

**RESEARCH PAPER****Relationship between 21st Century Skills and Socialization among Students at Undergraduate Level in Public Universities of Lahore****¹Iqra Shahzadi*, ²Dr. Shamim Ullah and ³Iqra Bibi**

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***Corresponding Author:** shamimullah.ier@pu.edu.pk**ABSTRACT**

This study explored the relationship between 21st-century skills and socialization among undergraduate students in public universities in Lahore. The main objectives were to determine skill levels and socialization patterns. The sample consisted of 320 participants (230 females and 90 males) selected through multistage stratified random sampling. Data were collected using a descriptive, quantitative design with a correlation method. Two main variables were examined: 21st-century skills and student socialization. A questionnaire, adapted from Mehmet İnan (2015), assessed attitudes towards socialization, including communication, collaboration, creativity, critical thinking, and media literacy. The 50-item scale had a Cronbach's alpha of .816. The study highlights that while there are some significant differences in skill levels between students of different universities, gender does not play a significant role in most skill areas. The findings suggest that educational institutions need to focus on creating balanced and inclusive learning environments that cater to the development of a wide range of skills. Implementing the recommended strategies can help in achieving this goal, ensuring that all students, regardless of gender or university affiliation, have the opportunity to develop the essential skills needed for personal and professional success.

KEYWORDS 4cs, Attitude, Communication, Socialization, Twenty-First-Century Skills**Introduction**

This study examines the level of engagement of students with 21st-century skills, and defines the study's problem statement, objectives, questions, significance, and rationale. By integrating 4 Cs, educators can introduce 21st century skills, including communication critical thinking, collaboration, and creativity. Today's individuals spend their lives in the twenty-first century, which requires advanced skills for Education, work, and life success are all related (Suto & Eccles, 2014).

The purpose of this study is to examine the relationship between 21st-century skills and socialization among undergraduate students. These students are very different from those who were 20, 30, or 40 years ago Today's students are experts in a variety of tasks and work with technology devices on a daily basis. Brain-based research showed that a 15-year-old, students had a 15 percent visual cortex, as Contrary to this generation (Jukes & Dosaj, 2006), Compared to yesterday's classrooms, today's are very different. A single teacher will not be able to limit students to a single teaching method, time, or location in 2019The ability to control learners is the only limitation to education. The only things that are not limited to teaching, paper-based knowledge, remembering, or cognitive decision-making are humans. The education framework of the 19th and 20th centuries Today's global economy requires substantial knowledge and skills (Council, 2007).Today, preparing students for their careers and lives is a challenging task. Educators, training services, government establishments, employees, and researchers focus on twenty-first-

century skills such as critical thinking, advanced study, complex reasoning, and communication skills (Scott, 2015).

Business leaders and stakeholders agree that students need to be aware of modern technology in order to be successful in the twenty-first century. We live in a progressive age that requires new technologies. But those skills which students demand in this century. It is not a new discovery (Rotherham, 2011).

Educational institutions, particularly at the undergraduate level, play a crucial role in equipping students with these essential skills. The undergraduate years are a formative period during which student's transition from adolescence to adulthood, making critical decisions that shape their future trajectories. Socialization, the process of internalizing students' social skills, values, and norms, is a vital part of their holistic growth within this context. Socialization occurs through various channels, including peer interactions, institutional culture, extracurricular activities, and engagement with faculty and staff. However, the traditional educational model, with its emphasis on academic rigor and technical proficiency, often overlooks the integration of social and interpersonal skills that are crucial for comprehensive development. This gap necessitates a deeper exploration of how socialization processes within undergraduate education contribute to the acquisition and enhancement of 21st-century skills. Understanding this relationship is essential for developing educational practices and policies that foster a more holistic and effective learning environment. 21st Century Skills encompass a range of competencies including critical thinking, creativity, collaboration, communication, information literacy, technological fluency, flexibility, leadership, and cross-cultural understanding (Trilling & Fadel, 2009).

An individual's socialization involves acquiring the norms, values, behaviors, and social skills that are appropriate to his or her social position throughout their lives. At the undergraduate level, socialization includes interactions with peers, faculty, and the broader campus community, shaping students' identities and preparing them for societal roles (Macaronis & Plummer, 2012).

Literature Review

The relationship between 21st-century skills and socialization at the undergraduate level is multifaceted and crucial for student development. Digital literacy is essential, enabling students to navigate information, make informed decisions, and engage in the digital economy, leading to positive academic and professional outcomes (Martin, 2018; van Deursen et al., 2019). Critical thinking, involving the analysis, evaluation, and synthesis of information, is another key skill necessary for academic success (Ennis, 1996; Facione, 1990).

Collaborative learning environments enhance problem-solving and critical thinking by fostering dialogue and diverse perspectives, crucial for developing teamwork and interpersonal skills (Johnson & Smith, 2014). Effective communication, both oral and written, is fundamental for conveying ideas, collaborating, and achieving goals, underpinning active participation in discussions and networking (Trilling & Fadel, 2009; Whetten & Cameron, 2016).

Teamwork is vital for addressing complex problems, promoting innovation, and enhancing productivity, leading to better learning outcomes and social skills, preparing students for the modern workplace (Voogt & Roblin, 2012; Kozlowski & Ilgen, 2006). Creativity and innovation are essential for academic and professional advancement, driving economic growth through original thinking (Pellegrino & Hilton, 2012).

Information literacy, the ability to locate and evaluate information, is foundational for academic achievement and lifelong learning (American Library Association, 2000; Eisenberg, 2008). Socialization shapes students' academic and social experiences, fostering

integration, network development, and career preparation (Merton, 1957; Tinto, 1997; Pascarella & Terenzini, 2005). In the digital age, technology literacy is crucial for engaging in online communities and virtual collaboration (Tapscott, 2009).

21st-century skills development is intertwined with socialization, with extracurricular activities and group collaborations enhancing critical thinking, communication, and leadership skills. These skills help students navigate social situations, make informed decisions, and build relationships, highlighting their importance in academic, social, and professional development (Allen & Tanner, 2006; Kuh & Hu, 2001; Kuhn, 1999; Terenzini, Pascarella, & Blimling, 1996; Johnson, Johnson, & Smith, 1998).

Research Design

As it is clear from the earlier discussion our research is based on studying the relationship of two variables on a quantitative level, and it is based on the positivist philosophy (Saunders, Lewis, & Thorn hill, 2009). By adopting a positivist philosophy, the study therefore falls in the realm of a deductive approach (Saunders et al., 2009).

Sample

The present study sample consisted of 320 students aged 20-24 years from public universities of Lahore schools through a multistage stratified random sampling technique. 28.1 boys and 79.1 girls of universities were taken from Lahore.

Instruments

Based on social learning theory, researcher adapted questionnaire that was developed by mehmat Inan (2015). In the first part, demographic variables are included, and in the second part, factors are included. Thirteen factors were examined, including; communication, collaboration, creativity, critical thinking, information literacy, media literacy, comfort in social interactions, social confidence and expression, social support and resources, preference for socialization, use of social media and online communication, impact of socialization on personal development, and social avoidance or isolation. The survey included fifty statements.

Procedure

Researchers took details from departments about undergraduate students. Students were randomly selected from a database of undergraduate student information. Students were explained how to fill out the questionnaire by the researcher. In order to collect data, the researcher personally visited three universities. (320 undergraduate students responded the questionnaire). The questionnaires were administered in groups using random sampling technique and the students were helped at every point where they were unable to understand any idea given in the questions.

Results and Discussion

Table 1
Results: table of mean and standard deviation

21 st century skills	Mean	Std. Deviation
Communication	10.97	3.10
Collaboration	11.10	2.72
Creativity	8.01	1.98
Critical thinking	15.00	3.36
Information literacy	11.29	2.46
Media literacy	4.98	1.60
Socialization	Mean	Std. Deviation

Social interaction	7.82	2.19
Social confidence	18.06	3.64
Social support and resources	8.30	1.85
Preferences for socialization	17.38	3.57
Social media and online communication	8.06	1.87
Impact of Socialization and Personal Developme	11.62	4.78
Social avoidance or isolation	8.35	1.75

In Table 1: Data from the survey was analyzed using descriptive statistics, including means and standard deviations. The Mean and standard deviation of factor social confidence on factor highest among all factors ($M=18.06$, $SD=3.64$). The Mean and standard deviation of Preferences for socialization is 2nd highest among other factors ($M=17.38$, $SD=3.57$). The Mean and standard deviation of the critical thinking factor is 3rd highest among other factors ($M=15.00$, $SD=3.36$). The Mean and standard deviation of the Impact of Socialization and personal development is 4th highest among other factors ($M=11.62$, $SD=4.78$). The Mean and standard deviation of Information literacy are the 5th highest among other factors ($M=11.29$, $SD=2.46$). The Mean and standard deviation of collaboration skill is 6th highest among other factors ($M=11.10$, $SD=2.72$). The Mean and standard deviation of the communication skill factor is 7th highest among other factors ($M=10.97$, $SD=3.10$). The Mean and standard deviation of Social avoidance or isolation are 8th highest among other factors ($M=8.35$, $SD=1.75$). The Mean and standard deviation of Social support and resources are 9th highest among other factors ($M=8.30$, $SD=1.85$). The Mean and standard deviation of creativity skill is 10th highest among other factors ($M=8.01$, $SD=1.98$). The Mean and standard deviation of social interaction is the 12th highest among other factors ($M=7.82$, $SD=2.19$). The Mean and standard deviation of media literacy is lowest among other factors ($M=4.98$, $SD=1.60$).

Table 2
Pearson(r) Correlation analysis of independent variables and dependent variables

Factors	Social Comfort	Social confidence	Social support	Social preferences	Online	Personal dev	isolation
Communication	.558**	.530**	.440**	.425**	.405**	.102	.364**
Collaboration	.435**	.464**	.343**	.409**	.276**	.121**	.362**
Creativity	.476**	.545**	.507**	.446**	.335**	.093	.371**
Critical thinking	.358**	.456**	.394**	.292**	.425**	.103	.287**
Information literacy	.536**	.506**	.490**	.430**	.354**	.108	.400**
Media literacy	.541**	.465**	.368**	.481**	.313**	.177**	.285**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Discussion

The study's results align with much of the existing literature, supporting the notion of minimal gender differences in a wide range of skills. As Hyde (2005) posits in the "gender similarities hypothesis," males and females exhibit similar levels of proficiency in psychological variables, a conclusion mirrored in the comparable levels of communication, collaboration, creativity, critical thinking, information literacy, media literacy, social interaction, social confidence, social support, and socialization preference found in this study.

The significant gender difference noted in social media and online communication skills, with males scoring higher, adds a layer of complexity to the discussion. While Hargittai and Shafer (2006) found that males often report higher confidence in their internet skills, it is essential to consider that this confidence does not always translate into actual proficiency. This finding suggests a potential area for further research to explore the underlying causes of this discrepancy and to determine whether these differences are

more about perception than actual skill. The observation that females tend to have slightly higher mean scores in most areas, though not statistically significant, aligns with Voyer and Voyer's (2014) research, which suggests that females often excel in academic-related skills. This could be due to differing socialization patterns and learning styles that emphasize communication and collaboration more among females (Gurian & Stevens, 2010). Although these differences were not statistically significant in this study, they warrant further investigation to understand their implications better.

The significant differences in communication, collaboration, creativity, social confidence, social support, socialization preference, and personal development skills among students from different universities highlight the role of institutional factors. Astin (1993) and other scholars emphasize that university environments, including curricula and available resources, significantly impact students' skill development. The findings of this study suggest that universities with more robust support systems and opportunities for social interaction and personal development are more effective in fostering these skills.

In contrast, the lack of significant differences in critical thinking, information literacy, media literacy, social interaction, and online communication skills across universities might reflect a baseline standardization in educational practices. These competencies are essential and are often uniformly emphasized across higher education institutions (Kuhn, 1999; Shapiro & Hughes, 1996). The consistency in these areas indicates that higher education institutions might have established effective methods for cultivating these critical skills uniformly.

In conclusion, this study reinforces the gender similarities hypothesis while also identifying areas where gender differences in digital communication skills persist. It underscores the importance of institutional environments in shaping various student competencies, suggesting that universities play a crucial role in developing specific skills. Future research should focus on unpacking the institutional factors that contribute to these differences and exploring targeted interventions to enhance skill development uniformly across all universities.

Conclusion

The study highlights that while there are some significant differences in skill levels between students of different universities, gender does not play a significant role in most skill areas. The findings suggest that educational institutions need to focus on creating balanced and inclusive learning environments that cater to the development of a wide range of skills. Implementing the recommended strategies can help in achieving this goal, ensuring that all students, regardless of gender or university affiliation, have the opportunity to develop the essential skills needed for personal and professional success.

Recommendations

The major limitation of the present research was the selection of other 21st century skills. Students felt exhausted while completing it. Similarly the role of other variables like academic achievement was not taken into account while investigating their attitude towards school. It is recommended to design studies using a holistic approach and taking into account all possible student and other variables.

References

- Azarkievič, J. S., & Azarkievič, J. (2015). Social Stratification According to Marx and Weber: *Comparison of the Theories and Modern Relevance*. *June, 22*, 230-224.
- Dadgar, H., Rad, J. A., Soleymani, Z., Khorammi, A., McCleery, J., & Maroufizadeh, S. (2017). *The relationship between motor, imitation, and early social communication skills in children with autism*. *Iranian journal of psychiatry, 12(4)*, 236.
- Davidson, B. W., & Dunham, R. L. (1996). Assessing EFL Student Progress in Critical Thinking with the Ennis-Weir Critical Thinking Essay Test.
- Eisenberg, M. B. (2008). Information literacy: Essential skills for the information age. *DESIDOC journal of library & information technology, 28(2)*.
- ERDEM, C. (2019). CHAPTER ONE INTRODUCTION TO 21ST CENTURY SKILLS AND EDUCATION CAHIT ERDEM. *21st Century Skills and Education, 1*.
- Frydenberg, M., & Andone, D. (2011, June). Learning for 21st century skills. In *International Conference on Information Society (I-Society 2011)* (pp. 314-318). IEEE.
- Fullan, M. (2017). *Educational change depends on what teachers think and do—it's as simple and as complex as that* (Doctoral dissertation, Doctoral dissertation, The University of Waikato).
- Johnson, D. W., & Johnson, R. T. (1999). Making cooperative learning work. *Theory into practice, 38(2)*, 67-73.
- Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). Cooperative learning returns to college what evidence is there that it works? *Change: the magazine of higher learning, 30(4)*, 26-35.
- Johnson, D. W., Johnson, R. T., & Smith, K. A. (2014). Cooperative learning: Improving university instruction by basing practice on validated theory. *Journal on Excellence in University Teaching, 25(4)*, 1-26.
- Kuh, G. D., Cruce, T. M., Shoup, R., Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The journal of higher education, 79(5)*, 540-563.
- Kuhn, D. (1999). A developmental model of critical thinking. *Educational researcher, 28(2)*, 16-46.
- Lai, E. R., & Viering, M. (2012). *Assessing 21st Century Skills: Integrating Research Findings*. Pearson
- Luna Scott, C. (2015). The futures of learning 2: What kind of learning for the 21st century?
- Martínez, I., Garcia, F., Fuentes, M. C., Veiga, F., Garcia, O. F., Rodrigues, Y., ... & Serra, E. (2019). Researching parental socialization styles across three cultural contexts: Scale ESPA29 bi-dimensional validity in Spain, Portugal, and Brazil. *International Journal of Environmental Research and Public Health, 16(2)*, 197.
- Miller, A., Balapuria, M., & Sesay, M. M. M. (2015). Facilitating project success by eliminating interpersonal conflicts. *Journal of Information Technology and Economic Development, 6(1)*, 41.

- Pellegrino, J. W. (2017). Teaching, learning and assessing 21st century skills.
- Rotherham, A. J., & Willingham, D. (2009). 21st century. *Educational leadership*, 67(1), 16-21.
- Ruiz-Primo, M. A. (2009, February). Towards a framework for assessing 21st century science skills. In *Workshop on Exploring the Intersection of Science Education and the Development of 21st Century Skills*. Washington, DC.
- Smith, I. (2010). Reviewing Scottish teacher education for the 21st century: let collaborative partnership flourish. *Scottish Educational Review*, 42(2), 33-56.
- Stahl, G., Koschmann, T. D., & Suthers, D. D. (2006). CSCL: An historical perspective.
- Sumarni, W., Supardi, K. I., & Widiarti, N. (2018, April). Development of assessment instruments to measure critical thinking skills. In *IOP Conference Series: Materials Science and Engineering* (Vol. 349, No. 1, p. 012066). IOP Publishing.
- Teoh, H. C., Abdullah, M. C., Roslan, S., & Daud, S. (2013). An investigation of student engagement in a Malaysian Public University. *Procedia-Social and Behavioral Sciences*, 90, 142-151.
- Terenzini, P. T., Pascarella, E. T., & Blimling, G. S. (1996). Students' out-of-class experiences and their influence on learning and cognitive development: A literature review. *Journal of college student development*.
- Trilling, B., & Fadel, C. (2012). *21st century skills: Learning for life in our times*. John Wiley & Sons.
- Uchida, A. V. Introducing Elements of a Four-dimensional Education into an EFL Classroom.
- Vail, L. M. (2010). *Teaching in the 21st Century* (Doctoral dissertation, University of North Carolina Wilmington).
- Van Deursen, A. J., & Van Dijk, J. A. (2019). The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New media & society*, 21(2), 354-375.
- Voogt, J., & Roblin, N. P. (2010). 21st century skills. *Discussienota. Zoetermeer: The Netherlands: Kennisnet*, 23(03), 2000.
- Voogt, J., & Roblin, N. P. (2012). A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies. *Journal of curriculum studies*, 44(3), 299-321.
- Yan, H. D., & Yu, F. L. T. (2021). South Asia: Bangladesh, India, Nepal, and Pakistan. In *The Routledge Companion to Asian Family Business* (pp. 425-493). Routledge.