CASE OF KOSOVO

Skill Development for the Digital Economy: The Case of Kosovo

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I. Introductory Overview

Since the turn of the millennium, policymakers around the globe have emphasized the need to prepare workers for the challenges awaiting them in an increasingly digitized world. In both “developed” and “developing” states, these officials charge that citizens must be equipped with a set of core competencies that will ensure that they will not be left behind in the rapidly evolving economy. Practically speaking, proposals for digital skill-building have centered on data literacy, grounded in the notion that all individuals must be able to interpret statistics in order to participate in “knowledge-based” professions (World Economic Forum 2016). This baseline proficiency, experts argue, will be useful as job prerequisites change as a result of coming technological disruptions.

At the same time, there has also been a push to promote “softer” skills like critical thinking and interpersonal communication, performing functions that are not easily filled by automated programs (UNCTAD 2019). These attributes, which highlight the importance of creativity, are cited as crucial when thinking of how workers will adapt to trends within the modern workplace. Ultimately, the combination of these abilities will enable individuals to rise to the top of a competitive labor market, demonstrating to potential employers that they can use digital tools in an inspired fashion (OECD 2019). Possessing this set of attributes may not only expand economic opportunity but may also enhance social satisfaction. Though the debate is ongoing, it is clear that politicians around the globe acknowledge that tech-focused education will shape the future of human capital development.

Among countries on the periphery of the global system, investing in this type of programming is crucial if their citizens are to reap the benefits of the data-driven international economy. Kosovo, a former Yugoslav republic situated in Southeastern Europe, is one such country that believes digital upskilling can offer its younger citizens a pathway to career advancement. This has prompted prominent stakeholders to turn their attention towards closing the “skills gap”, acknowledging that local companies believe recent graduates lack the prerequisite competencies needed to address

industry demands (Open Data Kosovo 2020; Shahini 2017). Specifically, they have observed that firms have devoted considerable resources towards on-the-job training, incurring additional costs that may constrain their market growth.

Educational reform is touted as a sensible solution to this complex problem, as area experts note that public universities have had success providing students with strong academic foundations (Berisha and Ilazi 2013). Yet few of these programs have made an effort to incorporate “hands-on” learning into their general curricula, further emphasizing how this oversight is stunting industry expansion. Policymakers have noted that these concerns, insufficient professional training and inadequate educational programs, have complicated efforts to unlock the potential of a digitally literate population (GAP Institute 2017). Building a workforce that possesses “cross-sectoral” skills, ranging from data analysis to leadership ability, will be needed if the country is able to surpass its rivals in the international marketplace. Ultimately, time will tell whether Kosovo’s current strategy will allow its citizens to fully seize the countless opportunities provided by technological change.

II. Research Question

Though these skills have been prioritized by policymakers around the world, there is minimal consensus on which specific intangibles are “most useful” for dealing with the unforeseen challenges of the future economy. In spite of these disagreements, however, one model has been touted by educators and economists alike for its ability to prepare modern learners for innovation-driven industries. The Partnership for 21st Century Learning (P21), a public-private collaboration of American-based firms originally launched in 2002, has created a pedagogical framework that aims to provide younger generations with transferable skills demanded from the evolving job market (Battelle for Kids 2019).

It focuses on three areas for student development: life, learning, and literacy skills. The first category highlights traits like adaptability and accountability, underscoring the degree of emotional

intelligence expected by potential employers. The second grouping emphasizes abilities from critical thinking to analytical reasoning, believing that these competencies are useful for solving problems in demanding environments. The third and final component is interested in individuals' capacity to leverage emergent technology, built on the assumption that digital "fluency" will be needed for the knowledge economy. Proponents of the P21 program believe that its approach will allow students to transition across job tracks, building on a set of competencies that will enable them to achieve their career ambitions (Hilton 2015; Voogt and Roblin 2012). By identifying attributes that reflect the expectations of corporate leaders, the initiative and its advocates maintain that students will be ready for the "real life" issues they will face upon entering the labor pool.

A. Project Motivation

For states like Kosovo, preparing their workforce for the challenges of the digital age is borne out of economic necessity. Policymakers, regardless of their ideological leanings, believe that a "tech-centric" education will allow the state to secure its niche within the competitive global marketplace. However, without pinpointing which skills will allow their citizens to advance in their careers, experts believe that the economic productivity of their young population will be negatively affected (American Chamber of Commerce in Kosovo 2020). Ignoring the frequent calls for curricular reform stunts the educational development of Kosovar students, leaving future graduates ill-equipped to handle workplace realities. To address this shortcoming, educational initiatives primarily led by actors in the private sector have been created, sponsoring trainings that address the perceived deficiencies of pedagogical instruction at the university level (Zogaj Gashi et al. 2020). Despite these isolated efforts, foreign benefactors remain the largest supporter of skill-building programs, raising concerns that the domestic market will be unable to produce qualified professionals with specialized skill sets. Looking to the future, greater collaboration will be needed between government actors and corporate interests to prepare for future economic

shocks, as the current misalignment in strategic priorities between these influential groups undermines workforce adaptiveness (Serhati 2017). Though there is political awareness regarding this pressing issue, clearly identifying the ways in which societal stakeholders can support the skill development of Kosovar workers will be crucial for the country's long-term economic prospects.

B. Question Statement

For young professionals, particularly recent graduates, working within tech-related industries in Kosovo, which modern skills are most important to achieve their long-term career ambitions?

III. Guiding Hypotheses

Upon reviewing publications released by actors in the technology sector, it is clear that major stakeholders in Kosovo have divergent opinions on the crucial abilities needed for citizens' workplace success. From this preliminary research, the author noted three major themes that may provide valuable insight into the core proficiencies that may ultimately enable the professional class to unlock their individual potential:

A. Literacy skills are most central to an individual's professional development, as learning how to adapt to trends in technology will enable them to distinguish themselves from peers in the workplace. Possessing a detailed understanding of digital tools may also raise their professional profile in the eyes of foreign companies, many of whom look to the Balkan state for outsourcing support. Ultimately, maintaining these proficiencies may push them to recognize Kosovo's potential to be a player in the global service economy.

B. Life skills are most crucial for career advancement, underscoring that an ability to adapt to changes will help the individual regardless of their vocational track. Focusing on the "soft skills" will prepare them to build a more robust professional network, with the added bonus of increasing their active engagement within their professional communities. Critically, displaying initiative and leadership may embolden these citizens to reflect on how they can contribute to raising their country's standing in the international arena.

C. Learning skills are most important for individual growth, particularly the capacity to imagine creative solutions to complex problems. In many respects, these skills have pushed individuals to think seriously about their career trajectories, leading them to become entrepreneurs in their own right. Yet when thinking about macro-level considerations, these persons are drawn to the notion that this sector could be an engine for economic expansion in Kosovo.

IV. Analytical Framework

For the purposes of answering this question, the author used a conceptual map to organize initial research findings. This analytical grid featured the primary skill areas that are commonly cited by individuals in the technology sector. Using the categories found in the P21 model, the author listed three specific domains that capture the diverse skill competencies sought by general Kosovar professionals in the following columns:

- **Life Skills:** These attributes include flexibility, initiative, productivity, accountability, and cross-cultural awareness.
- **Learning Skills:** These attributes creativity, communication, collaboration, critical thinking, and problem-solving.

- **Literacy Skills:** These attributes include media, information, and ICT (information and communication technology) literacy and competency.

The rows focus on the specific impacts that would be generated by developing proficiencies in these critical areas. More specifically, they describe how the professional qualities outlined in the guiding framework created by P21 proponents can help current and future workers achieve their career goals. These benefits are broken down into three categories:

- **Personal-Level Implications:** These skills will enable professionals to improve their individual situations, allowing them to rise above the competition in the ultra-competitive workforce.
- **Community-Level Implications:** These skills will encourage professionals to play a more active role in the local community of industry professionals, demonstrating their interest in facilitating the growth of this distinct industry.
- **National-Level Implications:** These skills motivate individuals to view their careers within the context of supporting Kosovo, applying themselves towards improving the country's socio-economic situation.

DIMENSIONS	LEARNING	LITERACY	LIFE
PERSONAL -LEVEL	The program improved my critical thinking, allowing me to stand out in the competitive workforce	The program expanded my technical knowledge, enhancing my marketability to potential employers	The program strengthened my "soft skills", bolstering my sense of professionalism
COMMUNITY -LEVEL	The program improved my critical thinking, pushing me to pursue entrepreneurial ventures	The program expanded my technical knowledge, making me a valuable asset to major corporations	The program strengthened my "soft skills", providing a vital tool for professional networking
NATIONAL -LEVEL	The program improved my critical thinking, shaping my understanding of technology's role in Kosovo's development	The program expanded my technical knowledge, encouraging me to think of how digital services could by Kosovo's niche industry	The program strengthened my "soft skills", inspiring me to imagine a different role for Kosovo in the international marketplace

Figure 1. Conceptual map of student attitudes towards workplace skills

V. Methodological Approach

In addition to this conceptual framework, the author believed that a qualitative approach would be useful to capture citizens' perspectives on digital skill-building.

As such, they created an in-depth case study, believing that this method would be useful in showcasing the breadth of experiences found within the tech industry. Relatedly, this strategy would allow the author to unpack how Kosovo's context shapes general opinion, emphasizing the complex forces at work shaping participants' career decisions (Baxter and Jack 2008). Additionally, they used data from twenty semi-structured interviews conducted during their research fellowship with the Fulbright U.S. Student Program. During their six-month stay starting in fall 2019, the author spoke with individuals who graduated from Cyber Academy, an educational venture based in Pristina that equips students with cybersecurity skills whosemembers have gone on to both the public and private sectors (Selmanaj 2020).

Considering how graduates have pursued distinct career pathways, the author believed that asking open-ended questions would lead to more productive conversations. Critically, this format would prompt individuals to reflect on their experiences, giving them a chance to pinpoint which skills gained through the program have allowed them to achieve their aspirations (Rabionet 2011). After reviewing the responses provided by participants in their interview transcripts, prominent themes from these one-on-one discussions would be sorted into the above table. In counting their replies, the author would be able to show which attributes are viewed as instrumental to career growth. Ultimately, the author feels that this report will highlight the core intangibles that are most prized by Kosovar citizens, shedding light on how these professionals assess the merits of vocational training.

VI. Preliminary Evidence

A. Personal-Level Dimensions

The majority of participants focused on what the program's curriculum could offer in terms of their professional development, as eleven of the twenty individuals who joined this study believed it accelerated their career advancement. Within this group, four individuals shared that acquiring literacy and life skills was crucial in order to

achieve their goals respectively. A trio of graduates stated that gaining learning skills allowed them to boost their professional profile. Given the variety of responses within this dimension, we could tentatively conclude that the educational program has encountered moderate success in producing well-rounded technicians suited for the modern economy.

From the outset, these findings indicate that many participants appreciated the technical elements of the year-long program. Individuals shared how they relished “hands-on” instruction, noting that university instructors rarely use these dynamic methods. Learning how to creatively use digital tools was a major draw for program alums; they believed that this expertise would enable them to attract attention in the job market. Most importantly, these speakers also appreciated the program’s rigorousness, as core modules tested their fundamental understanding of security technologies. In essence, completing complex tasks in a demanding environment was viewed as a unique simulation of the workplace experience.

Regarding the “life” and “learning” categories, these results underscore how numerous participants prioritized skills that went beyond technical knowledge. For instance, being forced to quickly respond to urgent problems that arose during intense simulations was frequently cited as a memorable learning experience. For these participants, having the opportunity to “think outside the box” had a tremendous effect on boosting their self-confidence, allowing them to see how they could handle the pressures of a fast-paced environment. Similarly, other individuals highlighted how the program instilled them with a sense of professionalism, teaching them how to comport themselves with managers and clients alike. In other words, these individuals gained a clearer understanding of the key requirements they will be expected to meet upon transitioning into a full-time job.

B. Community-Level Dimensions

The second-largest group among the study participants highlighted their skills would allow them to integrate within the country’s tech sector.

Three individuals identified how “life skills” allowed them to forge connections, expanding their network in the process. Two participants emphasized the importance of “learning skills”, believing that these intangibles were a springboard for a career in digital entrepreneurship. Interestingly, no respondents pinpointed how “literacy skills” enabled them to contribute to the growth of the sector, both domestically and internationally. From this we could conclude that “softer” skills were more useful for individuals looking to make a difference in the industry.

It is interesting to note that many individuals believed that their interpersonal skills, more than their technical knowledge, would enable them to create collaborations within the technology space. For example, understanding how to sell yourself to associates was seen as invaluable, for a number of participants shared that learning how to present their work was crucial in securing opportunities after graduating from the year-long program. Participants who identified “learning skills'' as a major takeaway from their program experience shared similar thoughts with their peers in the “life” category. For this pair of interviewees, the program demonstrated to them that creativity was a commodity in this industry, prompting them to think of how they could harness it to create their own forward-thinking business ventures. The numerous simulations not only sharpened their technical proficiencies, but also revealed how they could use their aptitude for lateral thinking to “disrupt” Kosovo’s nascent tech scene.

The lack of support for the “literacy” perspective may indicate two possible conclusions. Firstly, participants believed that possessing technical skills alone would not be sufficient to “make waves” within the industry community. Given how numerous initiatives trumpet the importance of “digital skill-building”, it is logical that students would pursue programs that offer a more holistic approach to workforce preparedness. Secondly, even if they possessed an aptitude for coding, this skill set does not guarantee an opportunity to climb the corporate ladder. Socio-emotional intelligence is crucial if individuals are to reach managerial positions; only then would they be able to make a meaningful contribution to growing the small, but vibrant, field. Bearing these factors in mind, these findings may underscore the shortcomings of trainings that focus exclusively on boosting technical proficiencies.

C. National-Level Dimensions

The third, and smallest, group within the participant base demonstrated an interest in how they could use their personal skills to accelerate economic growth in the Balkan country. Of these four individuals, two of them described how technical literacy should be incorporated into strategies aimed at developing human capital, indicating how digital services could be the country's market specialization. One interviewee expressed that they were pushed to think about how their skills, particularly those related to inventiveness and creativity, could be used to drive development. Finally, another person thought of how their "softer" skills could be deployed to improve the external reputation of the state. Reviewing these results, it is apparent that most participants were not concerned with the macro-level implications of these skill-focused trainings.

For those within the "literacy" category, they argued an education focused on the core skills demanded by digital industries is the primary path Kosovo can follow in order to compete in the global economy. Critically, they believe that churning-out programmers and coders is a practical strategy, providing a workforce that appeals to employers throughout the European Union. These individuals also expressed pride in the notion that the program allowed them to showcase their skills on the international stage; specifically, they were able to participate in hacking competitions that attracted technicians from around the world. In some respects, their comments seemed to indicate that, in spite of the ongoing political instability, Kosovar professionals are well-positioned to succeed in the interconnected marketplace.

VII. General Conclusions

From this study, we can see an equally distributed amount of support for each of the three hypotheses listed above. Eight individuals raised that "life skills" were the most crucial component of their educational experience. Meanwhile, six respondents fell into the "literacy" and "learning" categories respectively.

While no particular set of attributes can be said to have the greatest impact on career success, we could make the reasonable claim that the curriculum has done a satisfactory job in producing qualified professionals ready for the job market. Ultimately, these results lend credence to the notion that the institution's emphasis on "cross-sectoral" training has yielded a myriad of benefits for its former enrollees.

However, when we look at the data at the dimension level, a clearer picture emerges. Most graduates were primarily focused on how these skills would enable them to reach their goals in the short term. Reviewing the transcripts, there is evidence to suggest that participants view the program as a "bridge" between their undergraduate institution and their first place of employment. Even so, there were a few participants who focused more on the extended implications of their professional training. Within this group, five individuals were focused on what they could do to support the industry. An additional four expressed a desire to change Kosovo's narrative in the international arena. Bearing this in mind, the author concedes that more time will be needed in order to gauge how participants applied their skills once reaching a level of professional stability.

VIII. Project Limitations

The author acknowledges that methodological choices, particularly related to the design and implementation of the study, may have an impact on the general utility of preliminary findings. Firstly, the decision to use referral sampling must be considered when evaluating the overall generalizability of the exploratory research. This non-random strategy may provide a limited perspective on this target population, raising the risk that the author's conclusions may not reflect the experiences of the entire subgroup. However, given the high degree of connectedness found within the small tech community, they believe that the relative strengths of the "word of mouth" method outweigh its perceived shortcomings. Secondly, it is important to recognize that the period for data collection was disrupted by the coronavirus (COVID-19) pandemic.

During the first months of the research project, the author conducted interviews in-person with selected participants, believing that this open format would allow for more free-flowing conversation regarding their individual ambitions. After being evacuated to the United States, they resolved to hold these sessions over video chats or phone calls. While this switch was unfortunate, the author believes that they were able to provide a glimpse into the lived experiences of ICT professionals.

Finally, cultural factors must be taken into account when extrapolating from this initial study. For instance, while the P21 model is widely used by educators engaged with digital skill-building programs, its guiding principles have been heavily influenced by American interests in the corporate and academic sectors. Additionally, interviews were conducted primarily in English, though individuals received informational materials in either Albanian or Serbian. Bearing this in mind, readers must weigh these elements before drawing conclusions from this final report.

IX. Future Research

Based on the findings of this study, the author believes it would be beneficial to make use of pedagogical frameworks shaped by educational professionals from “developing” countries. As mentioned before, the evaluative tools proposed by P21 practitioners, while helpful in their own right, were designed by American experts who possess a different set of sensibilities than their foreign contemporaries. To remedy this problem, the author maintains that incorporating an analytical structure that better reflects the guiding norms of different societies could produce more insightful results.

Secondly, greater attention should be paid to how these educational trainings work to address gender inequalities in the modern workforce. For example, several female participants shared that their time in the program was empowering, as they felt they could compete with their peers in the male-dominated field. While the promotion of equity is not a core component of the instructional curriculum, the author believes that

it would be worthwhile to compare student outcomes with similar initiatives that take a more “gender-sensitive” approach.

Finally, these initial findings raise that there may be a link between training efficacy and geographic location. Participants came from a variety of towns all across Kosovo. Yet many traveled to Pristina for work and educational opportunities; critically, these are not commonly found in rural communities. To this end, it may be prudent to consider what impact a comparable initiative would have in a non-urban setting. Given the number of tech-focused projects found throughout the country, there is reason to believe a study similar to this one could be replicated in these contexts.

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Appendix A. Example questions used in semi-structured interviews

01 What originally led you to take courses at Cyber Academy?

02 Which modules did you remember the most during your time at Cyber Academy?

03 What are your thoughts on the instructional methods used at Cyber Academy?

04 How would you describe the classroom environment at Cyber Academy?

05 Would you say that Cyber Academy helped expand your technical knowledge?

06 Would you say that Cyber Academy helped improve your “soft” skills?

07 What lessons did you value the most during your time at Cyber Academy?

08 Did the program offered at Cyber Academy meet your expectations?

09 Do you feel that Cyber Academy has prepared you for a career in the information technology (IT) field?

10 Do you imagine yourself working in Kosovo for the long-term due to your time at Cyber Academy?

Appendix B. List of project participants

1. Granit Beka (Enrolled 2018-2019)

2. Melos Buqinca (2019-2020)

3. Jetik Cana (2019-2020)

4. Arian Cetaj (2019-2020)

5. Kosmos Dermaku (2018-2019)

6. Blerta Hasani (2019-2020)

7. Hava Jahaj (2019-2020)

8. Arti Karahoda (2018-2019)

9. Dren Krasniqi (2019-2020)

10. Kujtim Kryeziu (2015-2016)

11. Shega Likaj (2016-2017)

12. Jon Macula (2018-2019)

13. Adriatik Mehmeti (2018-2019)

14. Erblind Morina (2019-2020)

15. Drilon Osmani (2019-2020)

16. Ismajl Pnishi (2016-2017)

17. Drin Raci (2015-2016)

18. Adriatik Saliaga (2017-2018)

19. Robert Shala (2013-2014)

20. Gonxhe Sylaj (2019-2020)

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