

Developing Undergraduates' Soft Skills: An Investigation of the Status Quo and the Challenges

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Developing Undergraduates' Soft Skills: An Investigation of the Status Quo and the Challenges

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Article Info	Abstract			
Article History	This study aimed at investigating the undergraduates' soft skills in a private HE			
Received:	institute in Lebanon from various perspectives. The study adopted a mixed-			
10 December 2023	method approach for collecting and analyzing the data. Two different surveys,			
Accepted: 08 May 2024	compiling major features of incorporating soft skills into USAL's study programs,			
	were administered. 108 undergraduates and 23 instructors from different majors			
	competed the surveys. A focus group interview was conducted for student affairs			
	office personnel (SAO) to examine its role in developing undergraduates' soft			
Keywords	skills. Quantitative data were analyzed using SPSS 26.0 while qualitative data			
Higher education (HE)	were classified into themes and analyzed against the quantitative data and USAL's			
Soft skills Instructors Mixed-method approach Students' affairs office	policy and regulations. Findings indicate, from a triangulated perspective, that			
	USAL's undergraduates have revealed an average level of soft skills although they			
	admit their significant importance for employability and career advancement. In			
(SAO)	addition, USAL's role in developing undergraduates' soft skills appears			
	satisfactory with respect to the curriculum, the instructors' responsibilities and			
	conducts, and SAO liabilities. Challenges impeding the process of integrating soft			
	skills are pinpointed and discussed. Recommendations for the betterment of			
	investing soft skills within USAL' context, policy and practice, are shared.			

Introduction

The Problem Context

HE institutions have the responsibility to realize and grasp the minimal skills that employers require from the undergraduates (Kruger, 2015). Besides, they undergo a vital role in shaping the prospective future entrepreneurs by training them on a variety of skills that mostly embrace communication and relationship (Caggiano & Costa, 2023). In a world of ever-changing job requirements, HE institutions are facing serious challenges (Smaldone et al., 2022) to meet the labor dynamics in a rapid digital transformation setting (Aghaee & Karunaratne 2023). These challenges also include the difficulties HE study programs face to assess the undergraduates' acquisition of soft skills since the latter are neither quantifiable, measurable, nor explicitly embedded in the curricula (Schislyaeva & Saychenko, 2022). This situation has brought to light significant concerns that the employers have expressed about the efficiency of HE study programs in preparing undergraduates as a real productive workforce with a comprehensive profile of both hard and soft skills (Vykhliaiev et. al, 2022). However, collated research results have revealed that the future vision of HE institutions demand a future outline of major signposts of change

within three dimensions that focus on subjective developmental skills, instrumental skills and social, organizationrelated skills (Ehlers & Kellermann, 2019). These major changes will shape the HE institutions' policy toward the adjustment of their study programs and ensuring their modernity to align with the major signposts of integrating the soft skills for the betterment of the study programs in the universities (Kolyada, Kravchenko, 2020).

Hitherto, the directorate of HE in Lebanon, which with education is called the ministry of education and higher education (MEHE), has not suggested any common list of life skills as mandatory for the HE institutions to adopt and promote in their study programs. Accordingly, universities are not restricted by certain list of soft skills as long they have earned the license from MEHE; thus, each university has its own bylaw that could be similar and different to other universities. This study was conducted in the University of Sciences and Arts in Lebanon (USAL), a private developing university that has been founded since 2013 with one campus in Beirut. It hosts three different schools: the faculties of arts & sciences, education, and management, finance & economics.

At USAL, all study programs include sufficient number of courses that targets undergraduates' soft skills. Each syllabus should include a course description, course outcomes, a course plan or timeline, grading system, required tasks, and references. The course outcomes are categorized into two sets; the hard skills including the specific knowledge, abilities, and technical expertise that students gain in a particular field of study and few soft skills commonly known at USAL as the transversal skills. These transversal skills include creative thinking through reflections and inquiry-based projects, exploiting information and communication technologies which align with a related literature review (Coelho, & Martins, 2022), developing personal and social communication skills, and finally adhering to American Psychological Association Publication Manual (APA) as it contributes to enhance the undergraduates' effective written communication skills. In addition, all study programs mandate general requirements that include Arabic and English Language communication courses of two levels each to be achieved over two semesters in the sophomore year.

However, in a focus group held in the academic year 2021-2022 for curriculum development purposes, instructors reported various problems that resonate with several studies conducted in different settings (Vykhliaiev et. al, 2022). Results revealed that undergraduates struggle with their poor abilities in formal oral and written communication in both languages, a lack of critical thinking skills that subsequently hinders their problem-solving skills, and failing to submit assignments or other tasks within agreed time limit. In brief, although being mentioned in the syllabi as transversal skills, these problems entirely relate to a dire need of soft skills acquisition. In light of the aforementioned conditions, a critical need emerged to in-depth investigate the undergraduates', instructors' and the SAO's perceptions of soft skills and their associate practices in taught courses and various university activities. To proceed the study and according to USAL bylaws, the author requested a consent to disseminate the study tools among the instructors and undergraduates and to conduct an interview with the SAO personnel.

Aim of the Study

This study aims at focusing on leading SAO and USAL's instructors and policy makers towards a new perspective

on the significance of soft skills in increasing the undergraduates' employability rate before and upon graduation and accelerating their capabilities for sustainable development. It seeks to contribute with new perceptions to the discussion on this topic by analyzing the data collected from SAO, the instructors, and the undergraduates about the existing state of soft skills and the encountered challenges or barriers throughout the developmental process.

Research Questions

The study is guided by the following exploratory questions:

- To what extent are USAL's undergraduates aware of the importance of soft skills?
- What is USAL's undergraduates' level of soft skills acquisition?
- How does USAL contribute to developing its undergraduates' soft skills?
- What are the encountered challenges, and how are they tackled?

Definition of Soft Skills

Commonly, instructors have been developing undergraduates' cognitive skills or known as hard skills; those are essential for equipping them with essential capabilities and knowledge of their precise major or area of specialty. Recently, due to evolving work requirements and ever-changing work environments, and upon the breakthrough of emotional intelligence and the upsurge of various inventories that measure and predict the success of people in the workplace, the trend has entirely changed; and thus, further interest has arisen for non-cognitive skills and a greater emphasis has emerged on the readiness of the undergraduates. This brings up great demand on the undergraduates and HE institutions, which in turn should be responsible for equipping the undergraduates with not only the field knowledge, but also a range of soft skills as referred to in the current study (Asonitou, 2021).

Soft skills are identified profoundly with a vast number of terminologies that varies by country, as they growingly become a main indicator of the academic and the broader-life success. According to research, hard skills account for only 15% of an individual's success, whereas soft skills contribute significantly more, making up 85% of their overall success (Wats & Wats, 2009). Soft skills are referred to as life skills (UNESCO, 2015), non-cognitive skills (Heckman & Kautz, 2013), key skills, core skills, key competencies, essential skills, generic skills, transferable skills (Chamorro-Premuzic et. al, 2010), basic skills, people skills or employability skills, transdisciplinary goals, critical enabling skills (Osman et. al, 2012; Vera & Tejada, 2020), and durable skills (Hutson et. al, 2023).

Unlike hard skills that vary from job to job and are industry-specific (Cornali, 2018), soft skills, the must-haves in any workplace are propped up by human qualities and directly relate to intangible characteristics of someone's personality. They include, positive attitude, empathy or compassion, ability to communicate (Srivastava & Kuri, 2020), problem-solving abilities, collaboration and teamwork skills (Kolyada, Kravchenko, 2020), work ethic, creativity and leadership (Beard & Schwieger, 2008). Another classification for soft skills by Emsi (2021) identified 100 enduring skills that fall under 10 major competencies. These skills go beyond technical ability or disciplinary expertise and are expected to be highly valued in the future. The ten competencies are leadership,

character, collaboration, communication, creativity, critical thinking, metacognition, mindfulness, growth mindset, and fortitude.

According to Oxford Dictionary (Soft skills, 2023), soft skills are competencies that employees possess associated with activities such as customer handling, communication, problem-solving, and team-working within an environment of enthusiasm, punctuality, and a strong work ethic. Lately, a review of literature classified soft skills into two main categories that underlie 20 key components or sub-skills: personal and social. The personal involved; self-awareness, self-management, positive attitude, time management, critical thinking, decision-making and problem-solving, strategic thinking, lifelong learning, adaptability and flexibility, creativity, ethics and professionalism, and entrepreneurship skills, and the social comprises of leadership, communication skills, etiquette, negotiation skills, and cultural compatibility, teamwork skills, customer orientation and respect for clients, conflict management, and networking (Mohammed et. al, 2023). In the current study, it is note-worthy to mention that the surveys were created based on a list of the following ten soft skills: communication, conflict-management & negotiation, critical & analytical thinking, time-management, teamwork, self-evaluation, organizational (Chamorro-Premuzic et. al, 2010), information & data processing, digital communication & digital data creation (Bastos et. al, 2019).

Integrating Soft Skills within the Curriculum & its Challenges

Soft skills have gained a profound significance in education since various number of studies conveyed that, skills such as adaptation, motivation, self-determination and responsibility highly correlate with academic achievements and employment outcomes (Brunello & Schlotter, 2011; Deming, 2017). Besides, it has been reported that many employers have sought after them; therefore, undergraduates possessing these skills are more likely to be employed upon graduation (Teng et. al, 2019). These insights raise to the surface the essential role universities should play by creating courses that equip, train and assist undergraduates in developing their business skills for their future employability (Andrews & Higson, 2008).

Conventionally, HE institutions were dedicated to provide undergraduates with the technical skills that directly have to do with their major capabilities; however, due to the employers' recently announced demands, HE institutions rethought their aims to foster holistic personal growth by nurturing both technical and soft skills throughout the educational journey. If graduates are lacking soft skills, employers are left with a limited pool of valuable assets in their workforce; thus, HE institutions will have obviously become outspread away from its authentic mission. In short, the omission of soft skills from HE institutions' educational curricula has significant consequences, leading to detrimental outcomes in today's intensely competitive global job market (Dean & East, 2019). Due to that fact, through their instructional activities, HE institutions should sustain all-inclusive soft skills encompassing communication and interpersonal skills, team-working, critical thinking and problem-solving and personal development skills. These soft skills show obviously through the interplay between higher education and its surrounding environment that embraces factors such as economic growth, social equity, equality, and the enhancement of overall quality of life for populations amid the breakthrough of the digital context (Sá & Serpa, 2020).

According to a survey conducted by the Association of American Colleges and Universities, there existed a discrepancy between how HE institutions prepare undergraduates for their chosen careers and how employers perceive their readiness. The findings indicated that recent university graduates were deemed well-prepared in areas such as written and oral communication, innovation, complex problem-solving, critical thinking, analytic reasoning, and practical application of knowledge and skills in real-world settings by approximately 25% of the surveyed employers. However, the survey reveals that more than 60% of graduates rate themselves as well-prepared in these soft skills. These results emphasized the need for incorporating innovative and proactive methods of assessing and communicating graduates' achievements. Employers expressed the importance of understanding and evaluating soft skills, highlighting the necessity for HE institutions to align with what employers seek in their graduates (Kruger, 2015).

In another study conducted in US colleges to examine how the Humanities can contribute to the acquisition of durable skills and how these techniques can be incorporated into other areas of the curriculum to cater to the needs of employers and ensure the future success of college graduates. The findings show that there are contrasting views and expectations among students and faculty members regarding the development of durable skills. Overall, students indicated that coursework related to their majors and General Education helps in enhancing skills such as critical thinking and teamwork. In contrast, faculty members believe that extracurricular experiences like internships, volunteering, athletics, and student clubs are more effective in the development and consolidation of these skills (Hutson et. al, 2023).

Another study conducted in Russia to examine the effectiveness of a proposed system for digital monitoring the development of undergraduates' soft skills by applying interactive problem-based tasks and assessment criteria. Results conveyed that this system is a systematized tool that can be functional and productive for the teaching staff who wants to elevate and enhance the undergraduates' soft skills (Medvedeva et. al, 2022).

In a paper examining the importance of soft skills in the HE current and inevitable context, as well as their impact on the learning process, findings indicated that, apart from technical and scientific skills, soft skills play a crucial role in achieving success both professionally and personally. This realization demanded a significant redesign of teaching methods in the majority of HE institutions that involves key elements such as proficiency in digital technologies, fostering sustainability, and promoting intercultural understanding (Sá & Serpa, 2022).

On the other hand, the Malaysian ministry of HE has suggested three approaches to integrate soft skills within the curriculum; through formal teaching & learning activities, extra support programs, or campus-life activities, which is planned by the SAO (Osman et. al, 2012). A Malaysian study investigated the instructors' perceptions of soft skill development in HE, findings demonstrated that the instructors' beliefs and personal expectations affected their emphasis on the teaching and learning of soft skills. Therefore, there is a great role for the instructors in efficiently incorporating strategies that promote the undergraduates' abilities to acquire essential soft skills (Osman et. al, 2012).

Another study hosting a variety of focus groups from Thailand, United Kingdom and Vietnam, demonstrated that

to ensure embedding soft skills in the curricula, HE instructors have to target four questions while they are planning for their instructional activities. These questions should focus on the purpose of the activity & its significance, what soft skills each activity will develop, and what methods the graduate can apply accordingly in the workplace (Tang, 2019).

In Chilean HE, soft skills are infused into the curriculum as interpersonal attributes either through direct instruction or through a cross-curricular approach. In a study, conducted in HE institutions, findings indicate that although soft skills are imparted in the curriculum, undergraduates fail to prove proper acquisition since their instructors have not walked towards a paradigm shift in their teaching strategies dominating with 70% of the class talk with no evidence for active learning strategies. The study recommends that instructors in HE institutions should adopt in their teaching a variety of active learning strategies that will promote the undergraduates' soft skills advancement (Vera & Tejada, 2020).

An Australian study conducted in 2007 (cited in Osman, 2012) to investigate HE institutions' approaches in integrating soft skills; findings revealed that soft skills were integrated in the formal teaching and learning activities and they were efficiently assessed as part of the course outcomes. Another study conducted in Kosovo examined the undergraduates' perceptions of learning about the significance of soft skills for their education and future career since lately employers have desired these skills. Findings indicated that HE institutions should upgrade their curriculum by incorporating soft skills into it (Shehulokaj et. al, 2021).

According to a study, exploring soft skills integration in four public universities in Pakistan, results revealed a serious gap between their policies and instructional practices with respect to soft skills incorporation. The study recommended composing an interdisciplinary policy framework that would orchestrate the integration of soft skills efficiently (Manan et. al, 2021). Another study in Sri Lanka examined the undergraduates' level of soft skills and the factors that affect their acquisition. Findings conveyed that the occurrence of some factors ensure the undergraduates' acquisition of soft skills. These factors are mindfulness and personal preference, societal influence, instructional techniques and activities, observation and self-motivation, infrastructure and technology, and exposure to university experience (Ravindran & Cmyss, 2015).

In Lebanon, the researcher found only one study that investigates soft skills in HE. This study explored the acquisition of four soft skills; communication, critical thinking, lifelong learning and teamwork. Participants included senior students and new graduates from an NEASC accredited university. Findings revealed that the participants have acquired the examined soft skills with few gaps in sub-skills; this suggests a need for modifying the instructional strategies and incorporating active learning that will in turn contribute to attain the four examined soft skills completely (Awada, 2014).

A literature review study examined the barriers that impede the implementation of strategies oriented toward the development of undergraduates' soft skills. Findings classified the barriers into three types in light of their resources; organizational, contextual, and educational (of the teaching staff & the undergraduates). The reviewed barriers are summarized in the following: incompatibility with teachers' professional values and their attitudes,

undergraduates' attitudes, Teachers' low digital abilities & lack of resources, silo structures and bureaucracy, absence of pedagogy and teacher training, and cultural dimension (Asonitou, 2021). To alleviate or even surpass these challenges, HE institutions can turn to smart education wherein they optimize the instructors' role as a mediator, activate an interdisciplinary culture, and entail a shift of deploying new technologies in a student-centered educational context (Sá & Serpa, 2022).

To wrap up, soft skills can be seen as not only a valuable asset, but also as an essential aspect of one's personal growth and fulfillment, that occurs continuously as a lifelong challenging process (Coelho, & Martins, 2022). Although HE institutions are at the helm of contributing to their undergraduates' abilities to cope and excel in their workplace by equipping them with essential axiomatic career-related and durable skills, undergraduates themselves have to recognize the value of continuously learning and developing soft skills and to behave accordingly.

Method

This study adopted a mixed-method approach. It utilized quantitative and qualitative surveying to arrive at the findings, conclusions and recommendations.

Instrument

To answer the research questions, two surveys were developed by the researcher on Google Forms. Both were administered online via Google Forms, and their links were sent to USAL instructors and undergraduates respectively. The researcher developed these surveys making use of the work of Jardim et. al (2022), Hagen & Bouchard (2016) and Paisey & Paisey (2010) to indicate the soft skills list that will be investigated and each one's practices in the educational context. The instructors' survey consisted of five sections: the first section collected sociodemographic data about the participants; and four other sections indicating the percentage of undergraduates with various soft skills, rating the frequency of conducts promoting the undergraduates' soft skills, the significance of each soft skill for the undergraduates' future career and the encountered challenges. These four sections were rated on a 4-point Likert scale that vary in terms of the percentage, the importance, or the frequency of occurring. The undergraduates' survey consisted of four sections; the first one requesting sociodemographic characteristics while the other three sections, on a 4-point Likert scale, investigated the undergraduates' level of soft skills, USAL's contribution in promoting these skills, and the significance of the soft skills in the undergraduates' future career. The first version of either surveys was initially subjected to a critical expert review. Then, only the undergraduates' survey was piloted on a sample of 52 from other private universities. Reliability checks using the Cronbach alpha statistics were conducted for the internal consistency and was determined to be α =0.895 which is considered to be a very good indicator of internal reliability (Creswell, 2018). Consequently, the instructors' survey consisted of 41 items while the undergraduates' consisted of 49 items in total. On the other hand, qualitative data were collected from a focus group with the office of students' affairs (OSA) that is responsible for activating and supporting undergraduates' non-cognitive campus life; in addition to examining the content of the syllabi of various courses from different majors. The focus group consists of three main probing dimensions that investigate

the undergraduates' level of various soft skills, the SAO's role in developing undergraduates' soft skills, and the encountered challenges throughout the process. On the other side, it is noteworthy that the term "instructors" in this study stands for the teaching staff; the educators in charge of teaching the courses irrespective of their academic degree since some have master's degree while others have a doctoral one.

Participants

The surveys were originally administered to all USAL's 780 undergraduates registered for spring semester 2023 and 42 instructors actively teaching in the same semester. Eventually, 108 undergraduates and 23 instructors from 3 faculties completed the surveys. Additionally, SAO members, who are in charge of undergraduates' campus life and planning, implementing and assessing activities, were interviewed.

Data Analysis

Quantitative data were analyzed using SPSS 26.0 for windows. Descriptive statistics were used to describe and summarize the properties of the mass of data collected from the respondents. Means scores, standard deviations and percentages were calculated per each item of the survey instrument. On the other hand, qualitative data were examined and analyzed after grouping the ideas and categorizing them together.

Results and Discussion

Quantitative Results

Demographic information regarding the instructors is given in Table 1.

Instructors' Su	ırvey			
	Variable	Frequency	Percentage	Total
Gender	Male	7	30.4	
	Female	16	69.6	
Teaching	Tenure-track	3	87%	
Status	Part-timer	20	13%	
Taught	Education	14	60.9%	
Courses	Computer Sciences	1	4.3%	22
	Media	2	8.7%	23
	Business	3	13%	
	General Requirements	3	13%	
Taught	1-2 semesters	7	30.4%	
Semesters	3-4 semesters	3	13%	
	≥5 semesters	13	56.5%	

Table 1. Sociodemographic Characteristics of Participating Instructors

Demographic information regarding the students is given in Table 2.

Undergraduat	tes' Survey			
Variable		Frequency	Percentage	Total
Gender	Male	31	28.7%	
	Female	77	71.3%	
Learning	Full-time	52	48.1%	
Status	Working	56	51.9%	
Major	Education	63	58.3%	
	Computer Sciences	18	16.7%	109
	Media	12	11.1%	108
	Business	15	13.9%	
Achieved	< 25%	40	37%	
Credits	25%-50%	24	22.2%	
	51%-75%	13	12%	
	>75%	31	28.7%	

Table 2. Sociodemographic Characteristics of Participating Undergraduates

In Table 3, participating undergraduates have revealed that they have a satisfactory level of soft skills. They have also demonstrated a satisfactory role by USAL in developing their soft skills. However, the undergraduates seem to be aware of the importance of soft skills for their future careers. To demonstrate the ranking of various soft skills from the undergraduates' perspectives, results revealed *communication* as the highest rated skill with (M=2.89) while *digital content creation* ranked the lowest skill with (M=2.25). This result brings forward the necessity for combining all soft skills in the learning process in order to help the undergraduates become more effective (Bastos et. al, 2019).

Table 3. Results per Dimension addressed in the Undergraduates' Survey

Dimensions in Undergraduates' Survey		Standard Deviation	Minimum	Maximum
Undergraduates' soft skills level	2.563	.566	1.20	4
USAL's role in developing undergraduates' soft		.530	1	3.86
skills				
Instructors' role in developing undergraduates'	2.856	.534	1	4
soft skills				
SAO's role in developing undergraduates' soft	2.625	.675	1	4
skills				
Soft skills significance on undergraduates'	3.109	.697	1	4
future career				

In-depth examination for the instructors' rating of their undergraduates' soft skills acquisition, conveys that *digital* content creation, organizational, conflict management & negotiation, critical & analytical thinking, self-

evaluation, time-management, and information & data processing skills ranked the lowest among all other soft skills; thus, this means that 75- 55% of USAL's undergraduates have a seriously poor level of the aforementioned soft skills. This undoubtedly aligns with the results of a study conducted on undergraduates in Sweden (Aghaee & Karunaratne, 2023) where 50% of the examinees expressed a lack of soft skills in their curricula.

Dimensions in instructors' survey	Mean	Standard Deviation	Minimum	Maximum
Undergraduates' soft skills level	2.256	.590	1.20	3.50
Instructors' role in developing the undergraduates' soft skills	2.939	.315	2.30	3.50
Soft skills significance on undergraduates' future career	3.652	.458	2.20	4
Encountered challenges of developing undergraduates' soft skills	2.921	.585	1	3.43

Table 4. Results per Dimension addressed in the Instructors' Survey

The instructors have rated the undergraduates' soft skills as satisfactory; a result, which complies with the one, indicated by the undergraduates themselves in Table 3. In addition, the instructors have rated their role in developing the undergraduates' soft skills with "good" which is similar to the results expressed by the undergraduates in Table 3 for the same dimension. Similarly, the instructors have rated the significance of soft skills on undergraduates' future career with highly important while it was just important from the undergraduates' perspectives. However, instructors have usually encountered challenges in their attempts to develop the undergraduates' soft skills. There is a statistically significant effect of the instructors' status of work on the importance of soft skills on the undergraduates' future career (p-value=0.002 < 0.05) with M = 2.933 & 3.760 for tenure-track and part-time instructors respectively. Additionally, there is a statistically significant effect of the undergraduates' soft skills (p-value=0.000 < 0.05) with M = 2.973 & 1.794 for the males and females respectively.

Table 5. Comparison of Means- ANOVA

Variables in instructors' survey	Sum of Squares	df	Mean Square	F	Sig.
Instructors' status of work and the importance of soft skills on the undergraduates' future career	1.783	1	1.783	13.207	.002
Instructors' gender and the challenges they encounter when developing the undergraduates' soft skills	3.761	1	3.761	20.878	.000

Qualitative Results

Students' Affairs Office Focus Group

Findings of SAO focus group conveyed that undergraduates in all three majors at USAL have demonstrated unsatisfactory to average soft skills. They lack proper oral and written communication skills; such as, lack of

adequate formal etiquette when addressing an SAO member at office or when communicating an issue or a concern as financial aids or graduation procedure by email. They are poor at expressing their ideas systematically and in an organized manner; thus, they sound childishly distracted, unaware of prevalent basic regulations at USAL, tongue-tied, or uncivil and discourteous. In addition, on days of mid-term or final tests, more than 50% of undergraduates ask SAO's help to guide them locate their seating in the hall room. On the other hand, SAO reported that undergraduates lack digital basics of downloading data and accessing their emails and server intelligent storage (SIS). Although SAO frequently organizes activities, workshops, and seminars in various keytopics pertinent to efficiently develop the undergraduates' soft skills, unfortunately, only few undergraduates join and participate.

Against this status quo, SAO has subsequently revealed its role in developing the undergraduates' soft skills. SAO disregarded any responsibility for any other personnel and affirmed its exclusive responsibility for developing the undergraduates' soft skills; thus, denying the impact of the instructor or the instructional techniques on promoting undergraduates' soft skills.

As a preliminary step, SAO shares a questionnaire with all undergraduates to indicate their training or orientation needs and interests. Collected data will be processed, and a comprehensive two-semester plan with a precise timeline is created. As SAO starts implementing its plan, a variety of clubs, training workshops and seminars is announced publicly. Here is an overview of student campus life encounters: an instructional training series on Microsoft office features and access, seminars on problem-solving, decision-making, public speaking and presentation skills, creating CVs, e-portfolios and cover letters, acing employment interviews, building relationships, managing stress and anxiety, teamwork and communication (physical & virtual), financial literacy and household budgeting, and creative thinking skills. Conjointly, other activities are held such as, public speaking and various sport, computer and community clubs. Inconveniently, all seminars and training workshops are neither archived at USAL's system, nor evaluated by the participants and to add insult to injury, SAO has not collected any data about their impact on undergraduates' well- being, their academic achievements, or even social communication capabilities. Inversely, all competitions have been recently administered against properly designed rubrics that have a set of adequate criteria in which a committee of not less than three senior members will gather to examine the undergraduates' performance for feedback and final evaluation.

SAO has been encountering a group of obstacles that has verily impeded its progress throughout the path. The reported barriers are classified into two groups; one has to do with the undergraduates themselves while the other results from USAL's policy makers' mismanagement. To delve into details, due to the absence of strategic planning, SAO personnel have been confused with each one's role; allocation of roles has been a blurred process that has led to jeopardizing the tremendous efforts that this office is doing. Frequently, many similar duties have been repeatedly planned for from each one of the three members working in the SAO. To add up, there is a lack of coordination between SAO and other academic departments; this leads to an urgent call for collaboration to avoid unnecessary multiplied exerted efforts. On the other hand, due to the financial crises that have been consuming the Lebanese people since 2019 and have aggravated severely, training experts, coaches and mentors,

who can deliver a seminar or a workshop to undergraduates, cannot do that voluntarily and without being paid. Eventually, USAL policy makers should amplify the assigned budget giving way to engage undergraduates with more oriented and efficient activities that will visibly reflect on their soft skills acquisition and resonate with the ultimate purpose soft skills training which can be summarized by enhancing the undergraduates' readiness for their career success (Pramudia et. al, 2018). Moreover, the second source of challenges is the undergraduates themselves. SAO reported that undergraduates are unaware of the significance of acquiring non-cognitive skills on their future employability, workflow and progression; therefore, activities that foster soft skills attract very few participants and attendees.

Syllabi Examination

A set of various syllabi was examined in-depth to uncover whether soft skills are incorporated. The inspected syllabi belonged to the study programs of the faculty of education are psychology of development, theories of learning, instructional procedures, practicum, action research, graduation project, methods of teaching Arabic and English Language skills, psychology of play, introduction to early childhood, children literature, measurement and evaluation and psychomotor education. Commonly, all of these courses have indicated soft skills in its outcomes under the name "transversal skills" as mentioned earlier in the *problem context*, yet not necessarily in their course plans. In addition, 70% of the investigated course plans revealed that 10% of each of these courses relies on an assigned performance task that incorporates teamwork, digital literacy basics, written communication skills and time management.

On the other hand, the other 20% of the examined course plans conveyed the incorporation of communication, critical & analytical thinking, self-evaluation and information & data processing. Other courses such as technology and statistics automatically require the development of digital communication & digital data creation in addition to information & data processing. The project course, assigned for senior students just before graduation, requires the integration of all the investigated soft skills. To build necessary soft skills, a variety of pedagogical models can be applied; such as Game-based learning where skills are put into action (Merilainen et al., 2020 & Garcia et al., 2020) and case-based instruction which incorporates communication, collaboration and leadership (Lyons & Bandura, 2020).

In light of the quantitative and qualitative results, USAL undergraduates have satisfactory encounter with soft skills. Bearing in mind the SAO's, their instructors' and their own perspectives, their level of soft skills is average; thus, the evidence-based satisfactory encounter should become more prevalent among the undergraduates proliferating the involvement of soft skills in all required courses throughout the bachelor-degree journey. This resonates with most reviewed research that have focused on HE institutions' necessity to prioritize integrating soft skills in their entire study programs and be ardently aware of examining the integration's impact on the undergraduates' academic achievement and employability rates (Andrews & Higson, 2008; Osman et. al, 2012; Vera & Tejada, 2020; & Shehulokaj et. al, 2021). Furthermore, results align with the role of HE institutions to respond to their undergraduates' needs to be instructed theoretically and conceptually, and to be trained practically to become equipped with the vital experimentally transferrable skills through a variety of approaches that

embraces experiential education (Caggiano & Costa, 2023)

The results in Table 5 could be justified due to the part-timers' extensive experience in various higher education institutions where they have witnessed the value of soft skills in professionally promoting someone; and thus, have realized that the combination of communication, team-management, negotiation, and problem-solving skills is highly essential for employability and career advancement. In addition, usually part-timers teach courses with small enrollment rates; thus, giving way for more opportunities to tackle various topics imparting soft skills. Undoubtedly, this will enable the undergraduates navigate work intricacies more smoothly and less complicated (Bills & Hodson, 2007). Additionally, in light of gender significance, findings resonate with studies that found out that women score higher than men on key leadership capabilities such as inspiring and motivating others (Zenger & Folkman, 2019), emotional intelligence and empathy (Loffler & Greitemyer, 2023), collaboration and fostering team dynamics (Eagly et. al, 2003).

In the case of the low undergraduates' attendance rates of activities, as a solution SAO had arranged to disseminate a certificate of attendance for those who really attend. Although this procedure was implemented, the attendance rates have not really soared or even increased since the main challenge here lies in the undergraduates' mindset and their callowness; thus, resulting in a dire need of educating them the moment they join the university with every single course they are offered. This literally aligns with the research that spotlighted the paradigm shift in HE institutions policy towards the role of the instructors, the need for student-centered classes and interdisciplinary culture allowing the undergraduates to rationalize his mindset and thus connect concepts across various disciplines (Sá & Serpa, 2022).

Concerning the instructors' perspectives of their role in developing the undergraduates' soft skills, findings show that they often do pertinent conducts and practices that ensure this role; however, this does not justify the reported average level of undergraduates' soft skills declared by the instructors, SAO and the undergraduates themselves. This requires a closer look on how the instructors not only plan for the course, but also deliver it. This aspect of the study closely correlates with the findings of a study conducted in the United Kingdom; it demonstrates that embedding soft skills in the course design does not ensure the undergraduates' acquisition of these skills, yet examining both the design and the delivery does (Tang, 2019).

Undoubtedly, teaching and learning process requires assessment, so HE institutions measure undergraduates' learning and the effectiveness their teaching; however, the findings indicated no evidence for assessing USAL undergraduates' soft skills neither through instructed courses nor via SAO's various activities. This sets forth that assessing undergraduates' acquisition of soft skills could increase their awareness of these skills; and thus, accelerating their vitality for students' development. Assessing could be approached through the 21st century strategy of active learning; hence, engaging the undergraduates with real-life problem or inquiry-based project in which they have to reach a solution by incorporating all soft skills into practice. Along the process, undergraduates will extend their personal comfort zoned and tie their experiences to leadership behaviors (Boyd & Williams, 2010). This affirms with the findings of Awada (2014) as she mentions that active learning approach is a stepping-stone in HE curricula to teach and assess major soft skills.

Recommendations

USAL's policy makers should set an intelligible job description for SAO personnel that unequivocally sets forth each employee's scope, duties, mandates, and work conditions. This will certainly contribute to the SAO's harmonious and coordinated work in which bootless errand will have no place and the SAO personnel's efforts will process in unison and thus complement each other. Consequently, SAO will be more effective in terms of planning and implementing inspirational activities, fostering undergraduates' campus life and certainly nourishing their soft skills.

USAL should undoubtedly launch a new approach in avoiding overburdening its undergraduates with theoretical courses and incorporating soft skills into their study programs. This will in turn open new horizons and unequivocally motivate them to make individual and group efforts to improve their soft skills by either engaging in training workshops or relevant seminars and activities, or by turning to appropriate self-involved readings.

On the wider scope and as a closer look, USAL and other similar HE institutions, which have scant evidence of prioritizing and optimizing soft skills in their study programs, should try a subtle approach of constructive communication with various industries to be ultimately knowledgeable and updated with the latest key skills that emerge spontaneously or due to changing life demands. This essential openness will certainly lead to a curriculum reform in line with the tangible shared needs of various industries. This corroborates the insights of one of the studies that urged the need for rethinking about which coursework exactly promotes the development of undergraduates' soft skills. It concluded that HE institutions have to classify soft skills and examine how each can be incorporated into the curriculum with a close attention to various types of courses being instructed regardless of the major (Hutson et. al, 2023). Accordingly, HE institutions can process more precisely to identify where exactly each soft skill can be best promoted throughout the entire journey of the undergraduates in pursuit of their academic degree.

On a similar line of reasoning, the reform should apply on all aspects of the curricula embracing not only the instructional procedures, but also the assessment phase of each course no matter whether it is testing or any other technique. In light of this recommendation, the researcher suggests conducting a longitudinal study in which undergraduates' soft skills are investigated frequently throughout the sophomore, the junior and the senior years with a close examination of the implemented curricula. Nevertheless, USAL has to prioritize reconsidering the syllabi's content of all taught courses to inspect closely their outcomes, course plan and assigned performance tasks in a search for their compatibility with the essential skills that have been globally endorsed for their employability prospects.

In sight of further studies, the current study has relied on surveys, SAO focus group, and syllabi examination, yet class observation could have made an excellent tool to collect data about teaching and learning practices. The researcher recommends in-depth studies, which rely on observing teaching sessions to examine intricate details that might implicate suggestions for incorporating a professional development program to enhance the instructors' teaching skills with respect to efficiently delivering soft skills. This confirms the results of an Italian/Portuguese

study in which HE instructors were involved in a professional development that targeted their soft skills and hence making a fundamental difference in their teaching that enabled them to successfully manage the demands of their classes (Ragusa et. al, 2022). Furthermore, another study can assign a variety of instructors' focus groups to rethink their role and discuss in-depth how to smoothly and proficiently deliver soft skills and ensure transferring them to the undergraduates to enhance their employability in the workforce.

Conclusion

Undergraduates, enrolled in HE institutions, have a wide array of opportunities to attain soft skills theoretically and practically; through curricular, co-curricular and extracurricular activities. However, HE institutions play a significant role in laying the ground for developing soft skills; thus, identifying them, how and where exactly they could be developed, the focus skill(s) for each academic year or each semester, the instructors' role in the process, and the SAO's share throughout the journey. Soft skills choice throughout the academic years should vary in regard with the study year of the undergraduates. Sophomore undergraduates, who are post-secondary students, demand an exposure that differs from that of senior students. Consequently, the study program, regardless of the study field, should discern the needs and prescribe pertinent soft skills in major or minor courses, electives or general courses; in addition, to what co-curricular or extracurricular encounters entail and afford.

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References

- Aghaee, N., & Karunaratne, T. (2023). Soft skills demand and supply through the lens of Higher Education Students. *European Conference on E-Learning*, 22(1), 1–10. https://doi.org/10.34190/ecel.22.1.1639
- Andrews, J. & Higson, H. (2008). Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study. *Higher Education in Europe*, 33(4), 411-422. http://dx.doi10.1080/03797720802522627
- Asonitou, S. (2021). Impediments and pressures to incorporate soft skills in higher education accounting studies. *Accounting Education*, *31*(3), 243-272. https://dx.doi.org/10.1080/09639284.2021.1960871
- Awada, F. (2014). Assessment and evaluation of university students' soft skills: An active learning alternative [Unpublished Master's thesis]. Lebanese American University.
- Bastos, S., De Oliveira, H., Manuel Silva, M., & Azevedo, L. (2019). Soft-Digital Skills in Higher Education Curricula. Proceedings of the European Conference on E-Learning (ECEL), 70–77. https://doiorg.ezproxy.lau.edu.lb:2443/10.34190/EEL.19.037
- Beard, D., & Schwieger, D. (2008). Integrating soft skills assessment through university, college, and programmatic efforts at an AACSB accredited institution. *Journal of Information Systems Education*, 19(2), 229-240.

- Bills, D. B., & Hodson, R. (2007). Worker training: A review, critique, and extension. *Research in Social Stratification and Mobility*, 25(4), 258–272. https://doi.org/10.1016/J.RSSM.2007.08.005
- Boyd, B. L., & Williams, J. (2010). Developing life-long learners through personal growth projects. *Journal of Leadership Education*, 9(2), 144-150.
- Brunello, G. & Schlotter, M. (2011). Non-cognitive skills and personality traits: Labor market relevance and their development in education & training systems. IZA Discussion [Paper No. 5743]. http://dx.doi.org/10.2139/ssrn.1858066
- Caggiano, V., & Costa, C. (2023). Focus on Education. Entrepreneurship, soft skills and the ancient world. *Studi* Sulla Formazione/Open Journal of Education, 26(1), 133–141. https://doi.org/10.36253/ssf-14298
- Chamorro-Premuzic, T., Arteche, A., Bremner, A. J., Greven, C., & Furnham, A. (2010). Soft skills in higher education: Importance and improvement ratings as a function of individual differences and academic performance. *Educational Psychology*, 30(2), 221-241. https://doi.org/10.1080/01443410903560278
- Coelho, M. J., & Martins, H. (2022). The future of soft skills development: a systematic review of the literature of the digital training practices for soft skills. *Journal of E-Learning & Knowledge Society*, 18(2), 78– 85. https://doi-org.ezproxy.lau.edu.lb:2443/10.20368/1971-8829/1135576
- Cornali, F. (2018). Proceedings of the 4th International Conference on Higher Education Advances (HEAd'18). Universitat Politecnica de Valencia. http://dx.doi.org/10.4995/HEAd18.2018.8127
- Creswell, J. W., & Creswell, J. D. (2018). Research design (5th ed.). SAGE Publications.
- Dean, S.A. & East, J.I. (2019). Soft skills needed for the 21st-century workforce. *International Journal of Applied Management and Technology*, 18(1), 17-31. https://doi.org/10.5590/IJAMT.2019.18.1.02
- Deming, D. J. (2017). The value of soft skills in the labor market. *National Bureau of Economic Research (NBER)*, 4, 7-11. https://www.econstor.eu/bitstream/10419/178757/1/2017-no4-2.pdf.
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569–591. https://doi.org/10.1037/0033-2909.129.4.569
- Ehlers, U.D. & Kellermann, S.A. (2019). *Future Skills: The future of learning and higher education*. Karlsruhe. Retrieved March 3, 2024 from https://www.learntechlib.org/p/208249/.
- Emsi (2021). The high demand for durable skills. *America Succeeds*. https://americasucceeds.org/wp-content/uploads/2021/04/AmericaSucceeds-DurableSkills-NationalFactSheet-2021.pdf
- Garcia, I., Pacheco, C., Méndez, F., & Calvo-Manzano, J. A. (2020). The effects of game-based learning in the acquisition of "soft skills" on undergraduate software engineering courses: A systematic literature review. *Computer Applications in Engineering Education*, 28(5), 1327–1354. https://doi.org/10.1002/cae.22304
- Hagen, M., & Bouchard, D. (2016). Developing and improving student non-technical skills in IT education: A literature review and model. *Informatics*, 3(2), 7-30. https://doi.org/10.3390/informatics3020007
- Hanapi, Z., & Nordin, M. S. (2014). Unemployment among Malaysia graduates: Graduates' attributes, lecturers' competency and quality of education. *Proceedia Social and Behavioral Sciences*, 112, 1056–1063. https://doi.org/10.1016/j.sbspro.2014.01.1269
- Heckman, J. J. & Kautz, T. (2013). Fostering and measuring skills: Interventions that improve character and cognition. NBER Working Paper No. 19656. https://www.nber.org/papers/w19656

- Hutson, J., Valenzuela, M., Hosto-Marti, B., & Wright, S. (2023). The role of Higher Education in developing durable skills: Reframing general education. *Journal of Higher Education Theory and Practice*, 23(3), 1-12. https://doi.org/10.33423/jhetp.v23i3.5836
- Jardim, J., Pereira, A., Vagos, P., Direito, I., & Galinha, S. (2022). The soft skills inventory: Developmental procedures and psychometric analysis. *Psychological Reports*, *125*(1), 620–648. https://doi.org/10.1177/0033294120979933
- Kolyada, & Kravchenko. (2020). Practical experience of "soft-skills" formation in the conditions of an institution of higher education. *Humanities Science Current Issues*, *3*(27), 137–145. https://doi.org/10.24919/2308-4863.3/27.203686
- Kruger, K. (2015). US universities should follow UK in promoting students' "soft skills". In Times Higher Education (THE). https://www.timeshighereducation.com/comment/opinion/us-universities-shouldfollow-uk-in-promoting-students-soft-skills/2019081.article
- Loffler, C.S., Greitemeyer, T. (2023). Are women the more empathetic gender? The effects of gender role expectations. *Current Psychology*. *42*, 220–231. https://doi.org/10.1007/s12144-020-01260-8
- Lyons, P., & Bandura, R. P. (2020). Skills needs, integrative pedagogy and case-based instruction. Journal of Workplace Learning, 1–15. https://doi.org/10.1108/JWL-12-2019-0140
- Manan, S.A., David, M.K. & Haidar, S. (2021). Soft skills, policies, practices, and self-assessment: Employability challenges and opportunities of university graduates in Pakistan. *Journal of Educational Sciences & Research*, 8(1), 117-140.
- Merilainen, M., Rikka, A., Kultima, A., & Stenros, J. (2020). Game Jams for Learning and Teaching: International Journal of Game-Based Learning, 10(2), 54–71. https://doi.org/10.4018/IJGBL.2020040104
- Medvedeva, O.D.; Rubtsova, A.V.; Vilkova, A.V.; Ischenko, V.V. (2022). Digital monitoring of students' soft skills development as an interactive method of foreign language learning. *Education Sciences*, 12(8), 506. https://doi.org/10.3390/educsci12080506
- Mohammed, Z. J., Alsadaji, A.J., Al-Saadi S. F. & Al-Fayyadh S. (2023). Components of soft skills for university students in the 21st century: An overview of literature review. *Medical Education Bulletin*, 4(1), 603-611. https://doi.org/10.22034/MEB.2023.389121.1076
- Osman, W.U., Girardi, A., & Paull, M. (2012). Educator perceptions of soft skill development: An examination within the Malaysian public Higher Education sector. *The International Journal of Learning, 18*(10), 49-62. https://researchportal.murdoch.edu.au/esploro/outputs/991005544297907891
- Paisey, C., & Paisey, N. (2010). Developing skills via work placements in accounting: Student and employer views. Accounting Forum, 34(2), 89 – 108. https://doi.org/10.1016/j.accfor.2009.06.001
- Pramudia, J. R., Ardiwinata, J. S., Sudiapermana, E., & Hilmi, M. I. (2018). The Soft Skill Training to Improve the Readiness of Alumni in Entering the Working World. *Proceedings of the International Conference* on Educational Sciences, 214, 108–110. https://doi.org/10.2991/ices-18.2019.26
- Ragusa, A.; Caggiano, V.; Trigueros Ramos, R.; González-Bernal, J.J.; Gentil-Gutiérrez, A.; Bastos, S.A.M.C.; González-Santos, J.; Santamaría-Peláez, M. (2022). High education and university teaching and learning processes: Soft skills. *International Journal of Environmental Research and Public Health*, 19(17), 10699. https://doi.org/10.3390/ijerph191710699

- Ravindran, K. & Cmyss, B. (2015). Factors affecting acquisition of soft skills and the level of soft skills among university undergraduates (with special reference to management students of Rajarata University of Sri Lanka). *International Research Symposium of Rajarata University of Sri Lanka*. 538-545 http://repository.rjt.ac.lk/bitstream/handle/123456789/740/538-545.pdf?sequence=1
- Sá, M. J., & Serpa S. (2020). Cultural dimension in internationalization of the curriculum in Higher Education. *Education Sciences*, 10(12), 1-11. https://doi.org/10.3390/educsci10120375
- Sá, M. J., & Serpa S. (2022). Higher Education as a promoter of soft skills in a sustainable society 5.0. Journal of Curriculum and Teaching, 11(4), 1-12. https://doi.org/10.5430/jct.v11n4p1
- Schislyaeva, E. R., & Saychenko, O. A. (2022). Labor market soft skills in the context of digitalization of the economy. *Social Sciences*, 11(3), Article 3. https://doi.org/10.3390/socsci11030091
- Shehulokaj, A., Miftari, V., & Hajdari, V. (2021). Leading students towards a new soft-skills perspective: Development for employment. *Journal of Education Culture and Society*, 12(1), 283–296. https://doi.org/10.15503/jecs2021.1.283.296
- Smaldone, F., Ippolito, A., Lagger, J., & Pellicano, M. (2022). Employability skills: Profiling data scientists in the digital labour market. European Management Journal, 40(5), 671–684. https://doi.org/10.1016/j.emj.2022.05.005
- Srivastava, N., & Kuri, M. (2020). Soft skills: An integral part of technical education. Advances in InformationCommunication Technology and Computing, 189–193. https://doi.org/10.1007/978-981-15-5421-6_19Softskills.(2023).InOxfordDictionary.
 - https://www.oxfordreference.com/display/10.1093/oi/authority.20110803100516309;jsessionid=9BD1 0D2D2D68D27ED6FD16A73120C79E
- Tang, K.N. (2019). Beyond Employability: Embedding soft skills in Higher Education. The Turkish Online Journal of Educational Technology (TOJET), 18(2), 1-9. https://files.eric.ed.gov/fulltext/EJ1211098.pdf
- Teng, W., Ma, C., Pahlevansharif, S. and Turner, J.J. (2019). Graduate readiness for the employment market of the 4th industrial revolution: The development of soft employability skills. *Education + Training*, 61(5), 590-604. https://doi.org/10.1108/ET-07-2018-0154
- United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015) Skills & Employability Asia Pacific Skills & Employability Network Ilo Regional Office for Asia and the Pacific. EFA Goal 3: Life Skills and Lifelong Learning (Asia-Pacific End of Decade Notes on Education for All) - Skills and Employability Network. (n.d.). https://apskills.ilo.org/resources/efa-goal-3-life-skills-and-lifelonglearning-asia-pacific-end-of-decade-notes-on-education-for-all
- Vera, F., & Tejada, E. (2020). Developing soft skills in undergraduate students: A case at a Chilean private university. *Transformar Electronic Journal*, 1(1), 57–67. https://revistatransformar.cl/index.php/transformar/article/view/12
- Vykhliaiev, Y., Bannikova, K., Bazyl, O., Voichenko, O. & Trinko, O. (2022). On the Formation of "Soft Skills" as the equivalent of professional competencies: A forecast of educational trends. *Journal of Higher Education Theory and Practice*, 22(18). https://doi.org/10.33423/jhetp.v22i18.5696
- Wats, R. K., & Wats, M. (2009). Developing soft skills in students. *The International Journal of Learning: Annual Review*, 15(12), 1–10. doi:10.18848/1447-9494/cgp/v15i12/46032
- Zenger, J. & Folkman, J. (2019). Research: Women Score Higher Than Men in Most Leadership Skills. Harvard

Business Review. https://hbr.org/2019/06/research-women-score-higher-than-men-in-most-leadership-skills

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