Relevanța modelelor de învățare socială în Societatea 5.0 — Edmodo și Educația Inteligentă —

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The Relevance Of Social Learning Designs in Society 5.0 — Edmodo and Smart Education —

In the attempt to accommodate the shift from society 4.0 to society 5.0, the higher education is required to incorporate native edutech models. The acceptance rate of such designs may be correlated with the adoption rate of the platforms that already enjoy widespread popularity. One such model that builds on the social networking architecture is Edmodo. Known as a social learning instrument, the Edmodo educational platform models significantly on Facebook's social architecture and delivers a lucrative yet informal type of class design. Forming and delivering relevant and competitive knowledge, skills and abilities, mandates for the exploration of education as a lifestyle concept as well as for its quality of life implications in the era of ICT.

Keywords: edmodo, social networking learning, smart education, participative learning, educational data mining, foreign language acquisition, qol

Technological advancements and philosophical trends

Technological progress forges changes and redefines the quality of life social architecture. As the global economy steams ahead with vigor and speed, the technological sophistication reaches and discreetly passes the 4.0 industrial revolution mark. This stage pictures the disruptive innovation phenomena in all of its complexity and reveals the most recent advancements in artificial intelligence and big data. The accelerated pace requires technologically aligned skills and adaptive abilities. Referring to the competitiveness of 4.0 landscape, The World Economic Forum, reports that some particular abilities such as analytical and innovative thinking, emotional intelligence, and mathematics reasoning, will reach unprecedented levels of relevance.[1]

Understanding the magnitude of the shift, state level actors in various parts of the globe, develop strategies and educational designs intended to deliver on the employable skill sets and abilities. As technologized skill sets and abilities gradually become the common denominator in shaping educational architectures, local governments advance state policies to facilitate the development of the modern workforce currencies. The rapid advancement of technology places a tremendous amount of pressure on education. Traditional educational models are forced to adapt to stay relevant in the technologized society. Countries

found at various levels of socio-economic development are designing concise strategies to incorporate education in the smart society framework. Such is the case of "Thailand 4.0" policy, where state actors begin to prepare the next generation of secondary and higher-education graduates for the economy of the future. This implies preparing candidates for the upcoming intelligent and highly automated industrial models, which require a technologically fluent workforce.[2]

Another example is represented by the five year strategic plan in Japan, called the "Super Smart Society." The concept formulates an updated version of the quality of life concept (QoL), encompassing all facets of life. The plan, builds on the pillars of the technological industrial revolution coined as industry 4.0. Evolving from Germany's industry 4.0 vision defined as the "Information Society," the tenets of "Super-Smart Society," or "Society 5.0," reside in four main objectives. The first is to optimize society as a whole by integrating cyberspace and physical space while the second consists of using data as a new resource. The third consists of devising a business environment that is flexible to change and endurant to constraints, while the fourth focuses on solving complex social and living problems. All of them, but particularly the latter relates to Quality of Life concepts, (QoL).[3]

In [...] "Society 5.0," all necessary goods and services will be provided to anybody at any time and at any place regardless of region, age, gender, language or other limitation. The main goal of "Society 5.0," is to achieve economic growth/well-being and overcome societal challenges at the same time, contributing to the prosperity of global communities (CSTI, 2018).[4]

The central argument behind a smart society encompassing all major industrial verticals is the interconnected design. A"hyperconnected Society" (Vermesan & Fries, 2015)[5] is the direct result of a successful Internet of Things Integration. As traditional sector verticals,[6] are redefined as smart verticals, the redesigned operating infrastructure will be governed by smart transportation, smart environment, smart homes, smart energy, smart healthcare, smart industries, smart signage, smart tourism, smart security, fintech, and smart automation. All automation will be sourced from interconnecting big data mining and learning designs from all major sectors. The general assumption is that the higher the level of IoT integration, the higher the QoL coefficient. In this formula, education will find a solid ground in the integration of physical and cyberspace through blended educational architectures. The second major fit between smart society and education resides in the intelligent design integration of educational data mining and personalized learning models. As education is a market vertical as well, it will have to find its own place in the smart and interconnected ecosystem.

While society 4.0 involves unifying borders through digitalization, society 5.0 is banking on the results achieved by society 4.0 and focuses on the global community's prosperity. Education will need to redefine its operating formula and find contextual relevance in the context of digital native lifestyles. Generation Z people born to be users are accustomed to personalized information threads and profiles. Modeled on the fast paced and reduced attention span, digital platforms promote short stories and bite sized content. Whether it is wisdom, humour, news or critical events, the content is delivered in a compelling nut-shelled design. It is anticipated that the 21st century digital natives who are accustomed to dynamic updates and profile preferences personalized content, will have a low degree of correlation with the traditional 11th century Bologna design.

The tendencies in education, especially in the Higher Education, lead to a differentiated learning. It started with a gradual change, moving education from traditional homogeneous experience, based on one-to-many logic, for methods centered in meaningful, immersive and personalized learning. Nowadays, the profile of Higher Education students is very different from decades ago. Moreover, the skills and academic requirements for this type of education are increasingly broad. It is understood that the traditional methods, mostly centered on teaching, and not learning, are not enough for awakening motivation and engagement on students.[7]

While public funding for higher education is becoming very limited, public universities are gradually converging towards self-financing models. Delivering competitive programs which attract financially viable prospective students, the public curriculum design begins to take the perspective of an educational service provider. This trend is being reinforced to a greater magnitude as more private actors enter this vertical. Consequently, emerging from different fronts, education as a service becomes the new norm and becomes the dedicated source for instruction and training products. Smart education is the only design able to engage students who "expect to find information in multiple formats, when and where they want it as well as in the form they have grown comfortable using."[8] This is consistent with the tenets of "Society 5.0," which envisions that goods and services will be provided to anybody, any time, any place, regardless of region, age, gender, language or other limitations. This approach signals interest towards developing a flexible and endurant educational design, which is capable of addressing socially complex problems.

Closing the gap. Employee profile and modern educational architectures

The rapid technological development is gradually becoming a social norm. Delivering skills compatible with smart society tendencies would require a more rapid acceptance rate by the state actors involved in critical decision making. It is no secret that technology has become an inseparable part of our lives. The new reality touches on the important areas in our daily lives such as our homes, the workplace, recreational and leisure experiences, as well as education. Acknowledging the vast implications of the latter, a growing argument for integrating technology into the educational process, gains increasing support. Technologically aligned educational designs promote the development of the 21st-century skills, which gravitate around critical thinking, problem-solving and working in teams.[9]

Attempting to close the gap initiative may take a few forms. Namely, some will adopt a standard compliance model by simply digitizing the Bologna architecture, while others, will adopt intelligent designs that employ personalized learning architectures. Closing the gap is essentially, the alignment of traditional educational designs with modern social architectures. In this scenario the role of the instructor in adopting a socially relevant educational design, is critical.

The Education 4.0 expects the teachers to have mastery over the ICT skills so that these 21st century learners will use these skills for learning. Do the teachers from HE have required mastery over ICT skills? Are they integrating ICT tools into their teaching-learning-assessment processes? Could they be guided to integrate ICT into their day-to-day teaching?[10]

If education is to become a native lifestyle, teachers will have to implement instruments or devices that students commonly use to communicate.

The content delivery must account for user preferences but also for information format. For example, in blended learning, the platform may suggest independent movie scenes, research articles, or assigned reading based on Shakespeare or Dostoevsky. The design can be automated based on user's stated academic goals and keyword prevalence in class forums. Specifically keyword tagging can be linked to push notifications from Google Scholar regarding the word combination "tragedy-hamlet" or "religious beliefs-brothers karamazov." Following and building on user's personal preferences, stimulates the emotional engagement with the subject and channels the creative energy towards higher personal goals. The gaps equal the distance between skills-abilities obtained in higher education and workforce requirements. To minimise such distance, educational designers must implement the instruments which guarantee that most relevant information delivery channels are based on both, specificity and adaptability.

Closing the gaps contributes to the experience, that is, if teachers will use in the academic context the same instruments that students often use to communicate, the best solutions to help a better teaching molded to the characteristics of students could be identified, optimizing the variables that are the engine of learning, such as the emotion, and stimulating higher character skills (awareness and liberality), in addition to finding new forms of multiple literacies (Costa, Cuzzocrea, & Nuzzaci, 2014).[11]

Employee profile has changed and education must deliver on the promise of compatibility between instruction - training and professional integration. The new reality mandates for the development of relevant knowledge, skills and abilities.

We face changes in the near future employment trends influenced by extreme longevity, automation, computing and globally connected world, new media ecology, and super structured organizations which makes it necessary for new and old professionals to develop specific skills for the workplace in 2020, to develop computational thinking, design-oriented mentality, cognitive load management, new knowledge about media, multidisciplinarity, critical thinking, social intelligence, innovative thinking and professionals' adaptability, cross capacity and virtual collaboration (Davies et al., 2011).[12]

Closing the gap cannot be accomplished with static information and inflexible designs, but must incorporate a wider view of the social direction in all important developments such as longevity, automation and relevant skills.

Emerging solutions. From SNS to SLS

It is reported that by 2022, the size of the e-learning industry amounts to 243 billion USD. It is also expected to grow at over 5% of compounded annual growth rate per year from 2017 to 2022.[13] Therefore the search for smart architecture models is active and advancing. Generally speaking, private universities experiment with subscription platforms, while the less fortunate public institutions, adopt open source and free alternatives. And in doing so, instructors must choose the platforms that best communicate a native appeal to its users. Of the immediately visible advantages of social networking sites relative to education, their significant degree of positive correlation with the social constructivist learning theories stands out the most.

Social learning sites, provide an optimal environment for constructive opinion exchange, enriching content exploration and flat hierarchy that facilitates a comfortable degree of reciprocity. Distinct philosophies on social learning modeling have identified patterns that stimulate user engagement. Identifiable

patterns reveal linking frameworks which activate motivation through social connections, teaching by collaboration, and improvement in learning by immediate and frequent feedback and engagement. The fundamentals of the social constructivist theory, hold that interaction and socialization is central to students' ability to learn and construct their knowledge and to design their personal learning process. Social media paradigms facilitate participative learning alternatives and deliver the digital perspective of constructivist teaching and learning.[14].

To date, the growing body of literature indicates that educational networks, like Edmodo, provide competitive advantages not only for students but also for teachers and instructors. Educational designs that incorporate social learning networks, infuse the class with an innovative atmosphere facilitating flexible, borderless, and collaborative environments.[15]

Edmodo as SLS

While research is yet to reveal the most suitable educational designs for the young tech society, some architectures that model on the popular social platforms attempt to capitalize on the digital trends adopted by the majority of its users.

One such model is Edmodo, which emulates the features and conveniences of the globally popular social platform, Facebook. As each model delivers its own concept model, Edmodo, favors a flat hierarchy, promotes a student centric design and incorporates an informal walled forum format. Created in 2008 by Nic Borg and JeffO'Hara, Edmodo aims to combine the connectedness of the 21st century with teaching and learning. The architecture models largely on the Facebook design yet emerges as an independent and more private educational networking platform. The architecture allows teachers to create classes as closed groups, securing the learning space with a unique group code. This strictly allows teachers to create and manage group and individual accounts, permitting only users with a group code join the group or access the class.[16]

Modeling on the SNS architecture, Edmodo as SLS is a social networking platform designed for educational purposes. It provides both synchronous and asynchronous user engagement in a free and safe virtual learning environment. Whether, teacher, student or parent, everyone on the platform is a user. The user interface is modeled on Facebook's architecture syntax, in similarly colored elements and user friendly design. The model is one of the most popular designs, if not, Edmodo is the platform with the highest adoption rate, globally. The numbers point at 100.000.000 users registered in 400.000 schools residing in 190 countries. Edmodo scales up to 12 major educational topic based communities and delivers a secure teaching and learning environment. The safe space allows for teachers and instructors to share knowledge, resources, course materials, worksheets, suggestions, ask questions or make community wall inquiries. As of 2018, membership numbers indicate a total estimated of 90.000 to 500.000 registered community users. Each individual community covers a specific topic, bringing together an academic cluster of interest areas such as information technologies, mathematics, science, social studies, linguistics, world languages, career and technology education, health, creative arts, special education, college preparation and personal development. Edmodo's main asset consists in its vast accessibility across different populations and for this reason it is coined as a K-12 platform. Which is to say, that the platform was designed for the maximum possible outreach, beginning with kindergarten level users and ending with the 12th grade high school users. This architectural philosophy, not only facilitates easy access for the active users, but it also provides and easy understanding of school schematics for its passive users, the parents and those less digitally literate. Delivering well on the smart pedagogical tools, teachers on Edmodo, can engage in the easy creation of class exercises, but also in the flexible designing of quizzes and polls. The design allows instructors to intuitively initiate discussion threads, share multimedia links and files, store educational materials in the platform's own library and create homework assignments. Scheduling alerts and tracking individual tasks or the class goal of the students, is also a vital quality control mechanism offered by the platform.[17] Looi and Yusop (2011) state some advantages of using Edmodo in the classroom. First, the students could post positive feedback based on the assignments. Second, students could get a reward badge that could improve their learning motivation in learning English. Third, Edmodo permits students to increase their cooperativeness by allowing them to discuss the problems with the assignments.[18]

AI integration and Instructional Design development

If current students are the future employees of the smart market verticals, a few questions gain legitimacy. How education can speak netizens language? How can education design develop relevant topic threads for its studying cybercitizens? How can instructors deliver the personalized content so familiar to digital natives? A possible answer may reside in the argument of entering smart industrial integration through smart education. Smart education platforms, offer the possibility of performance monitoring through key performance

indicators. Edmodo excels in this category through its capability of making the user generated content measurable and classifiable. By means of AI integration and algorithmic architectures, educational data scientists can infer user performance levels and make observations on the aggregated data. Such observations are then incorporated by instructional designers in the curriculum design. This educational architecture therefore, offers a significant potential for curriculum calibration and facilitates the rapid development and deployment of responsive teaching and learning models.

The edge that Edmodo has over other SNS platforms lies in its ability to facilitate the export of students' posting history, allowing researchers to make inquiries on all users' posts and profiles. This function allows educational data scientists to assign appropriate data classification methods and knowledge extraction with higher degrees of confidence. Evaluating group and individual questions, opinions, and clarifications, helps educational designers with analyzing student data in terms of emotional, behavioral and cognitive forms of engagement with controllable measures of validity and reliability. This design allows for Edmodo posts to be classified into varying independent classes which consequently leads to more conclusive findings in terms of engagement levels distribution.[19]

From a technical perspective, all of the information that is generated by users, reflects both the user experience and the satisfaction levels. Improving the latter is synonymous to improving user engagement scores. To achieve this, instructional designers must calculate the levels of interaction with the platform and with the generated content.

As a matter of fact, sometimes users judge and create UX about any product before even touching them. Interests in UX has spread out all over domains, including the education field.[20]

User's experience with particular products, systems and services represents the integral view of a person's emotions, attitudes, and expectations regarding subjective perceptions of system features such as utility, ease of use, satisfaction, and efficiency. User experience is dynamic and perception is influenced not only by the platform performance itself but also by other emerging elearning designs. Upgradable features such as intuitive design, easy operation, flexibility, robustness, information architecture, visual effects, content strategy, accessibility, utility and performance, have a direct impact on user experience. These are the areas where users are accustomed by the current social platforms to see steady incremental improvements, identified as system updates. One particular manner of enhancing user experience in Edmodo, is by acknowledging the emotional expression potential. The platform recognises the mobile input of emoji expression and incorporates them natively in the written narrative of the class discussions. Another critical advantage provided by the platform is that of an informal psychological comfort. This welcoming atmosphere promotes collegiality and encourages constructive postings. The larger spectrum of experiences includes users' emotions, beliefs, preferences, perceptions, both physical and psychological responses, as well as behaviours and accomplishments that occur before, during and after the interaction with the platform. The user experience paradigm is influenced by a three-dimensional architecture which incorporates dynamically systems, users, and the contexts of use.[21]

Case studies

In order to improve the educational output, various academic institutions around the globe experiment with different types of platforms.

The most popular social applications relative to education are Facebook, WhatsApp and Edmodo provide excellent learning advantages such as collaboration, feedback and engagement, but also present the risk of addiction, distraction and maintenance of privacy. It is probably due to the latter risks, that the Edmodo architecture emerged as an independent platform, with features exclusively focused on competitive academic achievement.[22]

Whether in blended or exclusive online formats, social learning designs fuel both the informal-flat-architecture and student-centric class formats. These concepts reveal a positive impact on educational outcome, however certain disciplines tend to fair better than others at using social learning technology. While class design experiments include both science and humanities,[23] the strengths of the platform tend to incline more on the humanistic side of the educational spectrum, particularly in the English learning and foreign language classes. While fields like engineering and mathematics, medical teaching, counseling preparatory skills reveal positive user experiences and encouraging academic outputs, it is in the language learning and writing skill development where Edmodo induces a natural connection and where users find a native predisposition towards the subject matters.

[...] social platforms favor the movement from teacher-centered to student-centered instruction in language education (Brandl, 2002), where student autonomy and collaboration can be encouraged among learners (Benson, 2007). SNSs provide users with the means to connect with other users, make profiles, and exchange a range of content and information using a web-based system (Boyd & Ellison, 2007).[24]

In foreign language classes, student's multimedia contributions of writing, speaking and listening,

can be easily uploaded onto the platform, making instructor's asynchronous assessments more precise and more objective. Such a performance would otherwise be difficult to achieve in real time by the instructor for an entire class. This type of architecture brings more flexibility to the class design and constructively extends the academic space with the help of digital mechanisms. One critical advantage of the newly developed academic space, is the personal pace. An elegant argument presented by Radu Drăgulescu highlights that learning occurs when students are ready to receive it.[25] Consequently, both the personal space and personal pace are critical in the acquisition of new knowledge, with each individual pace imagining a bespoke educational space. The extended academic space allows for more control and flexibility in developing adaptive self-regulating patterns. The internal pace, or the cadence of each academic journey is individual and specific to each user. Creating a bigger educational space allows for asynchronous users to more confidently and better informed fulfill course assignments. This dynamic is particularly relevant during the freshman year when students form patterns of their own unique and "individual time."[26]

The present report accounts for nine positive references to language learning and writing skills, two for engineering and mathematics, one for counseling and one for medical education. The nine language and learning references are disseminated in six independent studies by Bradley Joseph et al., (2), Siswo Edi (3), Muhammad Zahid et al., (1), Unal Ulker (1), Radu Drăgulescu (1) and Andrei Androsoff et al., (1). Of the nine studies, eight focused on highlighting the optimal design for developing grammar knowledge and writing skills, while the eighth, identifies the platform's ease of access and use for foreign language students. The scenario depicting language learning and writing skills development suggests a ratio of 8:1, favoring the language and learning predisposition of the platform. The eighth reference does not provide a negative feedback against the language acquisition, it just simply focuses on the suitability of the architecture for language development. Out of a total of thirteen positive references to Edmodo, following the first place held by language learning and general linguistics,[27] the second highest number of positive references is attributed to mathematics, while the third place is attributed on equal footing to medical education and counseling education. If according to the current trend of interdisciplinary medical humanities, medical education is subscribed to humanities, the argument favoring the positive correlation between humanities and social learning design, grows even stronger. A draft conclusion appears to place humanities as the best fit for social learning educational designs.

In Japan, foreign language acquisition is obstructed by accepted social norms of reduced participation. The Japanese as well as the Romanian academic design is teacher and teaching centric and less about learning and student centric. This creates problems in language class participation, where verbal exercises are critical to language acquisition. Understanding the negative impact of this culturally accepted fallacy, universities in Japan initiate experimental designs, attempting to solve a cultural problem with a social instrument.

Japanese students may experience a contradiction with their cultural values and teachers' expectations to be active participants in communication since the education system is largely influenced by Confucian beliefs that results in classroom environments where students may be more accustomed to playing passive roles as knowledge recipients (Tanaka, 2009).[28]

Likewise, the Romanian educational context is also affected by the same unidirectional academic design and cultural bias. In similar experimental endeavours, romanian students positively correlate with Edmodo's social network design that models onto the social links and sociological dimensions paradigms of its users. Since students in Romania are technologically native by a wide margin, adopting the western models of social media interactions in class, becomes highly intuitive and natural.[29] Furthermore, adopting a smart class design such as Edmodo, may function as an anxiety reducing mechanism for language learning classes. As it is generally associated with assimilating novel information, anxiety usually resides in teaching and learning both in the endo and exo-linguistic contexts.[30] Social learning systems however, can be useful in moderating the anxiety levels by extending the academic space and by allowing students to exercise their natural choice of topics, ethnic group affiliation and gender group identification. Detailing on the anxiety associated with academic achievement particularly on the acquisition of Romanian as a foreign language in a Romanian university, Radu Drăgulescu, details on the importance of both prohibitive and competitive valences of anxiety in educational designs.[31]

Other experimental initiatives in Japan, Al-Kathiri (2015), found that Edmodo broadened the type and amount of communication, significantly increasing the levels of confidence and motivation. Edmodo was found to be helpful in acquiring English vocabulary terminology, improved grammar and spelling proficiency, playing an active role in developing listening skills. Okumura (2017) reported that Edmodo facilitates authentic communication levels while the use of the platform was intuitive, fun, valuable and interesting. Edmodo's capability of enhancing student's communication abilities was appreciated as a valuable asset and was regarded as a critical instrument in developing new connections with foreign students.[32]

In Indonesia, the most recent research supports the findings of previous research. Al-Naibi, Maryem, and Iman (2018), suggest that Edmodo's implementation registers significant improvement on students' writing abilities for English language classes. Students' positive feedback exchange using Edmodo, provides a strong foundation for both writing skills development and for the conception of well-structured text. The latter architecture, plays a pivotal role in the gradual development of the written argument. Of the many intuitive features offered by Edmodo, the autocorrect function is the one that offers substantial time savings in advancing the English learning knowledge. These text editor functions can automatically correct capitalization and spelling errors and acts as a personalized smart tutor. Duwila and Khusaini (2019) found that implementing Edmodo enhances the five aspects of rubric writing proposed by Brown (2004). The text writing areas positively influenced by the Edmodo architecture are, prewriting, drafting, revising, editing and text publishing.[33] Such enhancements, boosted student confidence, enhanced critical thinking, and invited exposure to broader knowledge.[34] Purnawarman, Susilawati and Sundayana (2016) revealed that Edmodo facilitates both teacher and student intervention in the educational process. The interventions were found to stimulate positive feedback responses and to add supplementary academic space for revising written assignments.[35] In a different context in Indonesia, an experimental Edmodo research design of a pretest-posttest group, evaluating future student counselor's competencies via animated video-tutorials, was initiated. The findings indicated that the use of animation-based flipped classroom concepts, increased both self-esteem and optimism levels on prospective counselor students. The social learning design facilitated the development of a wide array of self-regulating mechanisms and included a positive impact on self-esteem, self-competency, self-understanding, self-optimism, social optimism and self-efficacy. The study concluded a positive correlation between self-esteem and optimism.[36]

A report from Thailand focusing on language acquisition identified positive correlation between user experience and platform accessibility design. Covering the vast areas of Indonesia and the Philippines, studies find that by using the web-based LMS and SLN Edmodo, the students were able to both learn it quickly and also experienced an increased degree of motivation (Enriquez, 2014; Joshua et al., 2015).[37]

In Iraq, a study on blended learning Edmodo design for language preparatory courses for teachers at the university level, found that Edmodo was offered excellent results and was better suited for poll-quiz applications. The user preference for the social learning platform outranked dedicated applications such as Google Docs, Google Blog, Pear Deck and Flip Grid. The task stages and most comfortable content topics are illustrated in the three reading stages. Accordingly, at the reading stage, the pre-reading tasks included examples such as guessing the topic of the text using illustrations, tables, graphics or headlines, a group discussion/brainstorming about the predicted topic, trying to infer what the text will say, writing questions that can be answered according to the text and exploring key vocabulary items. While the reading stage makes reference to answering questions, completing the sentences using information from the text, filling gaps in a table, map or picture, creating students' own questions based on the texts' reciprocal questioning, writing down predictions of what will come next, post reading stage includes discussions of what is new or interesting in the text and summarizing the text orally or in writing.[38] This report is extremely relevant, as it is one of the few studies that point at the areas and levels of acceptability of social learning platforms among language instructors.

In Pakistan, the review article concludes that social media is a powerful instrument for social interactions and it is also used as a tool for teaching and learning. The integration of social media with traditional class teaching in medical education presents clear advantages, but there is also a clear debate about the probable disadvantages as well.[39]

Academic endeavours in Europe attempt to identify the potential of social learning designs relative to fields like engineering and mathematics. In Spain, building on previous research on the development of social skills (Valkenburg & Peter, 2009) concluded that the use of SNSs contributes positively to adolescents' peer relations development and facilitates interaction with the existing links (Boyd & Ellison, 2007; Haythornthwaite, 2011) promoting a collaborative working environment. Tangible benefits of using the platform includes tolerance towards the other members of the group, extending the ability of social support, easier integration and increased group cohesion (Cabero & Marin, 2013). The design is found to both stimulate the social capital formation and to facilitate social trust development (Ellison, Steinfeld, & Lampe, 2007; Valenzuela, Park, & Kee, 2009).[40] Therefore, a relevant study describing the students' use of academic SNSs, reports on the user experience associated with the social learning platform. The research details on the relationship between the socio-demographic and academic factors associated with the use Edmodo as well as on the perception of the skills' acquisition contribution towards future career development. In the user experience analysis, participants positively evaluated Edmodo and found that the overall satisfaction level is positively correlated with the academic results obtained, and negatively

correlated with the perceived usefulness in terms of the impact on their grades.[41]

Conclusion

As the case studies indicate, there are visible efforts all around the globe of aligning educational designs with workforce requirements. To truly deliver on the promise of employable skills, universities must implement educational designs that deliver real world skills and abilities. Relevant methods of information transfer must emulate similar learning methods and instruments present in the working environment. The workforce requires compatible and competitive abilities, and students with misaligned knowledge, skills and abilities will face resistance in workforce integration. Workforce mobility is probably one of the most important forces behind the heavy emphasis on foreign language acquisition.[42] For example, acquiring English or a majority language proficiency, transforms the local workforce into a globally relevant workforce.

Edmodo extends the traditional learning design and facilitates knowledge creation modeled on social network architectures. The platform has the potential of developing topic preferences and native skills predispositions into real world employable assets. Social learning empowers learners build accountability and challenge their knowledge by engaging in constructive dialogue. Social network architectures incorporate a student centric design where students learn through real world experiments and test alternating scenarios through in-class activities. Social learning keeps an active focus on developing students' competitive skill sets such as real life problem solving abilities as well as collaborative and cooperative learning strategies. Through networked designs, users learn how to engage in critical thinking and analytical decision making, developing better problem solving abilities both as an individual or as a team.[43] The social learning architecture extends the horizon of borderless educational designs and equally promotes both student-student and student-instructor collaboration. However, while the flat architecture is essential, it should be clear that the teacher is responsible for modeling the expectation standards and that knowledge transfer is "learner-centered but teacher-triven."[44]

As ICT literacy becomes normative in higher educational settings, teachers and instructors will have to master information and communication technologies competencies. In order to align curriculum design with marketable knowledge, skills and abilities, instructors must incorporate teaching-learning architectures based on key performance indicators. In this way, educational metrics can be natively integrated into the greater smart-ecosystem. The educational data can be mined into smart-city architectures, smart-transportation and adaptive budget allocation. Smart education is capable of speaking cybercitizen language. Therefore, teachers and instructional designers must develop relevant topics that match users' active levels interest and grow familiar with creating and delivering personalized content. These are only a few milestones that would guarantee that traditional education will not lose relevance in the face of rapid technological developments. Smart education appears to be one viable route for smart industrial integration. Edmodo is a promising smart integration compatible instrument that proves widely efficient both on the topic axis as well as on the generational smart integration axis. While the design rules out complex educational architectures is stays significantly relevant for a community of twelve topics and education levels covering from kindergarten to 12th grade. Out of the heavily populated global topics, the world languages tops the present trend. Foreign language acquisition seems to be the best fit for using social learning platforms. The present report indicates that, language learning is followed by preferences in mathematics, health and personal development.

Accounting for demographic variables, the Thailandese studies (Thailand 69.04 million people, Indonesia 264 million people, Philippines 104.9 million people, totalling 442.44 million people) lead the classification interest for foreign language acquisition in humanities. Pakistan (197 million people) follows with medical integration interests, seconded by Japan (126.8 million people) on language acquisition, Spain (46.72 milion) with engineering interests, Iraq (38.27 milion people) for language preparatory courses for teachers, and Romania (19.64 million) with Romanian as a foreign language and general linguistics.

Edmodo successfully delivers on the constructivist theory tenets which hold that interaction and socialization is central to students' ability to learn, construct knowledge and design their personal learning process. Social media paradigms facilitate participative learning alternatives and deliver the digital perspective of constructivist teaching and learning.An advantage that Edmodo possesses over other SNS platforms rests in its ability to facilitate key performance metrics monitoring and educational data mining integration with smart verticals. Coding user data allows for precise parameter measurements of emotional, behavioral and cognitive forms of engagement. Metrics that employ reliability and validity testing offer the most precise capability in delivering a comprehensive image os user's critical and innovative thinking, emotional intelligence, mathematical reasoning, and team problem-solving. Delivering on the promise of real world competitive skills, Edmodo's social learning architecture can facilitate both the nascence and enhancement of computational thinking, design-

oriented mentality, cognitive load management, social intelligence, interdisciplinary professional adaptability and virtual collaboration.

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