. Through XRP banks will be able to almost eliminate the international transaction fees and the estimated time for the transaction to be completed (Won, 2020).

Another cryptocurrency with an extremely different usability with the ones mentioned above is Filecoin. This crypto enables individual to rent their computer storage and get paid for that. All the above-mentioned coins were mentioned as examples to help readers conceptualize the definition of functionality and utility, which was used above as one of their main and most important difference. This aspect is the one that will make users believe in a coin and decide to invest on that.

Problem

More and more people every day are starting to get involved with cryptocurrencies, all of them with various educational backgrounds. Their main purpose for that decision is to invest their money somewhere, or to have an extra income beside their job or even they might do it as a full-time job by buying coins in low price and sell when the price goes up. All the above-mentioned investors must be able to understand when the coin's chart looks good for investment, especially the latter group of people. Some, due to their occupation, might be able to comprehend and analyze very well charts and know on which aspects should they focus on without doing any research about it and know exactly when the right time is to buy, sell or hold positions. On the other hand, there are people that do not know what they should check first before they invest on a cryptocurrency because their educational background has nothing to do with that. However, they might want to learn because it is a good aspect to guide their decisions about trading in order to earn money.

Many people are spending hours on YouTube watching videos trying to educate themselves or even purchasing online seminars to attend. Especially, newcomers in the world of crypto if they do not have someone to show them what to do, what they need to pay attention to, what they must know before they make any invest,

are doomed to search alone. The process of researching about it on the internet is chaotic, time-consuming and many times overwhelming. Nowadays though, the majority has no time, nor enough money to spend to learn reading charts, or to get educated about crypto. The fast-paced life worldwide, many hours at work or at college, people barely have free time to spend learning something not related with their college or their occupation. Time in modern world is very important and we must come up with ideas to spend less time but gain the same or even more outcomes.

Another aspect that affects the amount of time a person needs to spend on learning something is the quality of information they are trying to comprehend. For example, YouTube might provide answers to many questions about crypto but the amount of extraneous information the working memory is storing while someone is searching for videos is not neglectable. This fact makes the process of learning even harder and more time-consuming. Something that happens also while searching for information on the internet. Most adults after work and various responsibilities are exhausted, they cannot search for hours to find something related to what they want to learn and expect the learning to be effective. It might be effective though if it is something simple, without extraneous information, concentrated only on the

learning topic without spending time searching for the right information on the chaotic world of the Internet.

Considering the fact cryptocurrencies are continuously becoming more and more well-known alongside with the rapid increase of their audience, leads to the conclusion that an increased percentage of people are struggling with the above-mentioned issues. In combination with my personal experience on crypto, knowing the amount of time someone needs to spend online searching made me realize the importance of making the process of learning about crypto and learn what specific aspects of crypto they must check on before investing, effective, and less time-consuming, not forget mentioning free!

This addressed problem, is something that in general many of the cryptocurrency investors, especially the newcomers, are struggling with. However, it does not affect only newcomers into the crypto community, but also investors who do trading for years but they are still impulsive and take decision without all the necessary research first. Newcomers though are struggling a lot more because they must search all over the internet for useful information about crypto, information about the coin, getting informed of what they need to pay attention to and in addition to that learn on what aspects of the chart they need to focus more, if their educational

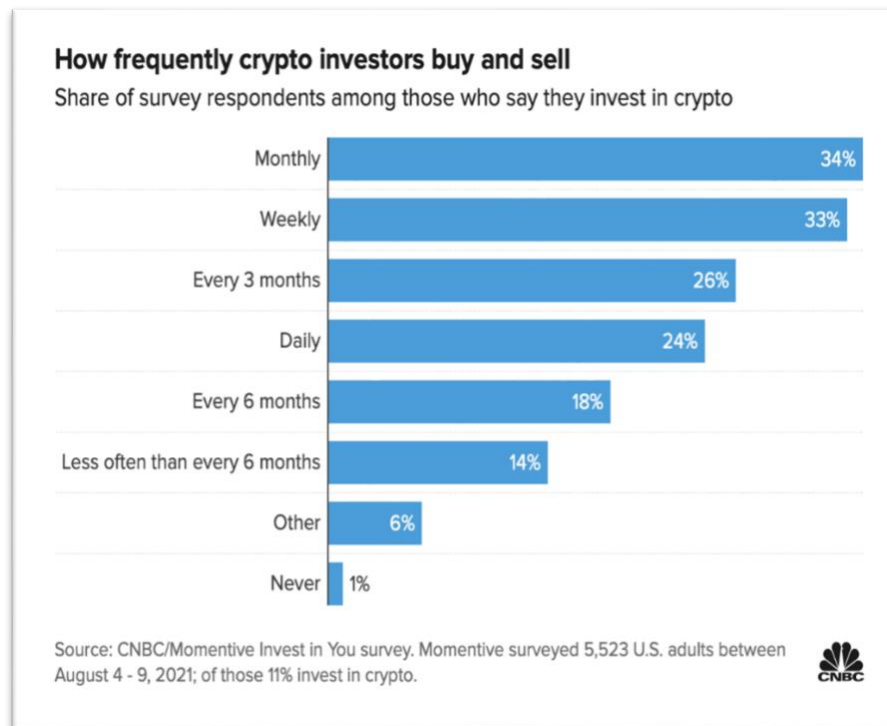
background is completely different. In order for them to search for all those things, they must have enough free time. This process is very time-consuming, overwhelming and it can overload your memory with unnecessary information because there is no specific digital place, where people can go directly there and search whatever they need to learn about trading in crypto, improve their knowledge or even get informed daily.

There are many websites, where people can go and learn about each coin's history and functionality. However, there is none that incorporates this aspect and understand the need of the crypto community for communication and interaction of ideas and strategies. There is a need in this specific field for something more organized, where people can learn in less time quality information that will need for their trades and at the same time give the opportunity to communicate with other people who share the same interests, questions, or concerns without navigating from one site to another. For somebody to realize the importance of communication and the need for learn about aspects of crypto in combination with their charts and be notified immediately for potential changes, it can be only with the comparison of stocks that are more long-term investments than cryptocurrencies. Even though both have the same outcome, which is investing money, at the same time there are many differences, for example in liquidity and transparency. Moreover, in

cryptocurrencies due to their volatility and sometimes aggressive volatility people must be aware of their news and charts every day. This affects not the long-term investors but more the short-term investors, and the people in the community who trade regularly.

According to research from CNBC crypto investors buy and sell very often. Only 1% of the people they surveyed were buying crypto as a long-term investment. It is not usual for people to invest long term in crypto like you do in the stock market. This aspect affects the way and the rapidness in which you must be able to take decisions and actions.

That knowledge about what you must check before make any decision must be good enough to positively influence actions therefore the possession of that



you
and

learning is extremely significant. In case somebody who is in the community of

crypto or wants to start trading, it is significant to learn first the history of its coin, its functionality and what to keep an eye on for some days before trading and all for free.

The last few years people all over the world are starting to invest their money, for an extra side income beside their jobs. They usually invested in stocks but the last couple of years more and more people daily are starting to search about crypto in order to see if it is a good choice to invest their money, either long-term or short-term. After an interview that I fulfilled with a person, who started trading in 2016, when I asked him “Why did you start trading and invest on cryptocurrencies?”, the answer was “Because I think it is the only solution for our generation to earn money without working endless hours. And besides that, crypto are the money of the future.”

Specifically, Millennials must deal with the most uncertain economic system. After Covid-19 started that uncertainty increased rapidly; people had either plenty of time on their hands trying to figure out how they can increase their income, or they lost their jobs and many of them started trading as a way to earn money. The two generations that were noticed to trade more often is the Millennial generation and Gen Z. More and more people after the beginning of 2020 started using trading platforms to invest their money. According to BlackRock survey, 45% of millennials

are more interested in investing than they were five years ago (Chen, 2021). However, not all of them know how. Many people jumped into the world of crypto being amateurs and by not having a good experience an aspect that might lead them to devastating mistakes due to the aggressive volatility of cryptocurrencies. This aspect increases the need for them to educate and inform daily well enough themselves in order to make good choices.

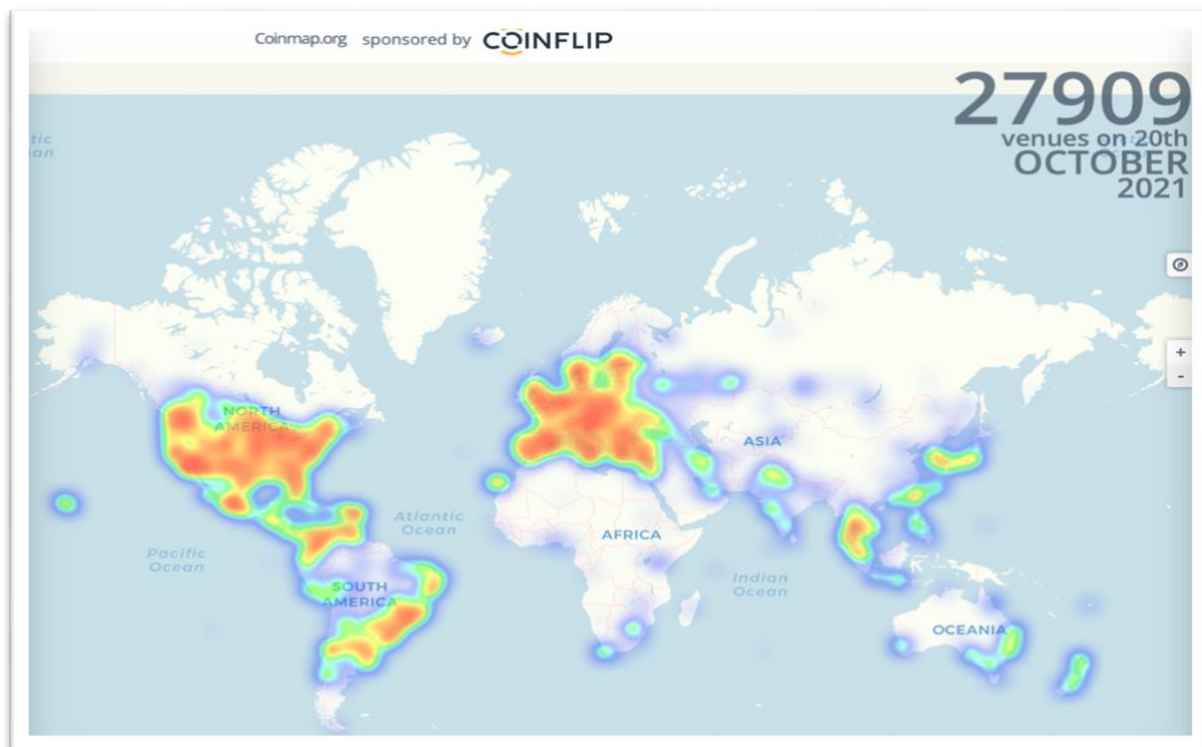
Another aspect that makes that learning need important is the fact that for many people, crypto are considered as the money of the future. Even though there are still people around the world who are extremely opposite too crypto, Bitcoin specifically has become in many places an additional way to make transactions and payments. Bitcoin is getting the term as digital gold and there are many assumptions that Bitcoin will gradually replace the conventional currencies and even surpass them in value. Over the years, since 2011 Bitcoin has gone under many crushes in its prices, with the latest one in the beginning of 2020 that went down to almost 3.000\$, but only to come back stronger and almost one year after to touch the all-time high 69.000\$. In addition, the technology that cryptocurrencies are based on, blockchain, has many advantages and it could be used in the future from banks, insurances for the international market and transactions with reduced fees and processing time (Matharu, 2018).

Based on this answer, it can be claimed that there is a gradual increased need for people who want to start trading to learn about crypto and the things they should pay attention to, and in addition learning due to cryptos' volatility to manage and control users' FoMO. The absence of a free, qualitative source that people can reach out and educate themselves, in combination with the fact that people invest their actual money there, makes the solution of this problem extremely important and helpful especially for people in the cryptocurrency community.

Target Audience

The target audience of this Thesis Project are people who are involved with crypto currencies in countries that crypto are not band from the government. This learning group of people is very broad and varied, however “Cryptolysis” will focus more on newcomers to the world of Crypto and old-timers who want to make research before they trade, and they are struggling with FoMO.

Crypto are currently very well-known worldwide, however not in all countries are acceptable. There are countries like China, India with the most recent Bolivia where



transactions with cryptocurrencies are banned. On the other side, there is United States

and even almost all countries in Europe where cryptocurrencies are accepted, and people can even find Bitcoin ATMs. In those places, Bitcoin specifically has already been an additional method for payments, online and even purchases from stores. However, the demographically aspect is not a good criterium to be considered for narrowing down the audience, because there will always be people that will find a way to trade even though it might be illegal in their countries by using for example “VPN”

Another significant aspect that needs to be considered for the target audience is their age group. What ages or what decades are usually more into crypto currencies? The most common ages for crypto traders or people who want to invest in crypto, are usually in their 20s, 30s and 40s. Younger ages are investing in Bitcoin, while the percentages radically declined after the age of 50s (J. Bohr and M. Bashir, 2014). There will definitely be people in older age that might be crypto investors but there might be a negligible percentage to reconsider for this Thesis Project. Thus, the target audience will be people in the age of 20s, 30s and 40s from countries where cryptocurrencies are legal. In other words, Millennials and Gen Z are the target audience of this project. In addition, they must be interested in crypto

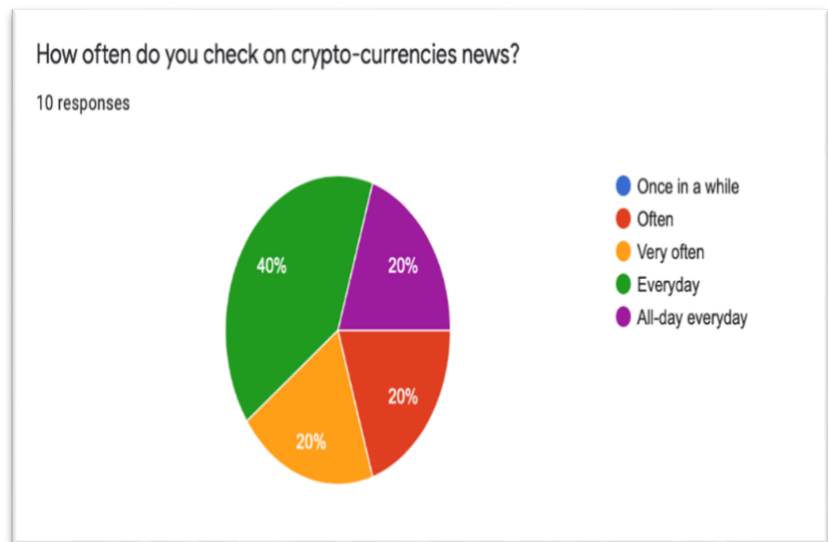
and more specifically they can already be crypto investors, or they are willing to become, but they want to gain information about the coins, knowledge about the charts and information about each coin's idea and history.

As it is mentioned above the target audience's characteristics varies. There are many differences among them, specifically their family role, their socio-economic background, their occupation, and their diverse type of educational background. However, one common thing is the lack of free time. Adults, usually have many responsibilities and their free time and time they possess to educate and improve themselves is very little and some days almost none. Thus, it is very difficult for them to find time for learning and more important when they must search about it first. By taking this aspect into consideration, we realize that they need something easily accessible, flexible, and concentrated only on this specific topic of learning.

Another aspect that must be taken into consideration regarding the target audience is a characteristic that has been observed to investors. According to research that was published in 2020 from Hee Jin Kim et al, FoMO was one of the investor's psychological main characteristics comparing to the non-investor group, since the scores in former group were higher than the latter. FoMO, the fear of missing out in many cases relates to depressed feelings. It is a source of negative mood because

it might undermine the fact that a person took the best decision in its life (Wortham, 2011). Especially in cases, where people are investing their money for a better future, or for an extra passive income, the FoMO symptom might be more obvious. They are in need to communicate and keep in touch with other people in that community, because they need to know if that were the best decision they could take. In addition, previous studies also support that FoMO is a crucial guide in investment environments (Pichet, 2017).

Additionally, by also taking into consideration some results from the surveys that was fulfilled with people that can be consider the target audience of this Thesis



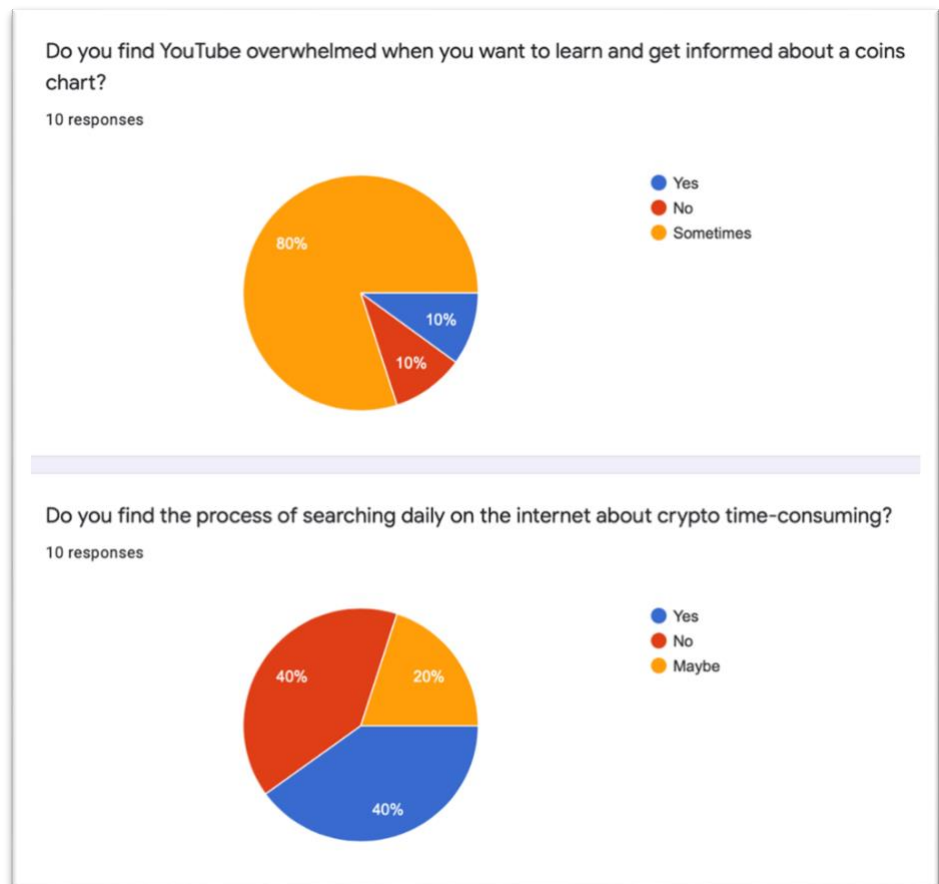
Project, since they are crypto investors, it can be claimed that FoMO can be a significant aspect that can influence my design. FoMO in economics and especially in cryptocurrencies is a very important characteristic that must be taken into consideration. People invest their money, and their main purpose is to make them more. Their main goal is to buy a coin in a low price and sell in high, however this

fear of missing out a potential good opportunity to invest their money, might lead them to impulsive decisions (Spaventa, 2021). It is an emotional related phenomenon that makes people react under less logical way. Usually, it appears when the market is going up and the prices are very attractive, while we might feel that were stuck in a solid plan especially if our investments stay the same (DePorre, 2020).

Directly connected to the symptom of FoMO is the following mentioned question that was also part of the survey's questions, "Do you share information about crypto with friends who share the same interest? Why?". All the answers were yes and each one of the participants mentioned different reasons why they are in touch with other investors and share information with them. It is either because they feel that it will help them if they share information with people they trust, because exchanging ideas, opinions and views might lead to better decisions. As a result, I saw that they need communication for various reasons, either because it is helpful for them, or others, or because it is fun. This specific characteristic leads into the decision that part of the design must be a section where users will be able to be part of a large community and being able to communicate with people they trust, respect and they can share quality information and ideas, something that might lead them to better decisions. This aspect of communication as a community and the sharing of multiple

perspectives might be very helpful to members of the community that struggles with the FoMO symptom. Their expose to multifaceted views and ideas will make them realize that opinions differ, and more analytic research might help realize what is the right decision.

Two other questions that were include in the survey are those presented in the picture. Is the process of researching information online time-consuming, is YouTube overwhelming when



you are trying to find information, either about the charts or the news or potential movements of the chart? Those questions were included on the survey, with the purpose to clarify if the majority of the target audience struggles with the same thing. The percentage in questions about YouTube is 80% with the answer “Sometimes”, 10% “Yes” and the neglectable 10% of those who answered “No”. Those results

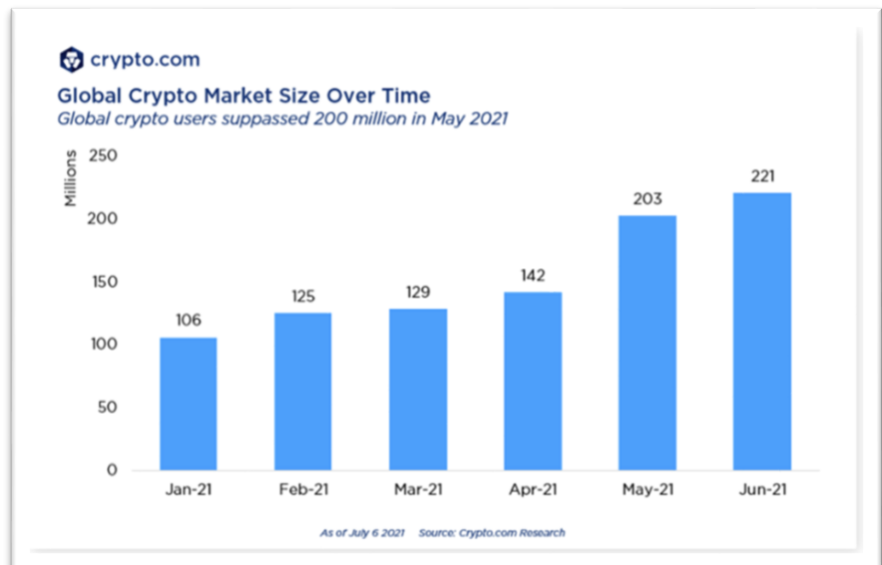
show that there is a need for a qualitative source of free information, especially for those who are trying to learn on what aspects on charts they should focus on through YouTube, since it is the only source of information about charts that they can find for free.

Goals

As it has been mentioned above, the percentage of people who are starting to invest in Crypto has increased radically the last couple of years. Specifically, only in the first half of 2021 cryptocurrency users doubled, from 106 million dollars in January of 2021 to 221 million in June of the same year. However, even though there are plenty of good websites and free Moocs where people can get information about

crypto, there is none that gives them the ability to communicate and share ideas, except some chaotic social media like “Twitter” and “Reddit”.

There is no website that



provides them basic information about what aspects should they observe before they buy any coin, neither helping them to manage their FoMO through communication and all these for free.

Especially for newcomers the process of learning all the above-mentioned information is chaotic, overwhelming, time-consuming, and sometimes expensive, since they must search all over the internet from one site to the other, or for one

YouTube video to another and even sometimes they must pay for seminars or even for some kind of subscriptions in websites in order to get a qualitative and effective learning experience.

Even for old-timers to the community of crypto the process of researching a coin and monitoring its movement before they invest in, it is chaotic for various reasons and time-consuming especially when their research is through the entire web. When they research, they must monitor specific aspects of the coin for a while before they buy, one of them are the daily news related to that coin. This monitoring must be consistent, and they must be able to keep records of potential changes on some important features of the coin, in addition during this process they must be able to control their FoMO and not letting it be the motivating aspect for trading. If they want to make good and not impulsive decisions in trading, they must have clear and neutral mind and thoughts.

Therefore, the goals of this project are as follows:

Main Goals

1. Newcomers into the crypto world will learn fast and easy basic information about specific aspects of crypto.
2. Newcomers will learn how they can make the right research before they invest.
3. Old-timers who make short-term investments will learn how to make more careful decisions without FoMO.

Sub-goals

1. The process of learning anything they want about crypto will be faster and more effective by avoiding the cognitive load with extraneous information.
2. Old-timers will be able to manage their FoMO in order to avoid impulsive decisions.

Landscape Audit

1. CoinMarketCap

<https://coinmarketcap.com/currencies/bitcoin/>

This website is focused on cryptocurrency investors either new-comers or old-timers by providing qualitative information about all cryptocurrencies.

Interesting aspects about it: In this website the target audience can learn anything they want about any asset they want. It is easy for them to find information by clicking on the searching icon and press the name of the coin you want to learn about. It also provides in the same page plenty of information about each coin, history of the chart, the Market Cap, even the amount of people that daily monitor the coins progress. Users do not have to search around the internet, since there are attached important daily news about the currency the user is searching about. This aspect decreases the potential extraneous load in the learning process.

It is very well organized. The design of the platform is easy, an aspect that makes the user's experience enjoyable and they are not overwhelmed from the amount of information provided. It has a simple design, easy to the eye with the categories at the top of the main page very well organized. Even though it is a platform for investors in general, it is not difficult for users to find fast specific information for

crypto currencies. If this process were hard and took time, the whole experience and the learning process would be overwhelming, because users would store extraneous information in their cognitive load.

This website in the home page has attached videos from YouTube providing daily news and information about various currencies. However, this is an informational website, it does not give the chance to new investors to learn how to read the charts, or even to those who are investors for years to resolve any potential misconceptions.

Furthermore, the creation of community and the aspect of communication and exchange of ideas is something that this website is inferior to. There is a live chat for each coin, where people can talk in real time, however this does not have any informative role, instead it can be overwhelmed. Messages are categorized to “trending” and “latest”, while it could categorize them per day, so people could search better and not have to scroll up and down to find something that can be related to what they are looking for to get information. In addition, even though it gives you the feeling that you are part of a community, you are not able to create your own communities and interact only with those. They are part of a big community, and do not have the ability to interact with smaller groups and share ideas there. In order to do that, they have to visit another app, or do it through their phones.

In addition, this website also has a learning section, where some videos and are included. When you click on the videos, it automatically directs you to the websites YouTube page. This aspect from learning perspective it is not a good choice, considering the fact that we need to avoid the extraneous load if we want our audience to learn something faster and more efficient. On the other hand, when you click on the news, you automatically go to another page where the news is very well organized by day.

2. Token Metrics

<https://tokenmetrics.com/?hsLang=en>

This is a website that provides useful information to Cryptocurrency investors about technical analysis for various crypto-currencies charts. This is a website for all crypto investors and even for people who have no idea of what aspects they should focus on.

Interesting aspects about it: In the interviews this website was mentioned as one of the most valid and qualitative sites where people can get information and a Technical Analysis for charts. In addition, provides the ability for users to access private Networks and engage with other crypto investors and the ability to communicate with staff members of the Token Metrics team and more specifically

with Researchers and Analysts. It gives you the ability to get in touch with experts, something that makes the learning experience more trustworthy.

However, the downside of this website is the fact that for users to unlock all these features they must buy a monthly or yearly plan. Even for the 7-Day trial users must pay a negligent amount compared to the actual amounts of the plan, that fluctuate from 19\$ per month to 749\$ per month.

3. Trading View

<https://www.tradingview.com/chart/>

This is a platform and social network for investors in general. Either stock investors or crypto investors can find useful information by navigating in this website.

Interesting aspects about it: This website provides a good quality of information, however a little overwhelming especially if the target audience is new in the community. All the information given is specialized only to the charts. Users must have an educational background related to all these in order to be able and comprehend the information provided on them and use it to benefit themselves.

It gives information about charts and what people should pay attention to while they are reading the charts. It gives them also the opportunity to make comparisons

among coins, an aspect that makes their research easier. In addition, it provides a technical analysis through visuals and text a combination that improves the learning experience and a summary of what the video is about. An aspect that helps users eliminate their time for research, since they can read the summary before they decide if they want to spend time watching it or not. In addition, before users check the videos, they can read a small paragraph explaining why they should pay attention to the specific aspects mentioned on the video and how they will help them in trading and making better choices.

This website also uploads news related to either stocks or crypto. However, the aspect of communication and interpretation of those posts as a community is not available. Users can read the news, but they cannot make comments on them or even share them with other members of the community. There is no direct community that people can find on the website, however, it gives to users the option to connect with experts, already famous and established traders into the crypto community.

4. Coin Desk

<https://www.coindesk.com>

Coin Desk is a website about daily news regarding digital currencies and especially Bitcoin. The target audience of this site is crypto investors, who want to get informed about the daily news for cryptocurrencies.

Interesting aspects about it: It is a very good source of information especially for people who are new into crypto, and they want to learn about the history and the functionality of Bitcoin or Ethereum, which are the two most important digital currencies. This information has been categorized into levels of expertise, the beginners, the intermediate level, and the experts. Each one of the users can click and learn about different attributes of Bitcoin regarding their level of expertise. They do the same thing also with the Ethereum, NFTs and cryptocurrencies in general.

This website gives information about each coin's chart and history. However, the analysis that provides is very advanced and easy to understand only from experts and people who are investors for years and have spent hours online doing their own research. In addition, in the research section users can find useful information about various webinars that took place, and they are able to watch them for free.

Another feature of this website that can be considered important is the event section. There users can learn about upcoming events about crypto an aspect that indirectly contributes to the idea of a crypto community. However, users cannot directly

communicate with other users of this website and share valid information and ideas with them.

5. Free Mooc

BLOC-511DL: Introduction to Digital currencies

<https://courses.unic.ac.cy/mod/quiz/review.php?attempt=428935&cmid=1494369>

This is a free MOOC offered from the University of Nicosia. The purpose of this online course is to provide information and make people understand the Blockchain technology and in general the decentralized digital currencies.

This course has been split in Weeks. For each week different topic is presented with various materials. Most of the time it is a video, a link that directs you to YouTube and a paper. It provides many different ways of learning, like reading or listening and this is an aspect of “multiple modes for learning”. I really like that it provides video from YouTube, even though I think that from organizational and design perspective the website is too wordy and maybe confusing.

However, what I really like, and I think that it would be a good idea to also keep in my design project is the button “mark as done”. Learners can press this button and simply mark something that they already did on the MOOC. If they watched the

video from the first week, they could mark it done for example. This is an aspect of self-paced learning and helps learners keep track of their progress.

Another important feature of this online course is the feedback that provides to learners. There is a Q&A, where they can post their questions and they are posted as a new discussion. So, every time that a member posts a question, other learners can go and give an answer or continue the conversation. This can be considered as an aspect of social learning, as it allows them to communicate with each other and share their ideas and perspectives or their concerns regarding anything related to blockchain. However, only in few of them I saw a conversation under the question, maybe learners need something to motivate them so they will participate more in those activities.

Last is the evaluation. Learners after completing the videos and the readings, they have the chance to take a multiple-choice quiz. Users, read the questions and they must choose the correct answer, after they submit their answers, they get immediate feedback. However, since our learners are adults, it would be better if the whole experience and even the evaluation part would be related and connected to a more real-life example. Something that I am planning to include in my design, where users will have to answers questions and make choices from simulated real-life examples.

Content

The content will be intended for helping people learn basic information about crypto and the aspects they should pay attention to before they trade. Those aspects will help the target audience to make the right decisions about when and where they should invest their money. This process will be qualitatively effective, less time-consuming, and free. In addition, “Cryptolysis” will be a community-based website that will include daily all the news regarding crypto and each coin specifically. The purpose of this is to help a significant percentage from the audience who struggle with the FoMO symptom to manage it and control themselves in order to eliminate and even avoid impulsive decisions.

Some of the topics the content will cover are: The first part of the content will be about specific cryptocurrencies’ history and functionality. What is for example Bitcoin’s purpose of creation, what are some specific attributes of that coin that made it the most valuable in the market. Beginners into the world of crypto for example need to know some basic information about crypto and more specifically as mentioned-above coins’ basic characteristics. Each Bitcoin for example is a computer file that is stored in a digital wallet app in people’s smartphones or

computers. People can send bitcoins to other people and every single transaction can be recorded in a public list (“Guide: What is Bitcoin”, 2021).

In addition, one very important thing the target audience needs to know is in what aspects of each coin they should pay attention to and what specific details they should focus on during their research. What aspects of the coin should they check before they invest in it or before they make in general any decision related to that. For example, one thing they will be able to do through Cryptolysis is to go to the learning section and educate themselves regarding those aspects. After that they will be able to go to the page of the coin they want and monitor it and keep some notes regarding its market cap and compare it each time with the coin’s price. This monitoring and research must take place few days prior to make the best decision they can and invest in the right coin the right time. All this research they will be able to do it only by navigating on the website, which will provide them all the necessary information needed and even all the necessary tools for their research, like a digital notebook saved on their account. They will be able to check their notes any time they want and save them by title and date.

Another part that will be included in the content is the analysis they should do by taking into consideration specific phases of the coin’s chart in combination with potential news regarding the coin. This aspect of content concerns not only

beginners but also people who are trading for years because it would be a complete source of information they need for their personal research before their investments. A theory that was considered for this feature of the design is the “Dow Theory”, that is a technical analysis theory used for the financial markets; thus, a theory that can be used also for the crypto market (Schanep, 2008).

According to this theory the market can get affected from daily news and information once they become available. When that information gets available, the chart of the coin might change and reflect accordingly that information (Schanep, 2008). This aspect of Dow’s theory, that affects charts movements when various daily information gets published on news, will be included in the design, as something that they must take into consideration if they want to do a short-term investment in the market of crypto. In the “Cryptolysis” website, daily news will be uploaded on the coin’s page, where users will have the chance to read and discuss with people of the community. In addition, users would be able to share news found online to discuss them with the other members and get a multifaceted understanding of them. That news will be in two different sections, general news, and specific news for each coin. They will be shared from Cryptolysis experts, but also people in the community they will be able to post news and share them on the news section publicly, or even privately with anyone they want in the community.

This ability of sharing news and communicate with other users to get a more completed idea regarding the potential move of the coin would be helpful also from another perspective. As mentioned above, FoMO is a symptom that can be observed to many crypto investors, especially those who make short-term investments. This fear of missing out the best price for example, might lead users to negative consequences. Thus, the fact that they will know a specific online page to visit in order to inform themselves would be helpful, especially if that option will be followed from the ability to receive notifications on their phones about daily news of the coin, they are willing to buy or sell.

Context

This Thesis's Project design solution will be used in an informal context. The target audience will be able to interact with that any time they want, and they feel the need to learn something about a specific cryptocurrency, either the history and functionality or check on the daily news that might affect any coin's chart they want to invest or have already invested.

Beginners into the world of crypto will be able to enter the site and find anything they need to know about the above-mentioned information. Crypto users will have the chance to check on daily news in this design and at the same time check on the charts to come up with a decision, or to understand the chart in general and be able to possible predict the price that it might get in. Even for experts into the world of crypto this project will be beneficial because they will be able to make their research easier, faster and at the same time keep some notes and all this only by using one app/website.

In addition, users will be able to interact with other members of that community and share their ideas, concerns, and questions with each other. They will feel part of a bigger community and they will be even able to create their own groups of close

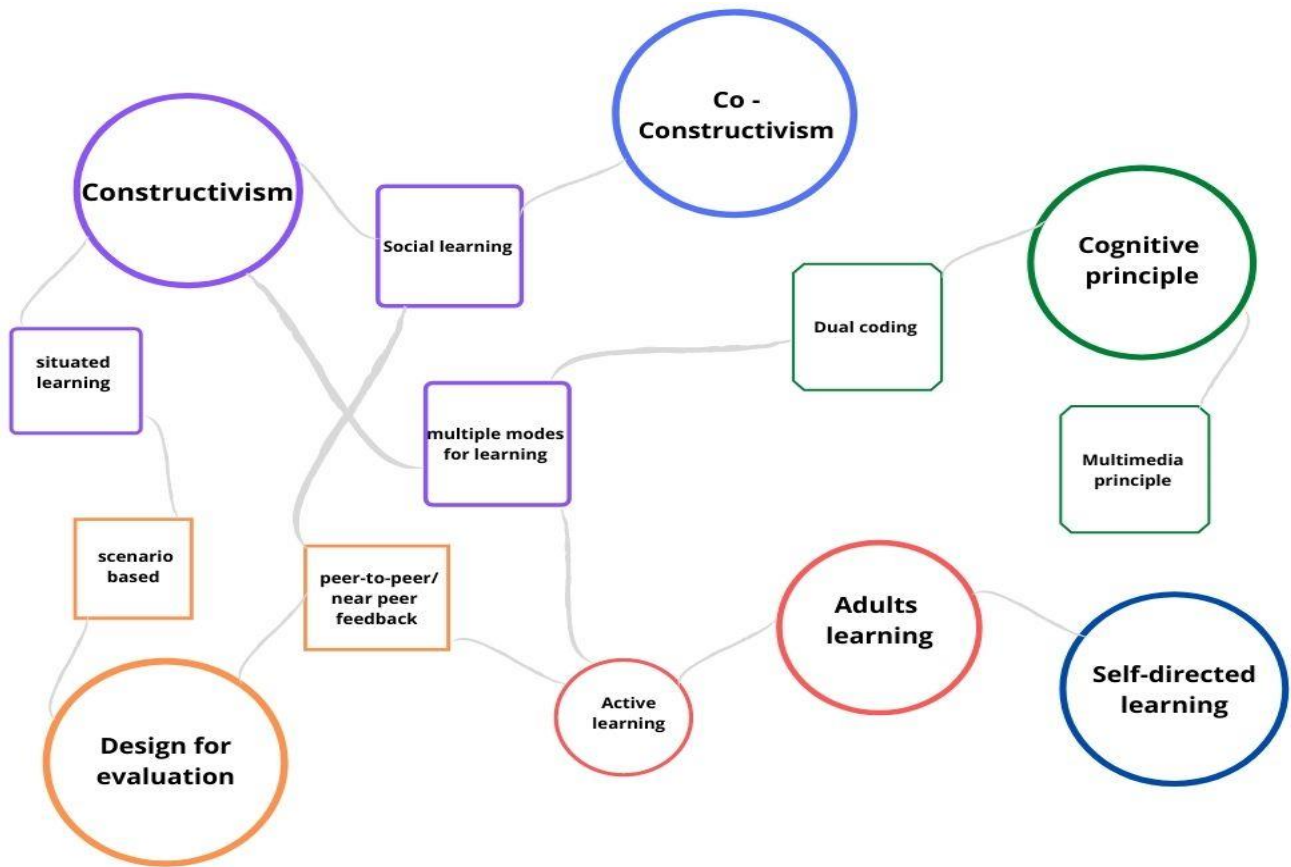
friends where they will be able to interact with each other in the same space where at the same time they are searching and getting informed about crypto.

The fact that there are already many mobile apps, where crypto investors can check on crypto daily and even trade through the phone, increases the need of the design to be both computer and mobile compatible. This is an aspect mentioned also in my surveys from some people. They were suggesting that an app would be more convenient for them to use, and they would have faster access to it any time they wanted to compare to a website, which would make the whole experience more difficult for them except if they were already on their computer. Furthermore, considering the need of the target audience for interaction with other people in the community, in combination with the FoMO symptom they might struggle with, increases the possibilities that a community-based website and even an app might be a good idea to engage users and help them learn each and every day from each other about anything that is related with crypto.

In addition, this community-based platform in the form of an app might increase our users' engagement. All of us use more our cellphones daily to send any kind of messages, from direct messages to group messages and even emails comparing to a laptop. Thus, an app will be more beneficial to them from that perspective. However, I will provide both versions, website and app, because the app might be

more convenient from communicative perspective, while for example the website would be more effective for those who want to research before they invest in any currency.

Design Rationale



The design rationale for the “Cryptolysis” project has been based on some Learning theories and Design principles by taking into consideration Project’s main goals and my target audience’s main characteristics as traders. In addition, another aspect where I based my design choices is the book “Design for how people learn” of

Dirksen. Learning will be viewed through the perspective of co-construction learning and participation.

The first learning theory the design will be based on is **Constructivism**. According to the **social learning approach** of Vygotsky understanding will be achieved through discussion and social interactions. Through collaboration and engagement, the audience will be able to understand and comprehend some basic aspects of Crypto before they start trading (Vygotsky, 1978). Users by exchanging information, ideas, and news, can better comprehend and see things through different perspectives. Especially, considering the FoMO symptom and the fact that this might lead them to impulsive decisions makes the need of social learning activity even more significant.

Since my target audience are adults and by taking into consideration all the above-mentioned aspects, I tried to conceptualize learning for my design also as **co-constructive knowledge**. According to Piaget, knowledge occurs as result of connecting and constructing ideas, building models, and connecting old knowledge with new. A way to connect old knowledge with new is through communication and through co-construction with other people. Even in everyday interactions, through negotiation, people can acquire new information and connect it with already acquired knowledge they had stored in their long-term memory. Through this

process people will be able to add information to their schema, or even reconstructed if they had any misconception. Social media offer new ways to approach human interaction and communication including education. In those social media we can claim there are communities of practice, that means learning occurs outside of formal group-based courses (Dron J. & Anderson T., 2014). A learning can occur in social media where people can create their own groups, where as a group can built their group cognition and collectively built new knowledge. By taking this aspect of learning into consideration, one feature of this website is the ability that users can share information not only on public through comments but also in private and group messages.

This aspect of interaction and communication will also help with the FoMO symptom. Part of the design will be a sharing option of news for each coin included on the project. On this page people will be able to share daily various news regarding each currency or to go and check what news other people of the community shared. On those posts, users will be able to make comments and share their perspectives with the rest of the users. This feature of the design will help the target audience to eliminate their anxiety for FoMO, since everything that they need to know will be in one place and whenever they want, they can go and check. At the same time, they

will be able to reconsider and comprehend more deeply that news through the comments followed before they make any decision.

In order to access the importance of those posts and if the information presented on the posts are qualitative and significant enough that must be taken into consideration, an aspect of **evaluation** must be included in the design. Reading the book “Design for How people learn” and specifically the last chapter of the book “Design for evaluation”, I ended up to the conclusion that feedback regarding the importance of the shared news must be taken into consideration. A way to provide that kind of feedback in a more co-constructive way of learning is through the “**Peer-to-peer feedback**” or the “**near-peer feedback**” (Dirksen,2016). Users will be able to evaluate and give feedback to each user posts regarding daily news about each crypto. They will be able to vote the post as good or bad and provide actual feedback through comments. Users do not have to be experts to give feedback, they can be in intermediate level and still being able to give feedback, share their interpretation of various news as a way of feedback in social learning context.

This aspect of the design will help users to narrow down their research and make the whole process of deciding which is the right choice to make less time-consuming. In addition, the above-mentioned parts of the “Cryptolysis” design will help the target audience first to manage and eliminate their FoMO, because

everything that they need to know will be there, and second to aid them think twice before any decision and not acting impulsive because they will see multiple people's perspectives and views that will make them think twice before their next movement on trading.

In constructivism there are also **multiple modes for learning** that a very important part of this Thesis project will be based on. One of the main goals is that the target audience will learn fast and easy important attributes of crypto that will help them make the right choice in trading. That information will be presented to the users through multiple perspectives and various presentation styles. Since my users are adults and knowing the fact that each person is different and that there are many kinds of learning styles, users will be presented to various presentation styles (Mayer, 2014).

There might be users that are visual learners, auditory learners, reading or writing learners. All those styles in combination with the "**Multiple modes for learning**", will be considered for teaching users what should they know before investing their money, or before they come up with any decision. That information will be presented via videos, text, diagrams and in that part of the design there will also be included a notes section, where users will be able to take notes while they are learning. For each coin, there will be a video of what should they pay attention to in combination

with a text, the coins diagram, history, news, and a notes button where users will be able to use while getting informed. Those different modes of presenting the information will allow users to learn better in less time by focusing on their learning style. This is also the main belief of the “**Dual Coding Principle**” that claims higher outcomes in encoding and remembering information, when it is presented through multiple modes (Mayer, 2014). For the videos included in this section, I will consider also the “**Multimedia Principle**” which states that the learning outcome can be improved when the information is provided by using both graphics and text (Mayer, 2014).

In addition, according to Pappas (2013), adults are learning better through **active learning**. The learning outcomes derived from actively participation during the learning process are undoubtedly better than users being passive listeners of the information. According to this, it is better for my design to give more space to the users participating in discussions, debates, solving real problems and provide them a method of feedback and evaluation that will reduce the content. The method of discussions that will be used as mentioned above will be comments on various parts of the design, private or group messages, even a forum chat for each coin.

On the other hand, the kind of **evaluation** and feedback that will be suitable to the active learning will be scenario based (Dirksen, 2016). If the questions immerse

users to real dilemma and the answers will be to choose the most suitable solution, it will be challenging for the users. The feedback in this part of the design, where scenario-based questions will evaluate the learning information users acquired from a multiple presentational design will be immediate. After each answer that users will give, there will be scenario-based feedback with the outcome of their choice.

In **situated learning** there is a connection between the learning and social environment in which can be occurred. Users learn better in authentic and real contexts (Ertmer & Newby, 2013). Thus, the scenario-based learning, evaluation and feedback will work as a simulation of an authentic problem-solving experience, where users will be asked to make the most preferable decision and there will be an accordingly suitable outcome of that choice.

Another instructional design model that will be taken into consideration is the “**Self-directed learning**”. This project’s target audience are adults with diverse everyday life. Some of them might have plenty of free time daily while others might have a very busy daily schedule with very little free time. Thus, it is significantly important to allow learners to follow their own pace of learning. They will be in control of the quantity of information they want to learn each time and suitable to their personal needs (Kleiman & Wolf, 2015; Morrison, 2016; Spencer, 2015).

Design Solution

The main purpose of this Thesis project is to help novices learn basic information about crypto faster and more effective. My target audience struggles a lot getting basic information about crypto through Internet. Even though there are many resources, the Internet might be a chaotic place that can lead them to cognitive overload without even getting first the information they need. In addition, our audience are adults with many responsibilities and limited free time. At the same time, “Cryptolysis” can help experts with their research by providing them an online research place that will help them also manage their FoMO, an aspect that might lead them to impulsive decisions and consequently to lose money from their portfolios.

So, Cryptolysis builds a completed online space, where people can visit and get basic information about crypto and scenario-based examples of the way that they should make and control their decisions. They can have the website as their online research center, a place where they can visit and collect all the information they need before they make any decision. However, after the evaluation of my design and the feedback that I got from my target audience, I decided that this project must

be consisted of not only a website but also an app, so users will have access to it faster.

In addition, regarding their decision-making process and aspect that can affect the accuracy of their decisions is their FoMO. Peoples' navigation in social media might increase their FoMO with various news and it is more likely for them to feel the fear that they might lose the right time to buy or sell the coin that they are interested in. Therefore, another important goal for "Cryptolysis" is to create a community of people that share the same interests and goals. Users, through communication with people that share same interests and discussion might get a broader and more completed idea about any viewpoint of the topic, that includes the news. Since they will be able to interpret the news considering also other peoples' perspectives without being affected from their fear of missing out. Also, the fact that they will have fast access to it anytime they want will decrease their fear of missing out the right moment/opportunity.

During Brainstorming, many things were considered that could help with the goals of a more effective, faster, and less overwhelming experience in combination with an aspect that will help users control and even eliminate their FoMO.

- Digital organizer that will help users with their research

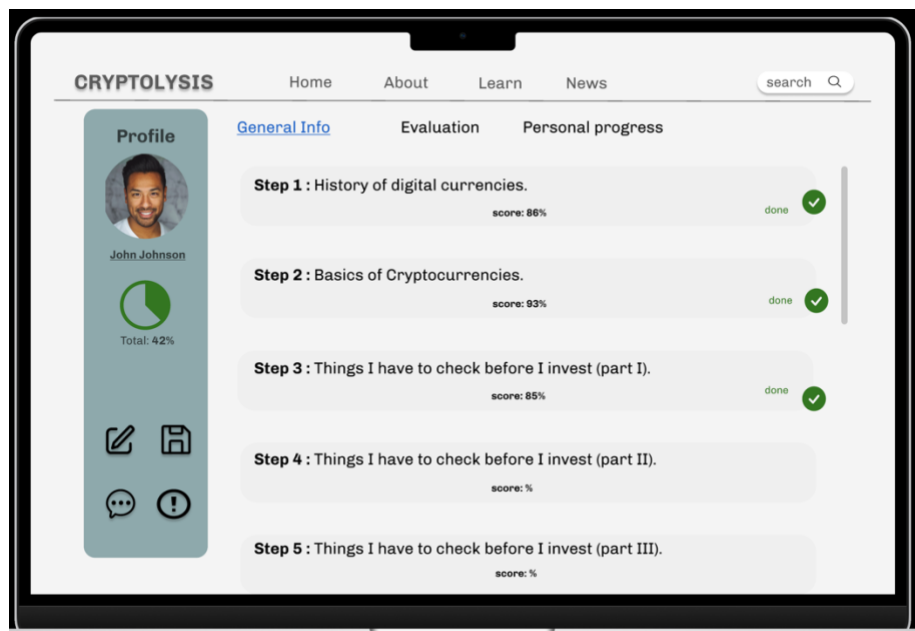
-
- The ability to share news that were posted public on the website, either via private or group messages
 - Interactive storyboard scenario, with immediate feedback that will help users connect the information with real-life examples and struggles
 - Up-vote or Down-vote coins, an aspect that could possibly help with peoples' FoMO
 - Notes section, where they can keep notes of anything they want to and save them as visible only to them or in public. This might help them with their research and the habit of making the right research and being able to control their FoMO.
 - Pin comments on the chat – a collaborative way to interpret the charts movements.
 - Connect movements of the chart with daily news – visual interpretation of the positively or negatively affect daily news might have on the market.
 - Chat for questions and discussion different for each coin to get immediate and specific feedback.
 - Save button on news to read them later, since we know that our audience are adults with limited free time.
 - People will be able to create their own group in the community and share information only with them.

-
- Starred coins. Users will receive that way notifications about the coins even when they are on or not on the website. This might decrease their fear of missing out.
 - Interactive slides for learning general information about cryptocurrencies.
 - Scenario-based approach to provide basic information about crypto and help people comprehend better the purpose of those information provided and the way they could use them in real life.
 - Post anything, they want, regarding cryptocurrencies on feed, visible for all members of the community.
 - Ability to schedule virtual meetings as a community discussing any topic they want.
 - Ability to share their screens on the meetings and discuss charts movements.
 - Option to save the meeting and watch the conversation whenever they can.
 - Timeline for each coin with users' posts regarding the coin.

All the above mentioned, were some ideas I had during my brainstorming. However, I did not consider all of them in my prototypes, for various reasons related only to the goals of my Project. In order to end up with the solutions for my projects problems I used the Human Centered Design Framework (IDEO, 2009), which places in the center of everything the target audience's needs. After

the interviews and the questionnaires that I did with some people that can be considered my target audience, I ended up that FoMO is a very important aspect that must be eliminated in my target audience's psychology and make the whole process of learning and researching less overwhelming, due to the quantity of the new information people need to learn.

Considering the fact that this Project's audience are most novices with no related background knowledge, who want to learn a significant quantity



of information about crypto, this creates the need of designing something that will not overload their working memory and give them some time to comprehend the information presented very important. The best solution to that problem was to split the information in small chunks and give them some time to assimilate the information provided to them, before they add more interrelated chunks to their long-term memory.

In addition, another aspect that will make the learning experience less overwhelming and faster is by learning according to their learning style. Thus, the solution that will help and make the learning process faster and less overwhelming is to provide the ability to the audience to get the information in any way they want to, either via text, video, audio or even by taking notes at the same time. For that reason, each step of the learning section will be consisted of those options. Even though in my feedback the learning style that most of them

picked was the video, however I decided to keep all of them so I will make the learning experience more completed. In addition, all the

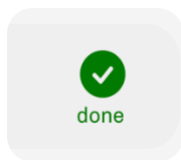


learning styles will be kept on the website in case a user prefers the text or the case-scenario instead of the video.

Specifically, the notes feature will be available to users not only to learn, but also for the research part. They will be able to keep notes anytime they want and save them so to be able and check them anytime they want. This section is visible only

to them, but they will also have the option to share them with members in the community.

In addition, since we know that users are adults with busy schedules and many responsibilities, “Cryptolysis” gives them the option to follow their own pace of learning and make the learning experience less overwhelming. Something that will help them track their progress are some special features like the following ones:

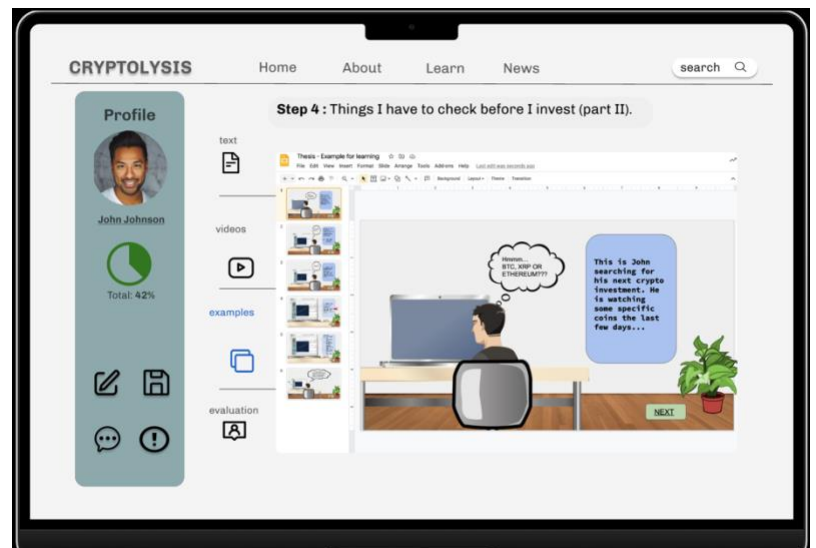


Each time they complete a step, this symbol will appear to remind them that they already completed this section.



This pie-chart will be always visible to them in any page of the website they are navigating to remind them the percentage of the general information they learned before they will be able to research and invest.

Another solution that was considered, to make the learning experience more effective and help users understand and assimilate the information provided to them, was a scenario-based



interactive storyboard with immediate feedback. Users, through the story board they will be able to connect the information with a real-life scenario, without risking their money. By connecting the information to an authentic context, they understand better the learning material. In each “Step” of the learning section, a scenario-based approach will be included not only as learning but also in the evaluation section. A real-life scenario will be presented to them, and users will have to choose what is the most likely best decision to make under the provided circumstances in both the storyboard and the evaluation section.

Another feature that was considered to help learners with investing and might

guide their decisions

is the news. Daily

news can affect

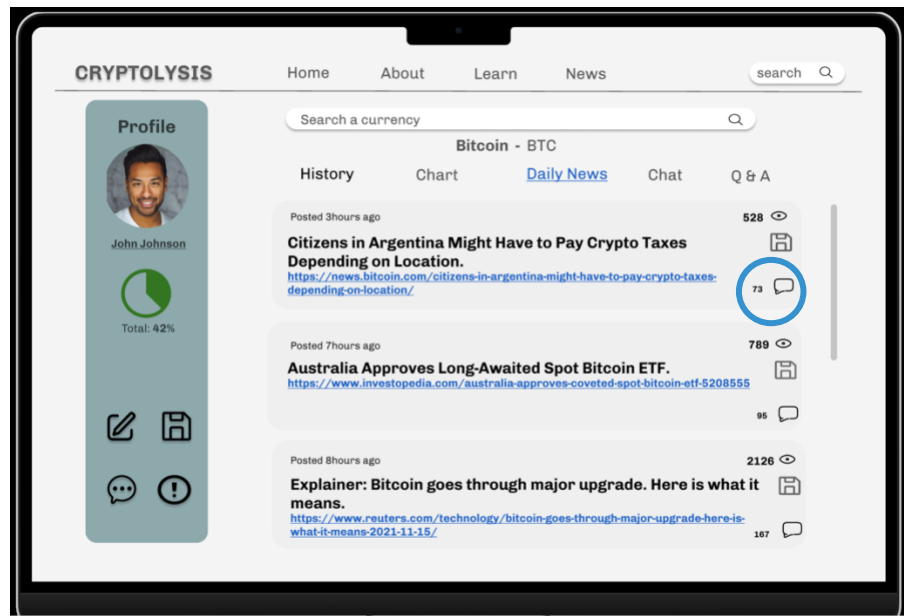
either positively or

negatively the

market. Users,

especially, old-

timers in the



community know that this might increase their FoMO by navigating in other social

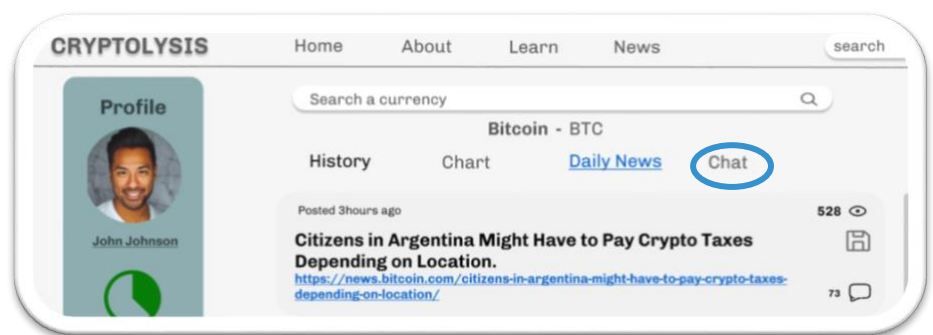
media platforms like Twitter or Reddit. FoMO, can affect their decisions and lead

them to tremendous loses and wrong decisions. To avoid that, there is a section,

different for each coin that users will be able to post as well as discuss the daily news of that coin with members of the community. Through discussion and communication, they will get a more completed idea for the purpose of the news and how they might affect the coins chart. FoMO, with this solution of co-constructive learning and community learning might be decreased and replaced by critical thinking and consequently more effective decisions without being affected from users FoMO. A way to fulfill this is through comments for each news related post. Also, in case that they do not have the time to read it when they navigate on the website, there will be the option for users to save it so they can read it later on or whenever they want.

In addition, another feature that can help users to manage and control their FoMO through communication, can be the ability to ask any question they have and

discuss it with members of the community. This ability will be provided to them

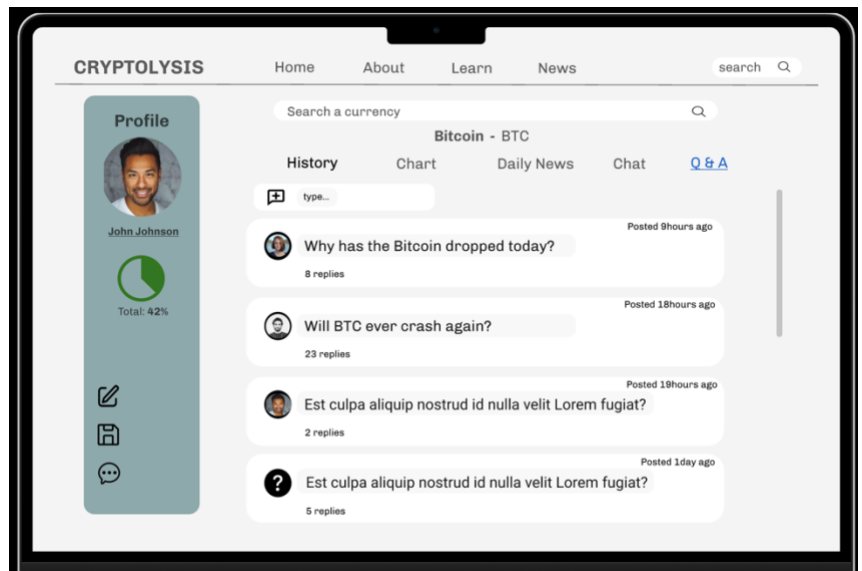


through the chat section. Each coin will have a specific Chat room where all members of the community will be able to talk not only with their friends but also with all the other members of the community. Through communication, they will

be able to resolve any misconception that might affect them from a wrong or hurried interpretation of the news or the coins chart. This chat will be very beneficial because they will be able to see other peoples' perspective who are not in their close circle of friends, with whom sometimes we share same opinions and views.

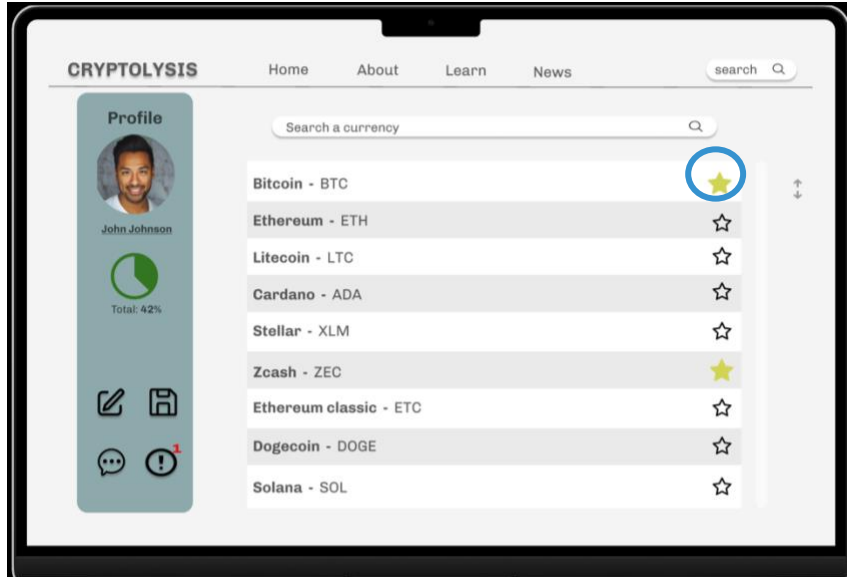
Another section of the design that will serve the same kind of purpose with the Chat is the Q&A section. Each coin's page will have its own Q&A section where

users will be able to ask anything they want related to the coin they are interested in, and it will be presented to all users. In that section, everyone in the community if they know



the answer will be able to answer those questions. This section will help the users with their FoMO and with their potential misconceptions regarding the coin.

Furthermore, another idea that was considered as a solution to decrease the audience's FoMO was the ability to decide from which coin they want to receive



notifications, even when they are not on the website. Users will receive anything related to the coin they are interested in as a notification in their phone. The fear of missing out symptom might be decreased by having in their mind that for anything that might occur they will receive notification. This aspect of the design will help them feel relived and well informed for everything they want to know. The solution to that is the star feature next to each coin that gives to users the ability to click on and receive notifications about anything that might happen related to that coin.

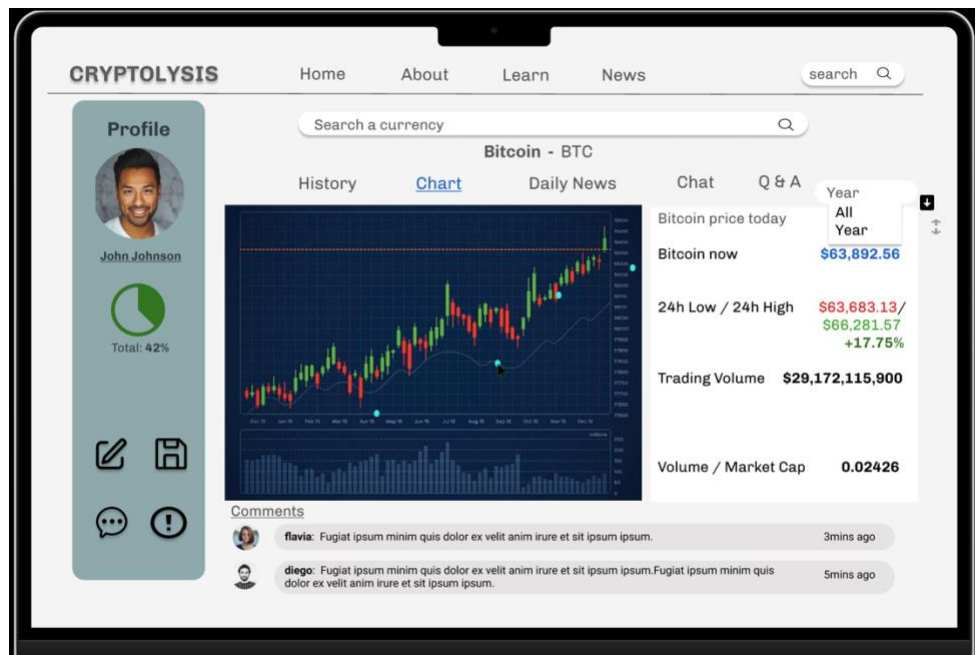


In addition, this specific feature will be a reminder to the users when they enter the website that they have an unread notification. In this specific case the user has one unread notification either regarding

Bitcoin or Zcash, because those two are the coins that he has clicked on the star in order to receive notifications for them.

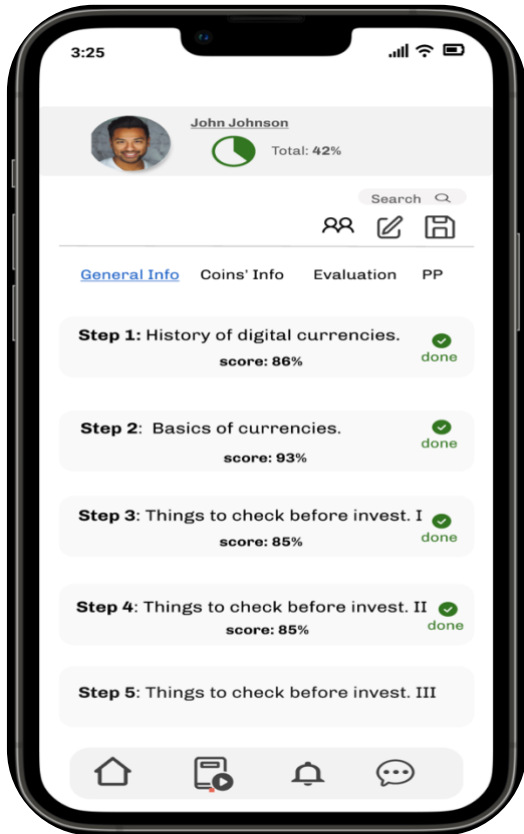
Another, idea from the brainstorming section that I included into the design is the interactive chart with pin-comments. This will help users visualize the affect the news might have on the coins chart. Users will be able to reply to each-other's comments and co-construct an interpretation of the chart. This will be part of each

coin's page. Also, each coin will have its own page consisted of the History, Chart, Daily News, Chat and Q&A section. This will help users



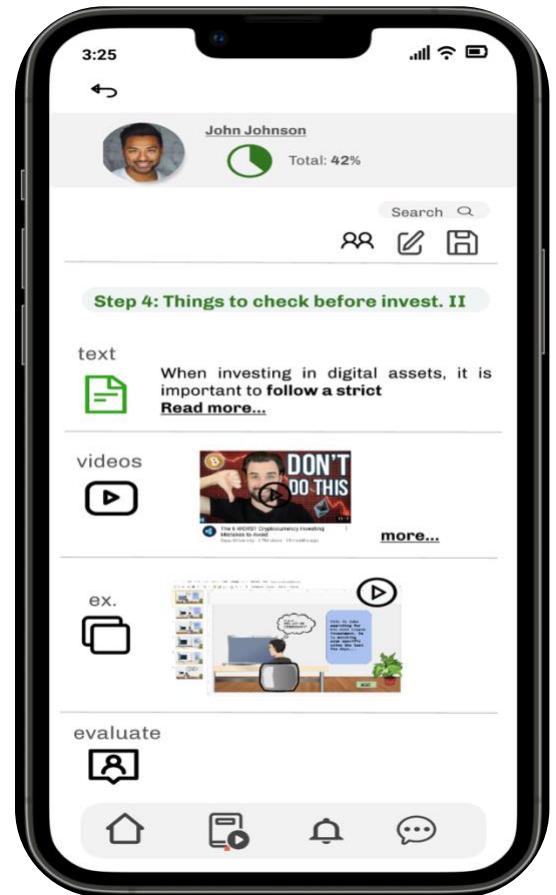
make their own research faster and learn anything they need to know before they invest their money in a specific coin. Thus, they will be able to make more thorough research, since they will have everything, they need to check in one place.

All previous design solutions were part of my first prototyping phase that I shared with some people from my target audience in order to get feedback regarding the learning and users' experience. The responses I got regarding FoMO were that an easier access to the community will help users more to eliminate their fear, by mentioning as an easier access the benefits of this project as an app in their phone. Thus, I ended up additionally with the following prototyping, where I used the same solutions by making some adjustments from designing perspective. The only thing that I did not include in the app is the interactive chart due to the smaller available space on a phone's screen. There is a chart where below it users will be able to read commends related to that, although they will not be able to pin them on the chart and on specific movements. Following are some pictures from the app.



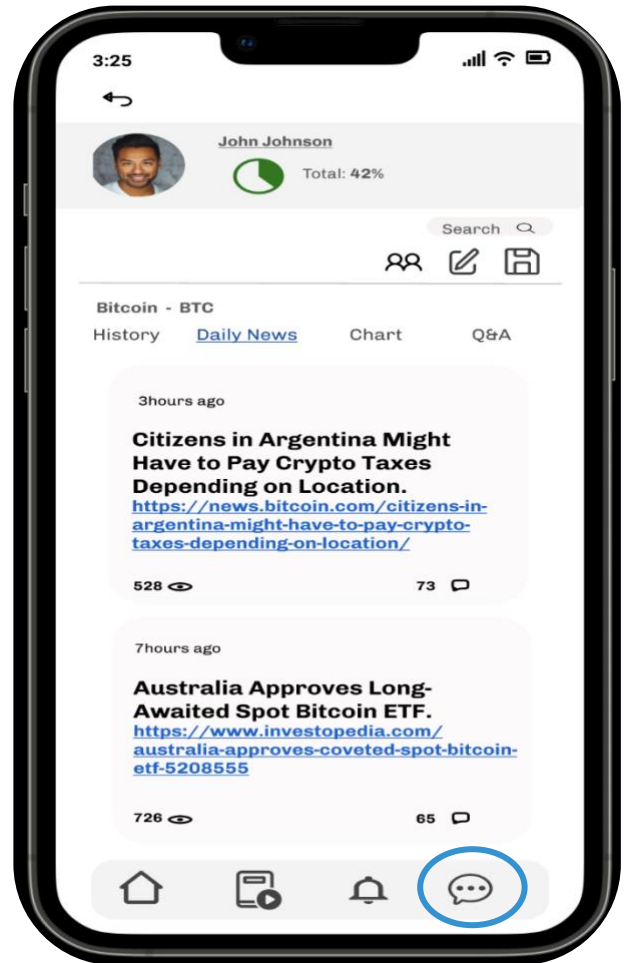
This is the page, where users will be able to learn basic information about cryptocurrencies. Again all the information here has been split up in small chunks in order to help users assimilate better the new information. This section is only for the newcomers and only for the old-timers who have any possible misconceptions or any lack of knowledge related to the presented topics.

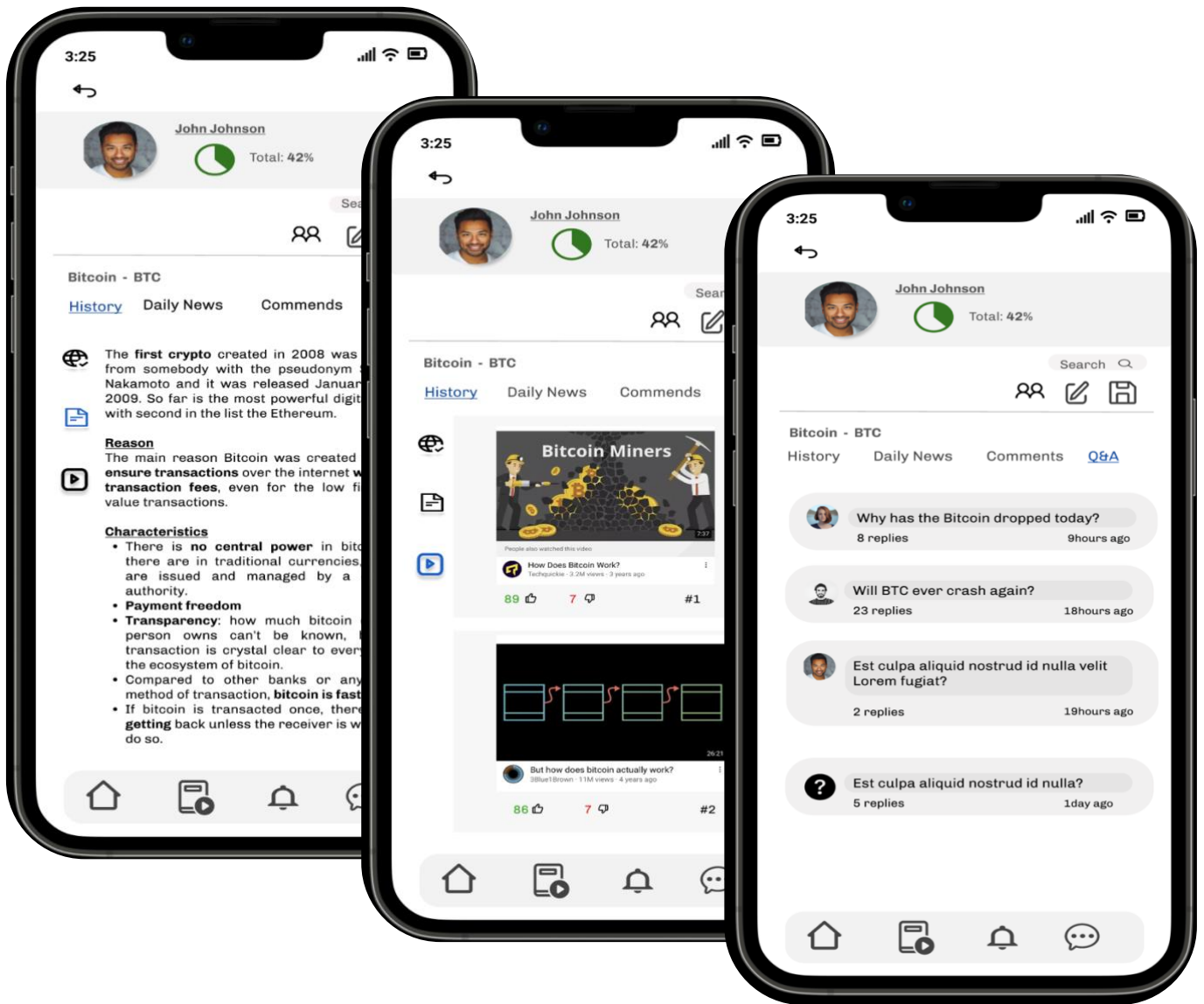
After clicking on a specific step that they want to learn about, they will be directed to this page. In my prototyping the presented learning step is step 4. The information presented in this section and in all steps will be again in four different versions, via text, videos, scenario-based examples and at the end there will be the evaluation section where they will be able to check on their understanding. The evaluation section will be again an interactive scenario-based approach where users will have



to choose the most suitable answers according to the presented circumstances. In addition, after every less suitable answer there will be immediate feedback.

In the app, they will have the option to click on the star that they will find next to each coin, if they want to receive notifications about it even when they are not online. There will also be for each coin a separate “History”, “Daily News”, “Comments” and “Q&A” section. The chat will be as an icon on the app, where they will be able to click and check any coin’s chat they want. Another feature of the design based on communication and co-constructivism is the ability to make comments on the “Daily News” posts and at the same time check on their popularity, specifically on how many people so far have read it.





Furthermore, in the above attached pictures, all the features are the same as they are on the website. The History section where information will be presented via text and videos and the official website of the coin will be attached, so users will be able to click on the browser icon and be directed to the official website of Bitcoin in that case. Another section that is and works the same as the website is the Q&A section, where users will be able to post any questions, they have about those coins and

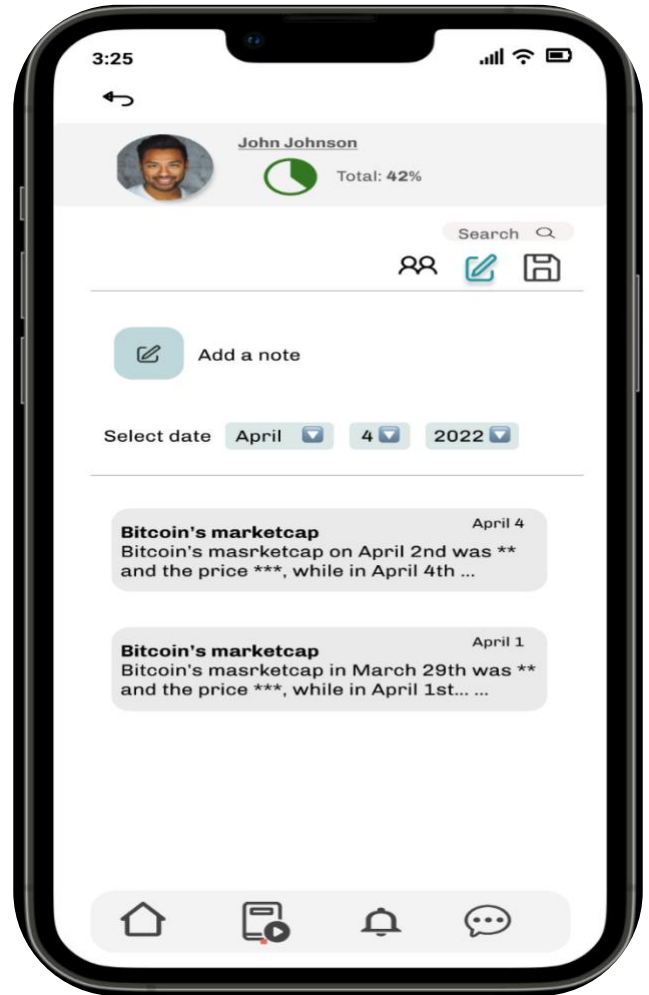
other users of the community will be able to answer as comments visible for everyone in the community.

The only difference between the app and the website is the pinned comments on the chart section. As was mentioned before, on the website users will be able to pin comments on the coins live chart. On the app though they will not be able to do that. There will be comments under the chart, but those comments will not be pinned on the chart. They will be presented by time; the last comment will be first and as users scroll down, they will be able to see all the previous posted comments. Those comments as the pinned comments on the website will be visible from everybody in the community.



Finally, another feature that will be slightly different on the app comparing to the website are the notes. On the website the notes will not be a different page, on the opposite side anytime the users want to write something down or keep a note as part of their research they will be able to click on the pen and an extra small window

will appear on top of the page that they are in, and it will stay on even if they navigate to another page of the website. On the other hand, on the app this feature must be for designing purposes different. Whenever users click on the pen they will be directed to a new page where they will be able to check their previous notes and add a new one.



Website: <https://www.figma.com/proto/foIGJCOW8QUCMobqm72asD/Cryptolysis-Project?node-id=61%3A422&scaling=scale-down&page-id=61%3A421&starting-point-node-id=61%3A422&show-proto-sidebar=1>

App: <https://www.figma.com/proto/coA3aHTAKsAbkYmSajS7Kn/Cryptolysis-project-app?node-id=31%3A765&scaling=scale-down&page-id=31%3A739&starting-point-node-id=31%3A765>

Evaluation & Iteration

Before starting to iterate Cryptolysis I followed some steps.

1. I reconsidered my design's goal statement: "Crypto-investors or potential crypto-investors need to learn easy, fast and effective basic information about crypto and get informed fast about any news or changes related to the digital coins, so they will be able to manage their FoMO"
2. I identified what I wanted to learn through this iteration and what it needs to be tested. Some of my thoughts during this step are the following:
 - Most important aspect that needs to be tested is the community and how they think it will help them learn fast and manage their FoMO.
 - Another aspect that must be tested are some specific features that I have included into my design in order to eliminate users' FoMO and help them make better decisions.
 - Will the aspects of collaboration on the design help them with learning, misunderstandings, and better choices?
 - Is the website easy to use?
 - Are there any complicated features?
3. I thought, what would be the most suitable approach to test my design. I ended up with a case scenario of someone using my design with visuals from

my prototyping. The case scenario was presented through a Google slides document, where pictures from my design were attached. With the case scenario users will be able to understand the use and the usability of some specific features in my prototype.

4. Considering all the above-mentioned aspects, in this step I tried to organize and create my test plan. First the case scenario will be presented to people that can be considered my target audience. After that they will have to answer some questions either in the form of a virtual interview or a survey via a Google form document. The questions will check both if my ideas meet my learning goals and the usability of my design. I began those interviews and surveys with people that I encountered during the research I was doing about my target audience and their needs.

Those were the steps I followed before I started conducting interviews with individuals and before I got in touch with people that can be considered my target audience. The process I followed for this preparation is completing some interviews and surveys.

For the interviews, I fulfilled them via Zoom. I arranged a meeting time with the person I was about to interview according to our schedules and shared my screen

presenting him/her the case scenario with all the visualizations I included. I also presented them my actual prototyping via Figma. After the presentation, I asked them a few questions in a more conversational way and not as a typical question-answer interview. While we were talking, I was keeping notes of all the useful feedback they provided to me.

For the surveys I sent via email the case-scenario and the questions with my instructions and the reason why their feedback was important to me.

The feedback I received from the interviews, one thing that was mentioned from a usability perspective is that if it were an app, it would be easier and faster to use it anytime and anywhere. The website would be more convenient for the target audience to do their research before they trade, and they want to learn something regarding cryptocurrencies. However, one of the people I interviewed mentioned that for FoMO reasons an easier and faster access to the community would be more effective and convenient, especially in the case of my design where people are investing their money. They mentioned that users would not have the fear of missing out on a good opportunity if they know that whatever happens they will receive notification on their phone and they will be able to access the community and check on that announcement right away through their phone.

Another feature that I will keep in my design because they found it useful from FoMO perspective is the stars for each coin, where if you click the star on a coin that interests you, a notification will be send on whatever happens related only to that specific coin. Both from the surveys and the interviews I got the same reaction for this feature of my design. My target audience found it useful and reassuring, since they do not have to check the coin's chart, because they know whatever rapid changes happen or any news, they will receive a notification and they will enter the app and check on it.

Specifically, there was one of my potential users who mentioned that he really liked the idea of receiving notifications on his phone regarding the coins he is interested, especially if there is any major price action to the coin, he is trading, or he would like to trade. From that perspective, he would prefer easy and fast access and he thinks that only an app can provide it to him. He also mentioned that if it is not fast accessible then his FoMO will increase instead of decrease when he will receive any notification. So, one aspect that I had to consider and definitely include in my prototyping was visuals for the "Cryptolysis" app.

Another aspect of my design that I wanted to check was my users' preferences regarding the learning section, what would they use more if they wanted to learn

something, what would they do if they wanted to be sure that they understood whatever was presented to them and they do not have any misconceptions. The reactions I received from my users were that when they want to learn something their preference is via videos. The majority mentioned that the first thing they will check on are the videos and maybe the interactive scenario-based learning if they want to be sure that they understood the context and they do not have any misconceptions that might affect them negatively. Nobody mentioned that they would prefer the text or the audio, but I will keep them in my design as an extra option in case somebody prefers text or audio over videos.

Regarding the communication among users, most of the people I surveyed and interviewed mentioned that they will use the chat, especially the separated chat for each coin. They also mentioned that they would definitely use the Q&A in case they have a question, or to answer any questions, if they know the answer. All this interactivity is what makes the website/app a community-based learning network about cryptocurrencies and encourages at the same time users to be more engaged. According to those results, I ended up keeping all the features of interactivity and communication among users in my design. The only alteration I will have to make from a design perspective is the interactive chart. I will keep it only on the website, where users will be able to read or make comments on any coin's chart

they want, while in the app there will not be as an option due to designing perspective difficulties.

Conclusions – Reflections

This thesis project was completely new, very interesting and an enjoyable learning experience for me. For the first time, I had the chance to work on a learning problem that really matters to me and my everyday life. It is a learning problem that really affects me and thousands of people financially. All those months I tried to solve it by using significant knowledge I got from all the courses offered to this master's program.

Crypto is a market where you can invest your money. In previous years we saw people earn millions for just investing a small amount on them. Due to their reputation, more and more people started investing in Crypto and nowadays a significant percentage all around the world invest every day. They are trying to find alternative ways to increase either their daily/monthly income or to invest their savings. However due to crypto's aggressive volatility, investors must be very careful and patient with their decisions. This volatility amplifies their FoMO and the need for some basic knowledge on crypto and the aspects they should pay attention to before they make any movement.

My intention with this project is to build a community-based website/app that will help people learn fast and effective basic information about crypto and at the same time do their own research not only by studying themselves but also by sharing ideas and knowledge with other users and by extension this process will help them to manage and control any potential FoMO symptom that might lead them to impulsive decisions.

The solutions I thought and designed for were based on the learning theories of Constructivism, Co-constructivism, and the Multimedia principles. I tried to create a sense of community to have users participate more actively by sharing ideas, concerns, thoughts with the members of this community. This way, they might be able to control their FoMO and see other peoples' perspectives, solve any potential misconceptions, and consequently make more thorough decisions.

According to the surveys I fulfilled with potential users of this website/app and the answers I received, not all methods and features I included in it will be used by all of them. Some features will be more useful to some people of my target audience, while some other features will be used more from others. Considering the fact that the target audience of this project are very broad and mostly eliminated by age, it is

expected that users will have different preferences regarding the offered features of the design.

Finally, through this thesis project I had the chance to learn deeper the process of designing, the obstacles that might occur and to realize how important it is the skill of problem-solving especially in cases of unexpected barriers. In addition, I had the chance to practice more and get a deeper experience and knowledge on some designing tools that I used in order to make the prototyping.

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