THE IMPACT OF SOCIAL NETWORKS ON DESIGN EDUCATION

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SUMMARY:Design education has an interdisciplinary structure that brings together the science and technology in art. Design instruction is a common subject in all design disciplines. Design works require both literal and multiple social communication to create new concept. It includes assessing situations and cases in the conceptual and contextual perspective. This study proposes an assesment, learning and sharing platform based on web 2.0 e-learning methods. "Design education social networking platform" is the main focus area of this study.

KEYWORDS: Design, Design Education, Design, E-learnig, Social Networks.

1.INTRODUCTION

Design has been explained and defined by design researchers in many ways such as "problem solving process" (Newel & Simon, 1972), "cognitive task" (Akin, 1986), "reflection in action" (Schon, 1987), "knowledge based activity" (Coyne, 1990). In this context, design can be considered as a process of organisation and decision making intended for solution to a spesific problem. Therewith Akin (1986) has stated that 'design is a staged and iterative problem-solving process', design is a constantly repeating, perpetual process, ending only in a specific maturity towards solution of design problem. Aforementioned design problem is defined as ill-defined, ill-structured, wicked (Rittel & Webber, 1973) due to its unidentifiable structure with all its parameters. By extension, there can be hundreds of solutions in progress for the design problem. Naturally, these solutions and alternatives require a specific knowledge and research.

Research and development of ideas by design students, develop under advisor supervision and in the light of advisors' knowledge. Traditionally this method materializes in a specific time and space interval in studio lessons. But, in an always repeating, endless process such as design, the design student shall be in need of ideas and verification to unlock deadlocks he/she has fallen in. In this context, a social sharing environment without time and place bounds is needed.

According to John et al. "Blogs, wikis, tagging, podcasts, and social networking websites such as Facebook, Twitter, Flickr, YouTube and so on have radically changed user interactions on the World Wide Web from a static, one-way, consumption model to a dynamic, multi-way, participation model. Broad user power and flexibility have changed how people engage in and experience their interconnections, interests, and collaborations." (John et al., 2008). In this context, considering perception and habits that are developing and

evolving, 'learning and sharing platform based on web 2.0 e-learning methods' is capable of fulfilling the need for timeless and placeless social sharing in design and studio lessons. For this reason, "design education social networking platform" that is created based on web 2.0 is the main focus area of this study.

The platform have groups consisting of instructors and students. Students access necessary documents and also be able to discuss any subjects on the uploaded design works. The most important feature offered in the platform is the advised revision tools is advanced revision tools for instructors. Instructors can place comments, tags or marks on the students' works. Students can also share their own works with other members of the platform. They can also offer hints and/or advise. In this way, the platform creates social network which focuses on discussing and producing new design works and also will help reducing the time of face-to-face education. This new educational medium provides continuous and interactive assesment environment for students and their instructors.

2. DESIGN EDUCATION AND NEED FOR SOCIAL NETWORK

Design is a process that is arousing in mind, developing by transferring to a design medium, repeating constantly, perpetual but ending in a specific maturity towards the design problem. In this context, design process continues on designer's mind constantly and is not bounded by time and place. In design developing process of design students, while they are struggling to solve the design problem, because of lack of experience and knowledge, they are making mistakes, having difficulties and having blockages at certain levels. At this point, advisors stepping in with their knowledge and experience to hop on to design work. But this knowledge transaction is in a restricted time and place, and for this reason design works might not attain desired level. For this reason, a "timeless" and "placeless" medium is needed. E-learning is the best education technology constituting this medium. Anytime and anyplace is the fundamental principles of e-learning. they are reshaped with web 2.0 notion and innovation, it creates ideal conditions for design education. Creativity in design is raised mostly with sharing and opinion exchange. New generation of internet has brought a lot of technological and methodological changes that yield fluent and accurate communication between individuals. Much information that might be lost or cause conceptual confusion with verbal communication, might be transferred through right channels and recorded with new generation of internet. These changes point out collective consciousness and sharing recruiter factor in design works.
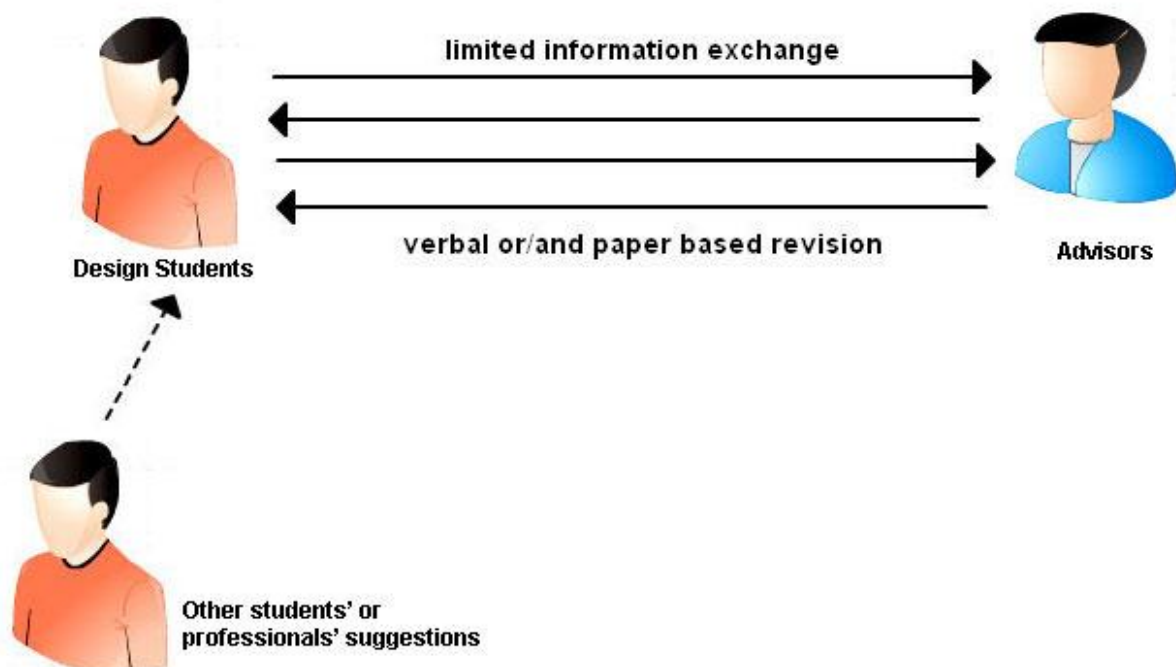

FIG. 1: Traditional approach in design education

All processes might be tracked in through possibilities such as storing and archiving information that are brought by computer environment. Therefore, everything including subjective comments on abstract notions might be saved in case of necessity. Important brain functions such as remembering, recalling, association can be performed with ease. It will also be easy for advisors who are guides in design education to track and evaluate student activities. There will be no need for extra note taking, organizing charts. All processes of concerned works might be saved on internet.
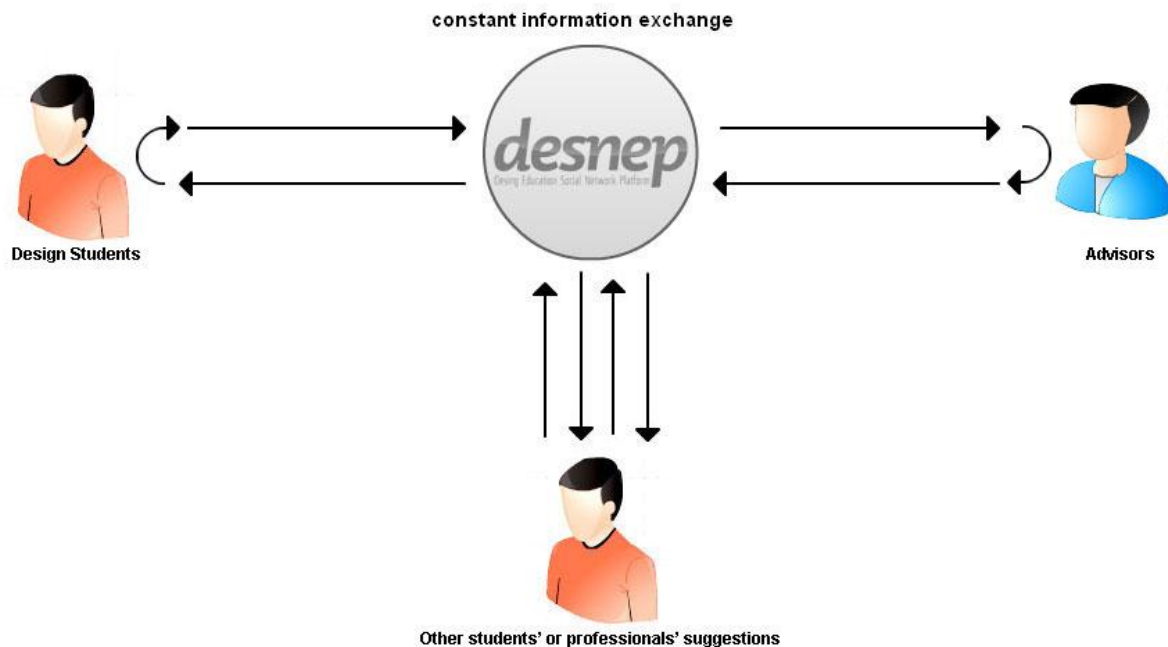

FIG.2: E-learning approach shaped by new generation of internet in design education

3. NEW GENERATION INTERNET SYSTEM WEB 2.0

Firstly, Web 2.0 is discussed and defined on a conference in 2004 (O'Reilly Media, 2004) So, it started to change web Technologies and trends rapidly.

The greatest achievement is content's reduction to micro sizes by new generation web that, according to some definitions, is a technology, and to some others is a new era. In the years before web 2.0, individuals had to visit reference sites for being provided with content. Service providers in few numbers had to response to too many clients. As time went by, clients started to build their own content and started to share them with people. The Emergence of applications that require no design knowledge and respond to all needs of users, instead of web sites built in a couple of hours with little html knowledge, has significantly contributed to content age which is supplied by clients. As a result of these applications, individuals can share their photographs, the technical or social content they want to tell, the visited web sites (bookmark) etc. with millions easily without struggling with technical or design issues. Besides publishing, the search engines that ease for whoever looks out for these content, the portals, and newly developed APIs (Application Programming Interface) are among the new features of new generation web chain.

The fundemental difference in evolving from Web 1.0 to Web 2.0 might be shown as transition from read-only medium to read/write system, where you can also comment. Glocolization Network is another definition of this process where users are both readers and writers. In other words, it can be explained as permitting local information (Localization) to international connectivity (Globalization). Technology and the user profile that developsed with it have been one of the biggest factors for this process to emerge. Glocalization Network is a major development in new generation web, but it is not web 2.0 itself. Web 2.0 is a structural change in information flow and sharing knowledge, therefore it is not only communication of the local with the global or of restricted masses with bigger masses. This definition is a network structure, which is found outside of global and local structures.

3.1. Benefiting From Collective Consciousness

Collective consciousness is emerged in Web 1.0 age and it also contributes to evolution of web 2.0.

Hyperlink is the foundation of Web. As users add new content and sites, with other users exploring this content and linking to them, these are added to web's structure. Network of links are in a process of organic growth due to all web users' collective activity with foundations increasingly gaining strength by repetition or density. Major topics that constitute Web 2.0 are:

Usage of semantic markup language; transition to XML: One of the biggest pitches of Web 2.0 is the transition from markup languages to semantic markup languages. HTML or HTM was densely used previously. These markup languages are still used by majority and transfer statically the information including tags with design. Following this way of markup language might help with handling partially critical jobs or transferring concerning messages but it is very hard to notify people of possible changes and ensuring they are benefiting from changes. RSS is a XML format, working as a mediator in content distribution, and it eliminates this problem. It is a very efficient solution to present content published in website as xml structure that has been defined as an RSS feed. User will be notified of changes in the website instantly, by adding RSS feed to his/her list with the help of API's developed for browsers.

At this stage, it is just one of the factors to remove obstacle of memorising domain names and supports sharing knowledge. It will be adequate for individuals to just visit website once and add RSS feed to their list, instead of visiting them again and again.

Evolution of Web Services: While content was seen as core of web, it was built statically, and web sites were consisting of subpages designed and content added seperately. That period might be accepted as "pages" period. Later, there has been an evolution, though it was small, but static web sites have been replaced by others that include information (even though it was bland) supported by dynamic or interactive applications such as Flash, CSS, JavaScript. Real satisfaction was provided after XML and dynamic content has been started to be used.

Same content can be used in different systems after XML technology (which opened the way to evolution of web services) has been found. As it has been stated in previous topic, as a result of XML technology's evolution and XML's coming together with web services, users became involved with web sites in a permitted rate. For example; Wikipedia's (an online encyclopedia) content has been filled out by its visitors, prices of products that are listed on eBay (an auction site) has been defined by users and these products are bought by users.
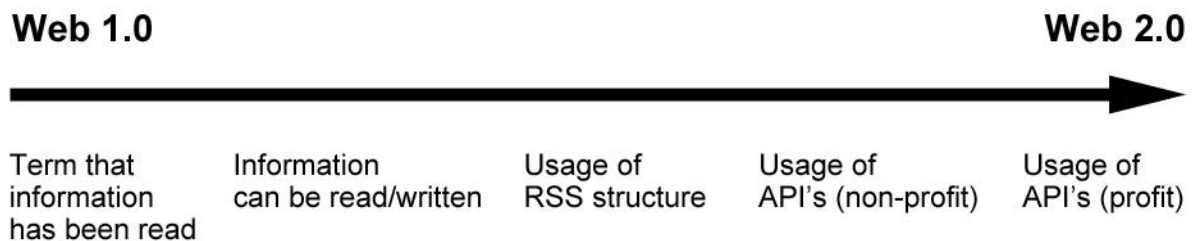

FIG. 3: Roadmap from Web 1.0 to Web 2.0

Change in content presentation: Internet journalists and web content providers have started to question their systems and began self-criticism, with the emergence of new generation web. Tom Curley, CEO of Associated Press has talked about internet journalism at "Online News Association Conference" in November 2004, and pointed out the stages for web content providers to complete after the evolution of web. Curley called attention to the rise of users with evolution of techniques, and stated that they have been having difficulties with supplying content from one source and redirecting people to that source, after the increasing importance of applications that ease reading of RSS feeds, search engines, and websites using video capture technology.

Now, with the increasing expectations of users, it has lost importance that who has prepared the news under what conditions and the site that it is published; now "what" happened "when" is important. Now, information is the thing.

Passing control to the user: In parallel to changes in content presentation, notion of "location" that user has been taking advantage of supplying information has been vanished too. Now, it is a product of new perception to follow information wherever it is, instead of adhering to a stable location. Naturally, it is logical to follow a website consisting of various links about a specific subject which is also designed to be comprehensible, instead of visiting a website that has been prepared for same specific subject. Websites such as Daypop, Del.icio.us, Blogdex that share information about almost every subject instead of one specific subject, help to track visitor behaviour and interests. Though it might seem as a disadvantage for users that their behaviours are being tracked, the information gathered is only about the visited web sites; for this reason, such action is very important for websites to design trends for content presentation and serve better.

A new notion "Tagging (Users creating their own topics)": Biggest change that Web 1.0 brought to grasp of publishing was presenting information anytime it is requested. Simple websites consisting of information was the foundation of publishing. Additions to these pages for someone who needed them for defining was limited: adding specific words to META tags (even though search engines took reference of this, because of reliable(!) websites consisting of just two pages but defining themselves in hundreds of words, this has lost persuasiveness), choosing explanatory titles, including long descriptions and including a detailed reference list.

But within the scope of Web 2.0, users might register their own tags. Websites such as Flickr, Del.icio.us, MSN Spaces let users add files, bookmarks, pictures of their own or as their hobbies and shares to build a common repository. For example: If you enter 'software engineering' tag in del.icio.us, you can see links saved for software engineering. The biggest convenience of websites which support tagging structure, is not limiting in terms of tagging someting, and everyone can build their own tags and add related links under it. Even though it seems like a complicated structure, it is suitable for building a large repository.

Seperation of Design and Structure: Previous generation of web consisted of two stages for developing and publishing websites. First, visual files (GIF, Animated GIF, etc.), tables, and then content was added to build a web site. Design process has been significantly evolved in this period, after view style changing CSS files has been added.

In Web 2.0 period, it is also important to publish site content through XML and exist in RSS world where every other website does, besides visual quality. CEO of amazon.com, Jeff Bezos, defines this situation properly: "Web 2.0 is making internet possible for computers."

If Web 2.0 is making internet possible for computers, what should web designers do? Designers should think besides design, to make web content useful for current API's and web services and think besides design extent, to think technical extent and take a step regardless how hard it is, to programming portion.
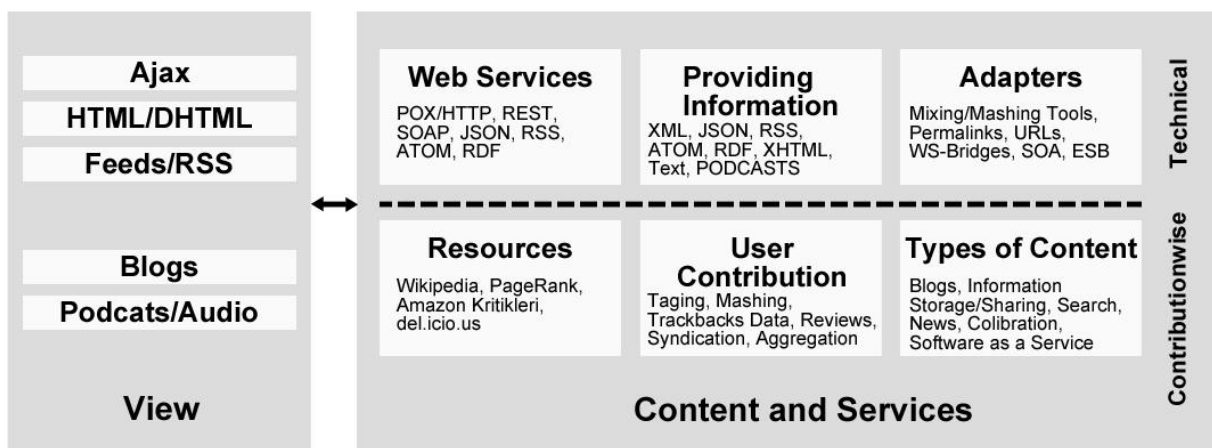

FIG. 4: Scope for web 2.0

It would be a very useful step to build web services using API's that are published by pioneers such as Google, Yahoo!, eBay, Amazon, BBC. For example; with the help of Google Maps API, it is possible to develop special

mapping applications with location information provided by Google, or namely Andale, developed by eBay can successfully manage sales operations on e-commerce sites.

As a new notion, tagging is frequently used with Web 2.0, therefore websites can move away from classical menu structures and build a completely user controlled listing logic. Using this kind of structure to delegate user to build menu structure and listing improves both content presentation and quality of useability.

Although new technologies naming RSS, XML, Tagging, Blogging, API are important specification of web 2.0, they aren't built new generation web.

Emergance of Web 2.0 depends on users' contribution in web applications and programmers' freedom to use applications developed by other programmers. Previous period was about filling parts that were seperate pages, and current period is about combining seperate parts. in In the general definition, Web 2.0 is a new era that sharing knowledge, collaborating in sharing knowledge and presenting it.

This sharing and collaborative period brings collective co-operation and mutual intelligence. Now with the existence of special communities gathered for various reasons, personal attributes became more meaningful and valuable. Developing web based applications, presentation and sales of produced goods, access to meaningful content has been eased and accelerated with new period that has fed from this source. For this reason, role models gave place to success stories and reference stories. At previous period, being a good programmer, being a good editor was important, but with Web 2.0, role taking for team as well, performing given duty and ethical values (sharing, entity of ideas etc.) have gained more importance.

Both technologicalwise and approachwise, all these developments affected many sectors and caused them to reshape themselves. At this point, web based education is taken its share as well.

4. E-LEARNING AND E-LEARNING ENVIRONMENTS

E-Learning can be defined as education method through electronic environment. It should be noted that it should not be mixed with E-training. In previous education systems computers were used as an aid for teachers to make education better and more efficient. With usage of internet technology, it was also directing to personal practice from learner's perspective besides it was helpful. But with establishment of massive network between computers and data transfer speeds becoming very fast, notions such as learning by self and life long education terms were born.(Yeaxlee, B. A., 1929) In this context, e-learning is an education that lets individual learn by self, using Internet/Intranet (local network) or a computer network, be not bounded by time or place for reaching information, communicate with other students and instructors in a synchronised or asynchronised way, get benefits of interaction with visual and audible aids that are supplied by computer technology, to learn in a way that all socio-economic obstacles are removed and to benefit from life-time education. Elliout Masie (1993), leading e-learning expert from USA, defines e-learning as combination of connecting to anticipated environment, resources, communication, performance aid and structural learning activities. Today, online learning and e-learning terms are used for similar explanations. Actually, these terms have the same meaning. It is been presumed that e-learning is containing other terms and creates the philosophy.

Self learning should be emphasised in e-learning as well. With this term, students are their instructor and teacher without any pressure or enforcement. They have a responsibility and they should develop their learning skills. They determine time needed to learn a subject, time it takes and learning pace and test themselves. If they believe they have learned, they can move on to another subject and achieve skills to comment on subjects they have learned. Another term that engaged with e-learning such as self learning is Web based learning. Actually, this term is also used for e-learning as online learning.

E-learning notion became to include new learning methods with technological developments and evolving internet infrastructure. "Mass collaboration" that is included in mutual learning process might be considered in this matter. Many activities towards mass collaboration can be achived in e-learning process.

One of the major advantages of e-learning is creating a virtual campus and baking asynchronous or synchronous education possible. Students can reach content in the system whenever they want and benefit from resources as much as they can. When this flexibility is combined with cost advantages, it allows to establish an ideal model (Carswell & Venkatesh, 2002, Maly et all., 1998). Main reason that e-learning is respected and its popularity increased rapidly, is that education is not bounded by time and place. This flexible and independent being of e-learning, it is an important reason to choose it due to people having hardship of time or can not be on education site because of their business life (Aslantürk, 2002).

Time and place advantages of e-learning have overshadowed other superiorities sometimes. These superiorities have attributes to make the system preferred (Aslantürk, 2002). These attributes are personalized education, student centered education, student managed education and low cost education. In personalized education, everything can be customized for a company, division, group or an individual. Student centered education is defined with determination of education being adjusted to student's needs, instead of instructor's capacity. Advantage of student managed education is allowing students to create online communities to establish an environment for creating content or program for themselves. In terms of cost, this learning model's costs are averagely half of the traditional learning's costs. On the other hand, e-learning's interactive teaching ability and updated content presentation shoud not be disregarded.

To mention e-learning, there has to be a Learning Management System (LMS) including a lot of functions to be present. In this context, it is not enough to have only course content in electronic environment. Accessing course content through web is one of the major elements of e-learning, but it never means in all. Learning Management System should allow these information to be gathered from system or to be transferred to web; from preparing course content to student records, statistical records such as system usage times and frequency to student success rates. In that respect, abilities that learning management systems should have, defines complete system.

Platform developed in the scope of this study, has the attributes of a learning management system. However, it has interpreted instructor-student-course relationship for a special need. For this reason, its tools might have very different attributes than a classical LMS. Also, administrator priviliges have been reduced so that mass collaboration is increased and value produced to reach maximum level. Therefore, it might be distinctive from other LMS's and might be considered as student and instructor based. Because, all value produced via the system is a result of collaboration and sharing. One of the most critical aspects of LMS systems, measurement and evaluation is also considered out of platform. Because, platform creates a ground for student and instructor to produce innovative, creative ideas and works, instead of creating an alternative learning platform. Additionally, it has an attribute to help finalize a study. It consists of research, test and design processes of the study. For this reason, it has a study oriented structure, instead a platform oriented structure. Because it has been focused on these aspects, it has different attributes in a learning management system in produced in a traditonal manner.

5. RELATIONSHIP BETWEEN WEB 2.0 AND E-LEARNING

E-learning too, shaped towards technological possibilities and new notions that Web 2.0 brought. At previous period, internet based learning activites were more of a system oriented type. Students' activites were tracked and evaluated with a central administration. Interaction between students were lesser. The general interaction was on system-student and system-instructor axis.

With Web 2.0, particularly internet based learning methods met with notions such as collective intelligence and collaboration. It has been observed that student-student interaction was more efficient in learning processes than system-student interaction. These research has been carried out on environments such as blogging, groups, wiki which came with Web 2.0. These environments were not developed towards learning goals. But if these systems were positioned in a different way after accurate necessities analyzed, they were used in a very efficient and active way for learning purposes. This too, has caused learning management systems and e-learning platforms to be revised.

For this reason, major principles of e-learning such as student based teaching and self learning have been revised with Web 2.0. These notions have been re-included in a mor efficient and active way, with innovative tools and technologies. It was easier to provide more appropriate education towards users' learning activities. It was easier to implement smart learning systems. Collecting information about student has been extended from systemwise to whole webwise. In this way, student can be acknowledged better and personalized learning became possible. At this very point, usage ratio of learning styles in e-learning processes started to increase. With the new period, smarter systems are started being developed. Furthermore, these smart systems can analyze students' learning abilities and use gathered information in e-learning with advancements in artificial intelligence technology. Individual oriented studies using collective consciousness towards facilities brought in by new web technologies, are being widespread. Nevertheless, social media environments that students use frequently, took part in learning. Part of learning processes are started to move to this media (for example, Facebook groups).

E-learning notion that has been renovated with this perspective, is being called "e-learning 2.0". At this new period, it has been respected as an alternative learning environment that utilizes past experiences of e-learning, fed from collective consciousness. But, Web 2.0 has re-adressed LMS concept as it shaped approaches to e-

learning and technical infrastructure technologies. However, major deficiency at this point is systems that have developed during new process can not present custom tools in special scientific areas. Existing LMS's adressed public, but lacked at management of special learning processes.

A social media supported special platform has been developed for "design education" which was a similar area that had a similar deficiency, to support the revision process with e-learning process. With this platform, all processes can be staked out to ensure work done is valid and for critical revision processes in design education, to be more efficient and active, special tools can provide feedbacks. Also, an environment that can work in parallel with social media (especially Facebook) has been created to substantiate important activities in design education such as getting one's opinion, consulting and evaluating.

6.SOCIAL MEDIA BASED DESIGN EDUCATION SYSTEM (DESNEP)

It's been confirmed that there are 434 different LMS's according to a research conducted by Advanced Distributed Learning (ADL.) Amount of this many different EYS types put strain on people and corporations who create content trying to make these systems richer and more prosperous. There should be course materials in different styles for different categories created to increase the usage rate of these systems and make them widespread. Therefore, with the best content, the solution could be provided to the needs which could be caused by personal differences.

Student evaluation phase is also as important as content creation and its presentation. Amongst this rich LMS options, it's not easy as it looks to integrate special instruments, whichwould be needed in scientific fields, to the systems. LMS's basicly having different qualities, hardens the transfers of developed evaluation instruments between the systems.

Evaluation is the important phase in the online learning. Even though wide variety of LMS, evaluation tools aren't developed for specific needs of learning and these tools aren't move one LMS from other LMS quickly. Process of exporting and importing include difficult technical information.

With this point on, it's needed to make a special system with its sui generis standarts of judgement that could ease up the revision phase of 'Design Education' and control and track the phase which is needed to make sure the studies are real and not plagiarised. This system is built on the 'internet-based education method' which is a crucial type of e-education. Teaching method was proect-based education. (Buck Institute for Education, 2009)

This system has also been shaped actions brought by web 2.0 such as getting one's opinion, sharing, evaluating, that have a key position in design education. So that, it became to include all important steps in this scientific field.

In design education, actual learning activity happens in the revision process. For this reason, revision is in the centre of the system. However, students might reach any subject or conceptual information rapidly through a wiki-like tool working in parallel with the system. This tool can present information submitted by instructors in both dictionary and encylopaedic way. It has advanced search and detailed listing functions. For this reason, students might find information they seek, rapidly and easily in this system.

There are 3 active user groups if we overview the system. First of them is student, second is instructor and finally there is administrator group. Instructors become involved with a basic registration form. Users that are in administrators group can make instructors active in the system. Instructor accounts that are not activated by administrators can not operate in the system. And students become involved in the system with "Single Sign On" (SSO) logic. For this reason, it is rapid and easy for them to be involved in the system. They do not need to fill a registration form and that form to be approved. With this logic, students can be defined better and current information about them might be used by the system. Students might log on to system with their Facebook accounts. After logging on to the system, they might choose courses from courses catalog that are defined by instructors. For students to actively participate in a course, they should be approved by instructors.

Instructors primarily define courses for themselves on their own. They might add a lesson with basic information such as name of the lesson, description and quota. All courses take part in courses system catalog. Students might choose lessons as they wish. Instructor might activate students (for this reason, student will be responsible for all activities during course period), define them as a viewer (student might follow course activities and make evaluation) or rejects them (student can not see any activity related to course).
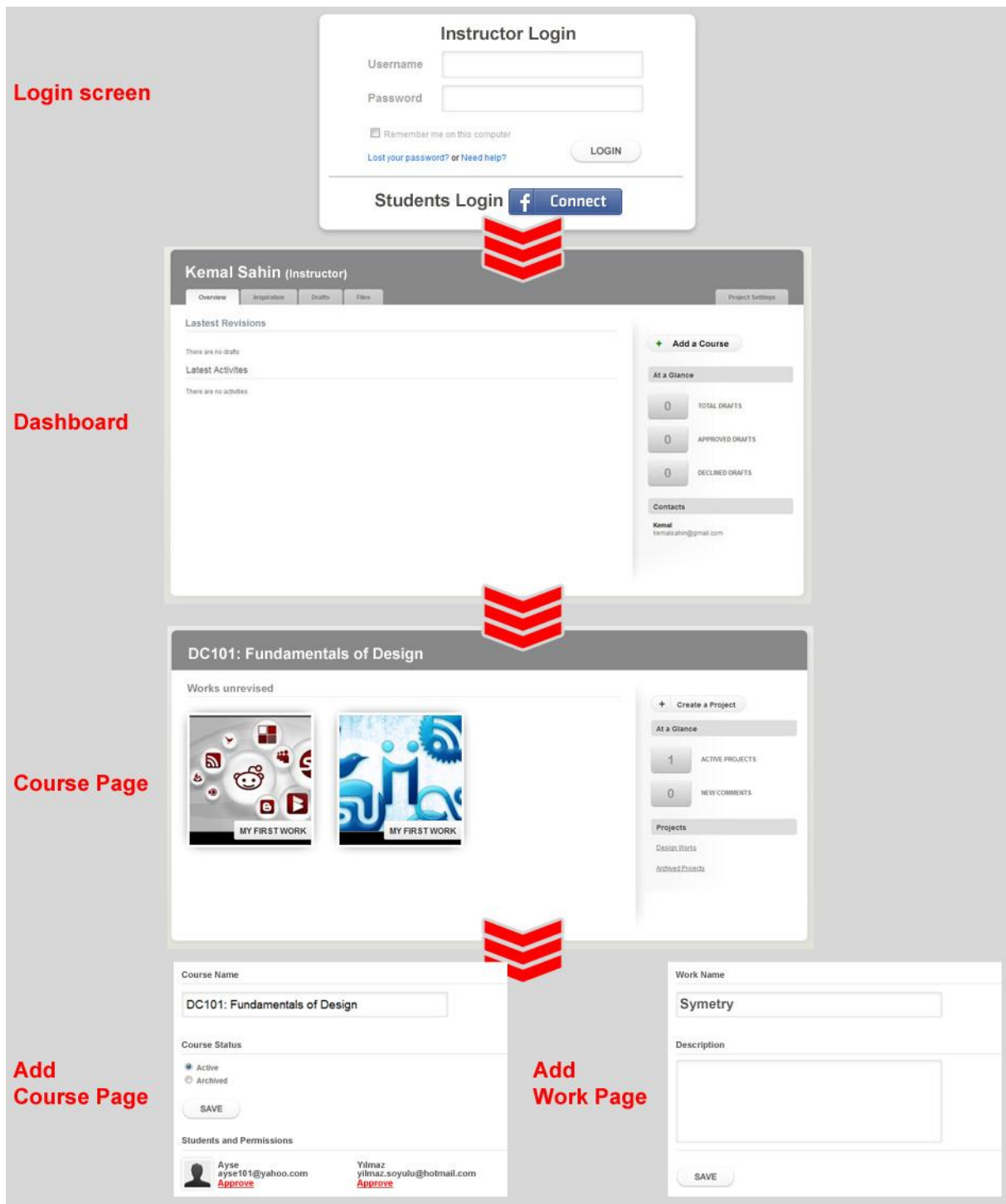
FIG. 5: Screenshots of teacher process

Instructors define modules related to the course after they add a course. Amount of evaluation studies that will be done in these modules might also be added with related forms in the system. For this reason, instructor has added design education that students will do, to the system. In the evaluation studies; such values are defined: course name, description, materials needed, delivery date, number of revisions, (revision dates). If this is a step of a final project, it is being related to related modules. Prerequisited might be defined. (For example, for this activity to be chosen, process of previous module should be completed.)
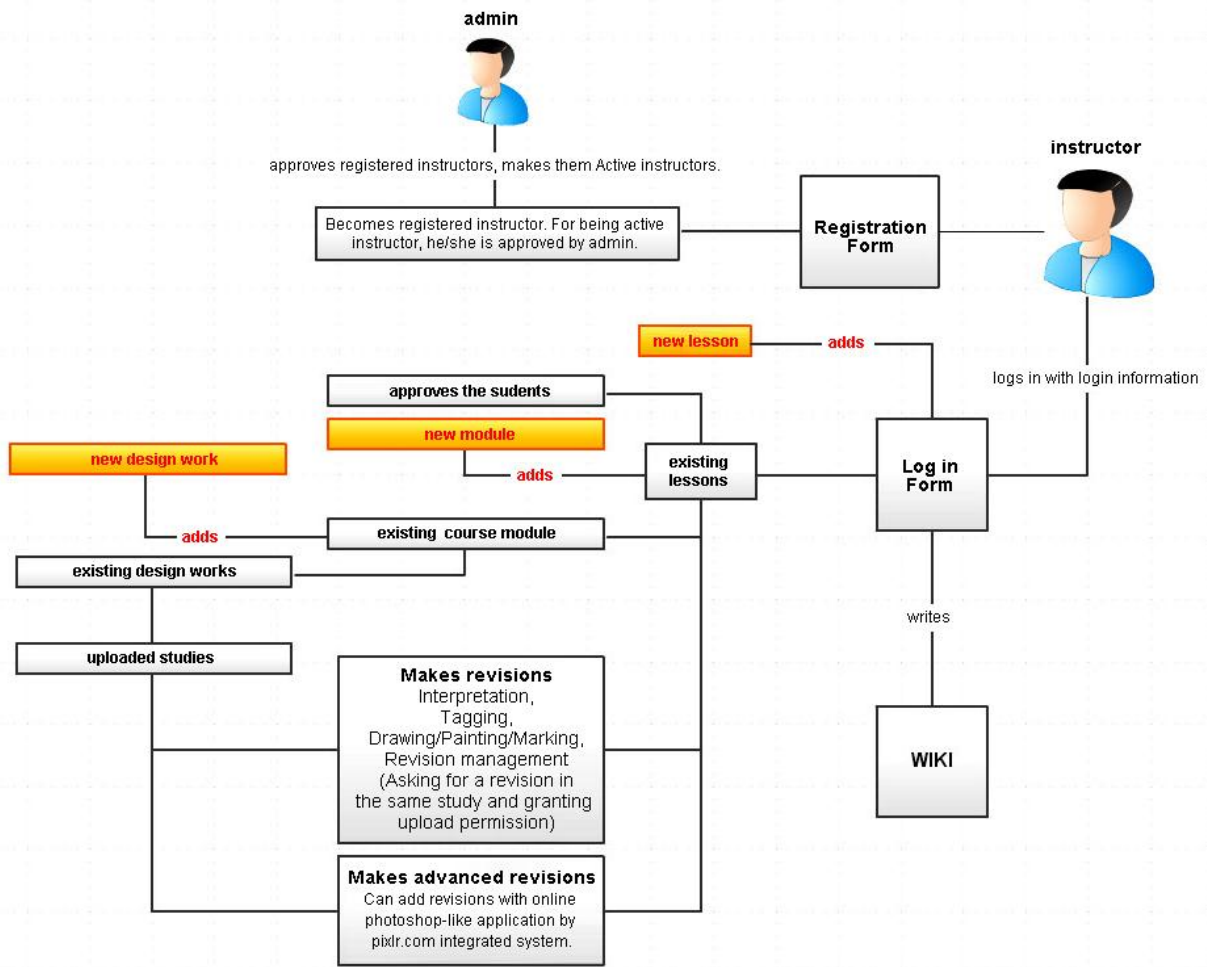
FIG. 6: Interaction between admin and instructor

Students actively participating in course might see evaluation studies that instructor has added. They can upload their works through related interface to these evaluation studies. There is no format or entry limitation in related upload operation. Students might upload as many visuals (video or picture) as they want to the system. For this reason, they can prepare different visuals to narrate their works. Same genuineness is also applicable to uploads from mobile phones.
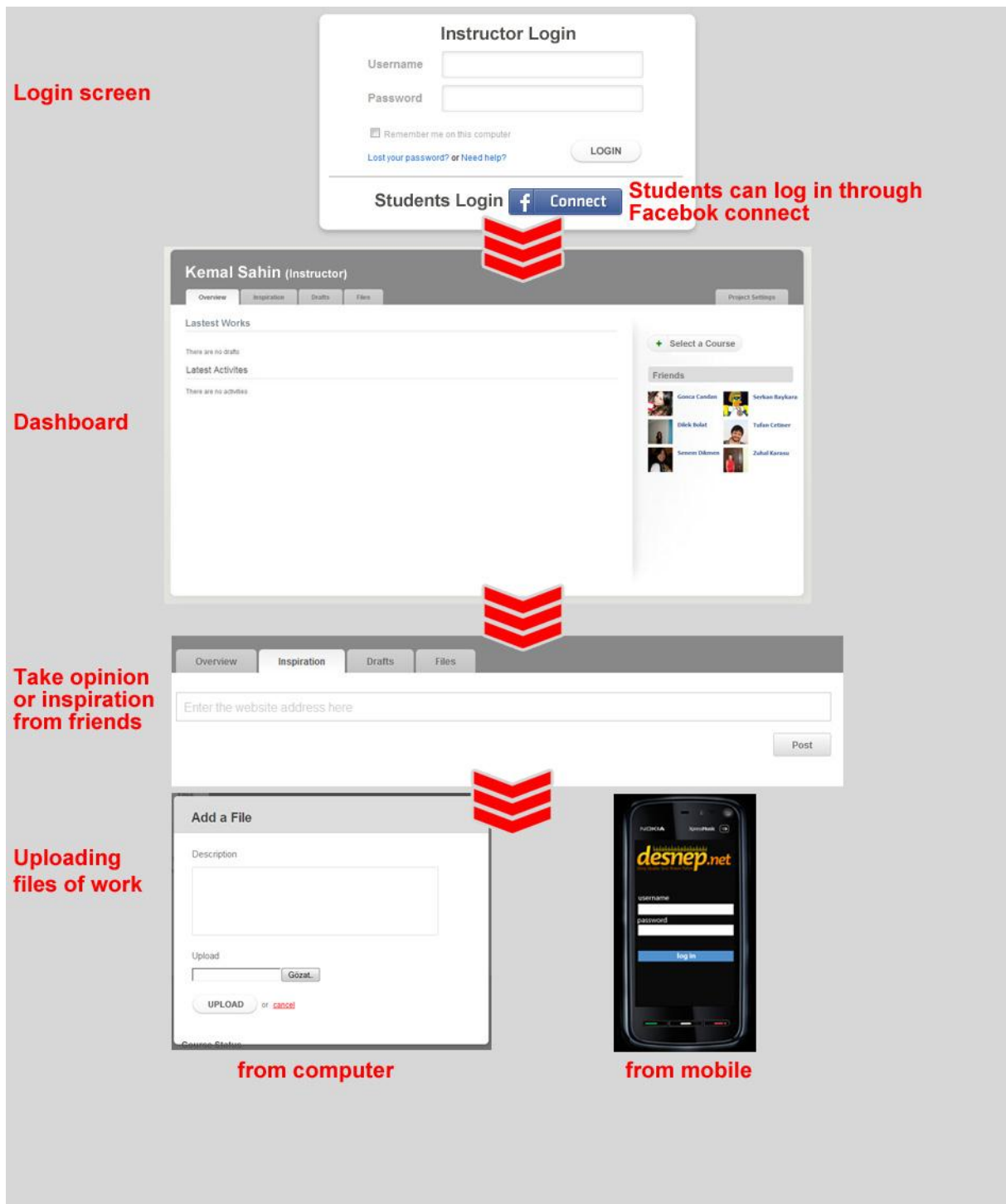
FIG. 7: screenshots of student process

Students might interact with friends on their Facebook account before they prepare their works. System might actively use all tools and functions offered in Facebook SDK. Students might ask for their friends' opinions. If they want, they can message, ask for an opinion to friends they want or to personal friend groups they have created. They can send their work to Facebook friends and ask for an opinion.

Individuals who will give opinion or evaluate might also use their personal Facebook accounts to log in to the system and operate. These individuals does not necessarily need to be registered for any lesson on the system.

They might share related opinions and evaluations for their friend(s) asking for help. They might give feedback for work that has been done with; tagging, marking/drawing and rating tools. Therefore, quality and content might be improved. A collective work might be prepared. Student might enrichen or improve work towards opinions and evaluations it takes. Instructor is not involved in this process. But they might see or track if they want to.
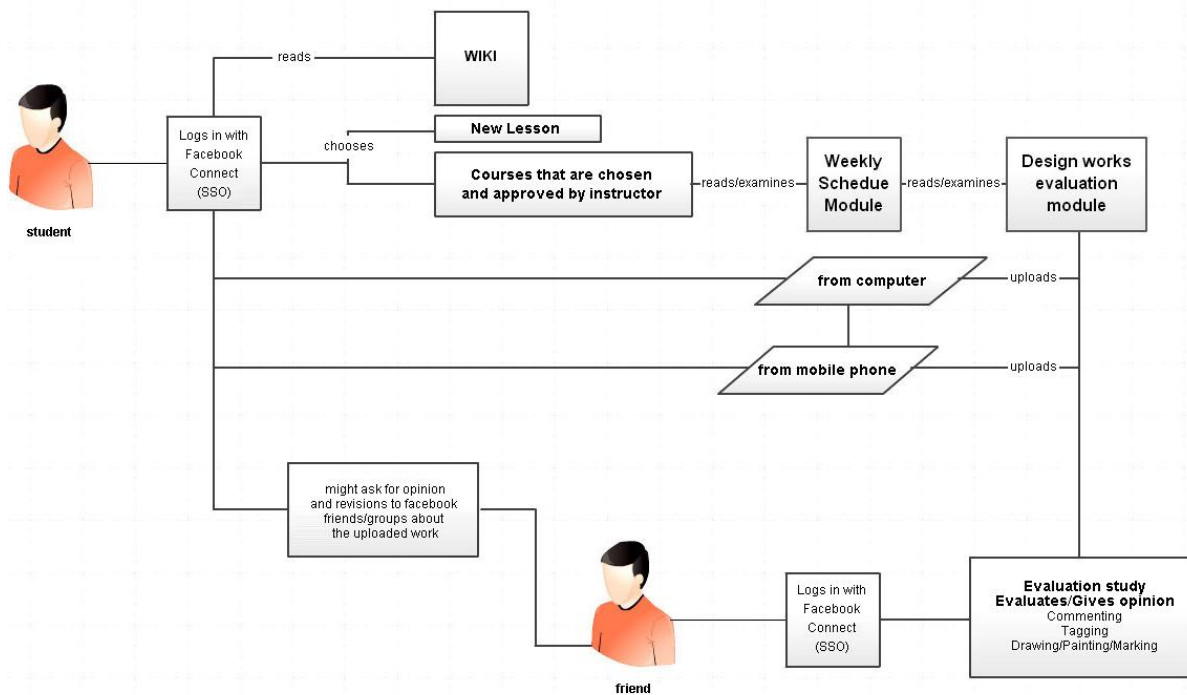

FIG. 8: interaction between students and their friends

If students believe their work has been finalised and wants to upload to the system for instructor's revision, they either shall re-upload or send to instructor for revision whom they had discussed with and got feedbacks from.
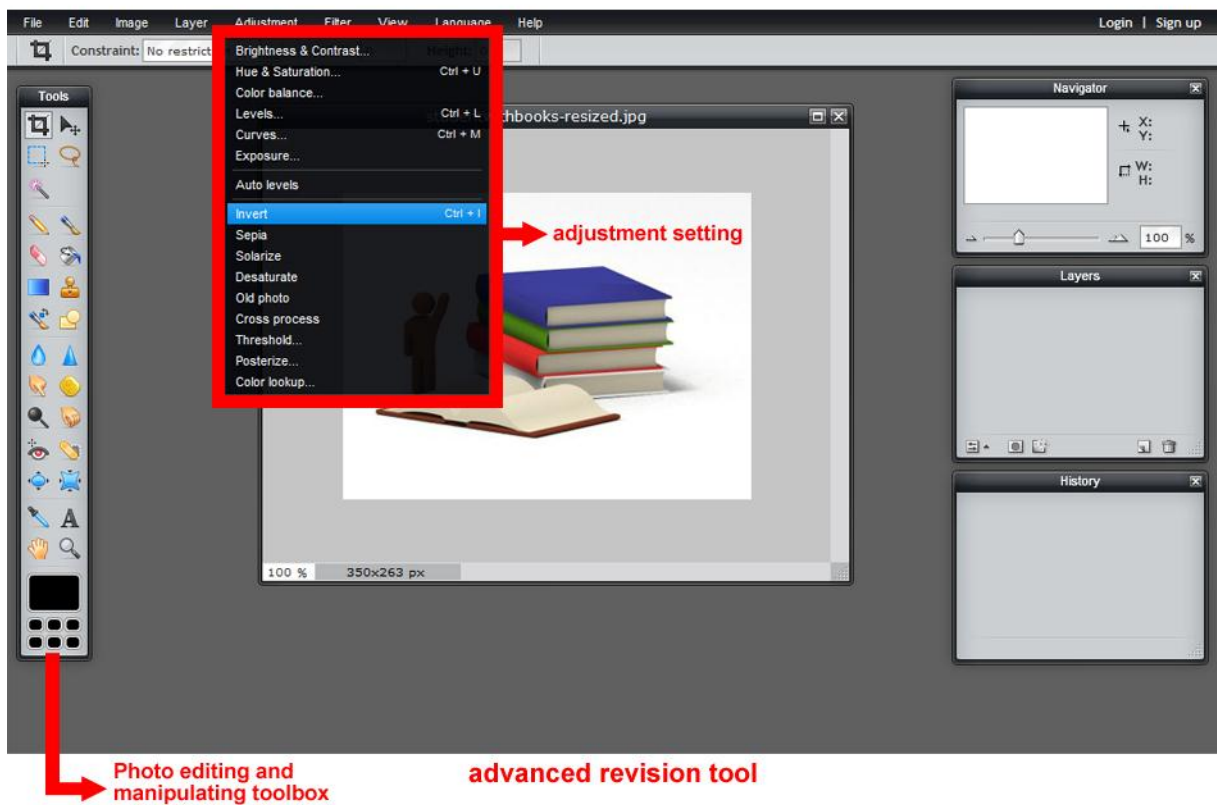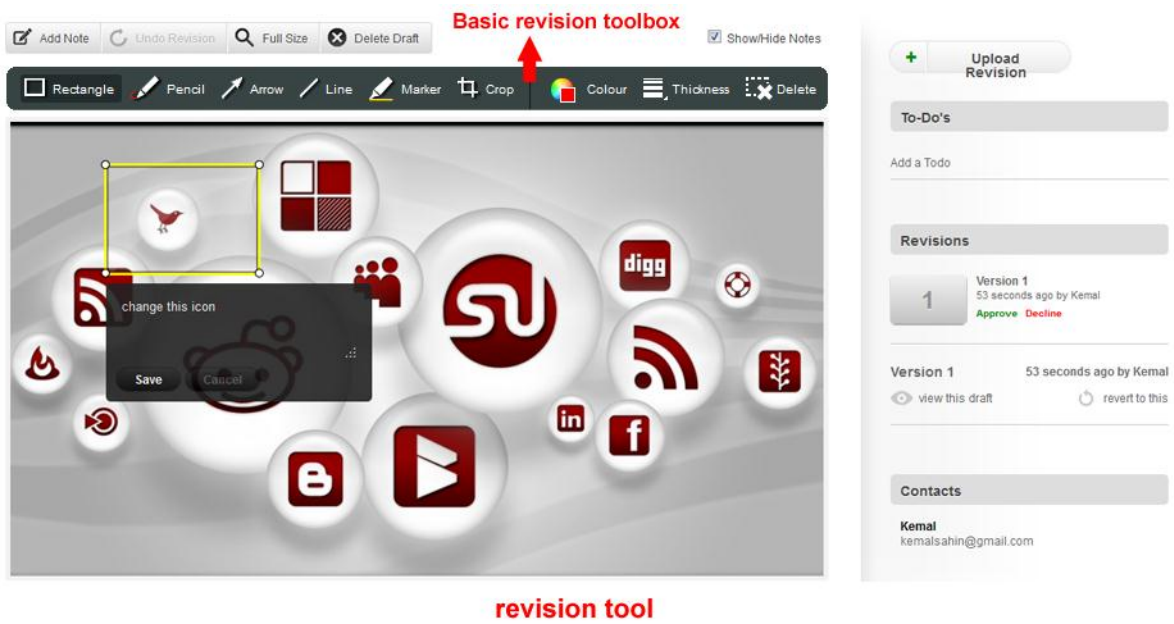
FIG. 9: Screenshots of revision tool and advanced revision tool

Instructors might feedback or evaluate through special revision interface defined for themselves. This special revision interface is being consisted of two components namely simple and advanced. Basic revision method is developed specifically for this platform and it is a tool that requires no expertise. Instructor might revise through tools on the system such as commenting, marking/drawing, tagging, rating and revision management. Revision management tool is developed only for instructor use and it is not accessible by other users.

Advanced revision method is integrated with web based image editing platform, namely PIXLR.com. Here, all tools commencing basic revision method and advanced image editing tools in desktop publishing such as color correction, filter, effects, might be used. Revised works might be sent to students when approved by instructor to be re-finalized and with a new final upload date. This period is also named as mid-evaluation study. Mid-evaluation studies are recorded and these records shall contribute to final submission as well as helping instructor to track project development process. Instructors might follow all works of students through a related screen. Therefore, instructors might observe all steps taken by students from single interface and might comment and evaluate final product's progress.

All works done by students at studio lessons are not computer oriented. A mobile application has been developed for uploading physical works to the system easily. Through this application, students might upload their works after they took a photo of the work. They might share with their friends to get opinions and feedbacks and they might send it to instructor for a revision, as stated before.

6.1. Desnep Technical Infrastructure and Technologies Used:

Desnep works on two major environments. First of it, is web based part. This is the part where all flow and operation has been substantiated. It works through web browser. It might work on same stability and performance level on all current web browsers. Since front end developing has been done with CSS3 and XHTML structures, interface functions are rich and consists of all new functionalities. Since HTML architecture has been built with DIV-CSS, it has a tableless design. Therefore, it is friendly for search engines and robots as well as user friendliness. All content and categories generated in Desnep might be found by search engines. Therefore, it is aimed for the platform to be spread and expanded. At the same time, JQuery framework has been used to increase user interaction. This is a JavaScript based framework. It is being supported by all web browsers of new generation. It allows event-drive functions to work and has a flexible build. For this reason, a response and feedback might be generated to user clicks. Furthermore, it is supported by many web browsers since it needs no extension or component. This allows Desnep to be reached via mobile phones.

For server-side technologies, PHP base on Apache web server has been preferred. It uses MySQL as database server. The main reason for choosing open source software and applications in all infrastructure and information architecture, is the importance and place of communities in platform development with new generation of internet. Community contribution and developments for development and extending of a platform makes systems work healthier and more stable. Also, it encourages to resolve possible bugs in a rapid and easier way. Furthermore, surveys show that users who support platforms as developer, are staking claim and thus, belonging to the platform gets stronger.

For web based technologies, open-source codeigniter with PHP framework has been preferred as technical infrastructure. Codeignite has created diversity from other frameworks with light build (uses less RAM and it is CPU optimized) and customizable core. Furthermore, its availability for object oriented programming, it consists of all changes received via PHP 5.0. Another advantage of this framework is that it offers scaleable performance analysis and technical infrastructure for systems that expand in time (user and content-wise). This framework has been preferred for Desnep, since Desnep has a user-oriented structure to respond better with time to increasing number of users.

Second environment is mobile channel. In this environment, an application based workout architecture has been preferred. Therefore, students might upload their design works' photos via Desnep application directly to their accounts at DESNEP platform. They might take more than one photos and upload under one topic. This upload might be done for previously stated reasons such as getting a friend's opinion or getting revisions from an instructor. In mobile evironment, Nokia has been preferred and for this reason, DESNEP mobile application has been developed in this platform. Major influence for this preference is Nokia's penetration rate and high population in Turkey, since there are more than 20 million Nokia users.

Acoordingly, Qt programming language has been used on DESNEP mobile application. This language is an open-source project which was bought by Nokia in 2005. Major feature of this programming language is preserving same visual interface in different mobile operating systems. This is a major technological infrastructure for a company such as Nokia, that has a wide range of phone products and it provides standardization among different models and products. Furthermore, there has been a meeting with Nokia Turkey at the development stage, and with their support and permission, it has been mutually decided for application to take place in OVI Store in November 2011.

FIG. 10: Screenshot of mobile access for desnep.net

DESNEP educational social network is an integrated structure that allows sharing and can be reached through web and mobile systems. From both environments, www.desnep.net is the official address to reach the platform. Application to transfer design works to mobile environment will be ready to use in the following months.

7. CONCLUSION

This study has treated design as a problem solving process and it has been considered that all design and opinion sharing environments plays a significant part in shaping ideas via interaction, during this process. Presentment environment is where design ideas are shaped and shared; and technical and technological possibilities of this environment, is aiding tools for shaping design ideas. For this reason, changes and evolutions in presentment environment or techniques are creating new sight, sense and comphension forms and mediate the new ideas formed.

DESNEP is a social network about design education formed by beforementioned, that will grow with contributor's contributions. DESNEP has been planned as a social sharing environment, that allows ideas to be shared, presentments of these ideas have been transferred and also, respected ideas are developed in courses led by instructors. DESNEP is a social sharing environment (social network) that combines web and mobile technologies, thus differentiates itself from design education centered social networks, and helps the development process of design idea with the revision tools it carries and records statistical information with process management. Besides, it allows process tracking to be done with managemant tools (revision management, simple and advanced revision tool etc.). Therefore, instructor might see all works done by student and might make a general evaluation about process, without need of taking extra notes or prepossessing. By this way, measuring-evaluating process which is an important level in education, might be done by instructors easier and more accurate.

It has been considered that this platform will be a very useful database for future academic studies as number of contributors and statistical records increase. This database to be will be supported by varioud surveys and evaluation forms. These research will be on on measuring system's reliability and impact and competence of student-consultant environment that has been wanted to create in design education. Also, as a result of research, changes and recruitments will be done to the system. User action analysis to increase platform's ability in design education will be also commenced.

To increase user control on the system, there will be useability tests and eye-tracking analysis' done. With this process, user control on system will be increased and also system's useability value will be enhanced.

Platform might put into service of many offices and companies in design oriented business according to needs. Architecture offices, advertisement agencies that have revision processes in their workflow, might take feedbacks and evaluations from their customers or from their crews through this system. Therefore, this process will be recorded and workflow will be enhanced. Because today, similar processes are conducted through e-mail or phone conversations. Both communication ways does not include tools to enrichen the process. This increases number of revise and draft works in many companies' works. Through this system, companies might take revises easily and complete them rapidly for submitting them to approval. Employers might get opinions from their crews about the work that is done, and also narrate revisions they want to tell, in a more accurate way. Impact and competence of the developed platform, will set light to works in future stages.

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